NP 22

RECORD OF AMENDMENTS

The table below is to record Section IV Notice to Mariners amendments affecting this volume.
Sub paragraph numbers in the margin of the body of the book are to assist the user when making amendments to this volume.

Weekly Notices to Mariners (Section IV)

2004	2005	2006	2007

IMPORTANT – SEE RELATED ADMIRALTY PUBLICATIONS

This is one of a series of publications produced by the United Kingdom Hydrographic Office which should be consulted by users of Admiralty Charts. The full list of such publications is as follows:

Notices to Mariners (Annual, permanent, temporary and preliminary), Chart 5011 (Symbols and abbreviations), The Mariner's Handbook (especially Chapters 1 and 2 for important information on the use of UKHO products, their accuracy and limitations), Sailing Directions (Pilots), List of Lights and Fog Signals, List of Radio Signals, Tide Tables and their digital equivalents.

All charts and publications should be kept up to date with the latest amendments.

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NP 22

BAY OF BISCAY PILOT

Bay of Biscay and approaches with adjacent coasts of France and Spain from Pointe de Penmarc'h to Cabo Ortegal

NINTH EDITION
2004

PUBLISHED BY THE UNITED KINGDOM HYDROGRAPHIC OFFICE

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Previous Editions:

First published as West Coasts of France, Spain and Portugal Pilot 1867
Second Edition 1873
Third Edition 1881
Fourth Edition 1885
Fifth Edition 1891
Sixth Edition 1900
Seventh Edition 1910
First Edition of Bay of Biscay Pilot 1921
Second Edition 1931
Third Edition 1944
Fourth Edition 1956
Fifth Edition 1970
Sixth Edition 1991
Seventh Edition 1998
Eighth Edition 2001

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PREFACE

The Ninth Edition of *Bay of Biscay Pilot* has been prepared by Mr S. C. Mason and Captain M.Waight, Master Mariner, from the latest information received in the UK Hydrographic Office to the date given below.

This edition supersedes the Eighth Edition (2001), which is cancelled.

Information on climate, currents and ice has been based on data provided by the Meteorological Office, Exeter.

The following sources of information, other than United Kingdom Hydrographic Office Publications and Ministry of Defence papers, have been consulted:

British publications:

Lloyds' List Ports of the World 2003.

Lloyd's Register Fairplay, Ports and Terminals Guide 2004

Lloyds Shipping Information Services.

The Stateman's Year Book 2004.

Whitaker's Almanac 2004

French publications:

Instructions Nautiques Volume C2.2 France (Côtes Nord et Ouest) 2001 with corrections to April 2004.

Instructions Nautiques Volume C2.3 France (Côte Ouest) 2003 with corrections to April 2004.

Spanish publications:

Derrotero de la Costa Norte de España 1999 with corrections to April 2004.

Derrotero de la Costa NW de España 1993 with corrections to April 2004.

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PREFACE
to the Sixth Edition (1995)

The Sixth Edition of *Bay of Biscay Pilot* has been prepared by Lieutenant Commander J.H. Townshend MBE Royal Navy and contains the latest information received in the Hydrographic Office to the date given below.
This edition supersedes the Fifth Edition (1970) and Supplement No 11 (1987), which are cancelled.
Information on currents and ice has been based on data provided by the Meteorological Office, Bracknell.
The following sources of information, other than Hydrographic Office Publications and Ministry of Defence papers, have been consulted:

British publications:

French Pilot 1983, Malcolm Robson (Nautical Books).

Lloyds Maritime Guide (Dry Dock Information) 1990.

Lloyds Ports of the World 1991.

Lloyds Shipping Information Services.

North Biscay Pilot (3rd edition) 1982, RCC Pilotage Foundation (Granada Publishing).

RCC Foreign Ports Information.

South Biscay Pilot (3rd edition) 1984, Robin Brandon (Granada Publishing).

The Stateman's Year Book 1990–91.

Whitaker's Almanac 1990.

French publications:

Annuaire Nautisme (26th edition) 1988.

Courants de Marée.

Feux et Signaux de Brume Volume CA 1990 with corrections to 10 March 1990.

Guide de Navigateur (1981) with correction No 9 (1990).

Instructions Nautiques Volume C2.2 France (Côtes Nord et Ouest) 1989 with corrections to February 1991

Instructions Nautiques Volume C2.3 France (Côte Ouest) 1989 with corrections to February 1991.

Votre Livre du Bord (26th edition) 1990.

Spanish publications:

Derrotero de la Costa Norte de España 1989.

Derrotero de la Costa NW de España 1983 with Supplement No 3 (1989).

Faros y Señales de Niebla Parte 1 1990.

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Rear Admiral
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Hydrographic Office
Ministry of Defence
Taunton
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England
30th March 1991

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EXPLANATORY NOTES

Admiralty Sailing Directions are intended for use by vessels of 12 m or more in length. They amplify charted detail and contain information needed for safe navigation which is not available from Admiralty charts, or other hydrographic publications. They are intended to be read in conjunction with the charts quoted in the text.

This volume of the Sailing Directions will be kept up-to-date by the issue of a new edition at intervals of approximately 3 years, without the use of supplements. In addition important amendments which cannot await the new edition are published in Section IV of the weekly editions of *Admiralty Notices to Mariners*. A list of such amendments and notices in force is published in the last weekly edition for each month. Those still in force at the end of the year are reprinted in the *Annual Summary of Admiralty Notices to Mariners*.

This volume should not be used without reference to Section IV of the weekly editions of Admiralty Notices to Mariners.

CD–ROM

Status. A compact disc is provided at the back of this volume. The paper publication of Sailing Directions satisfies the requirements of Chapter V of the International Convention for the Safety of Life at Sea. The CD version does not satisfy these requirements and should only be used in conjunction with the paper publication and any amendments affecting the paper publication. Where any discrepancy exists between data on the CD and in the paper publication of Sailing Directions, the paper publication (inclusive of amendments) is to be relied upon.

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References to hydrographic and other publications

The Mariner's Handbook gives general information affecting navigation and is complementary to this volume.

Ocean Passages for the World and *Routeing Charts* contain ocean routeing information and should be consulted for other than coastal passages.

Admiralty List of Lights should be consulted for details of lights, lanbys and fog signals, as these are not fully described in this volume.

Admiralty List of Radio Signals should be consulted for information relating to coast and port radio stations, radio details of pilotage services, radar beacons and radio direction finding stations, meteorological services, radio navigational aids, Global Maritime Distress and Safety System (GMDSS) and Differential Global Positioning System (DGPS) stations, as these are only briefly referred to in this volume.

Admiralty Maritime Communications is a comprehensive guide on all aspects of maritime communications for the yachtsman and small craft user. It provides general information on Global Maritime Distress and Safety System (GMDSS), the management of VHF, Maritime Safety Information, NAVTEX, Inmarsat and Radio Facsimile, and detailed information and procedures for marinas and harbours used by small craft.

Annual Summary of Admiralty Notices to Mariners contains in addition to the temporary and preliminary notices, and amendments and notices affecting Sailing Directions, a number of notices giving information of a permanent nature covering radio messages and navigational warnings, distress and rescue at sea and exercise areas.

The International Code of Signals should be consulted for details of distress and life-saving signals, international ice-breaker signals as well as international flag signals.

Remarks on subject matter

Buoys are generally described in detail only when they have special navigational significance, or where the scale of the chart is too small to show all the details clearly.

Chart index diagrams in this volume show only those Admiralty charts of a suitable scale to give good coverage of the area. Mariners should consult NP 131 *Catalogue of Admiralty Charts and Publications* for details of larger scale charts.

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Chart references in the text normally refer to the largest scale Admiralty chart but occasionally a smaller scale chart may be quoted where its use is more appropriate.

Firing, practice and exercise areas. Except for submarine exercise areas, details of firing, practice and exercise areas are not mentioned in Sailing Directions, but signals and buoys used in connection with these areas are sometimes mentioned if significant for navigation. Attention is invited to the Annual Notice to Mariners on this subject.

Names have been taken from the most authoritative source. When an obsolete name still appears on the chart, it is given in brackets following the proper name at the principal description of the feature in the text and where the name is first mentioned.

Tidal information relating the daily vertical movements of the water is not given; for this *Admiralty Tide Tables* should be consulted. Changes in water level of an abnormal nature are mentioned.

Time difference used in the text when applied to the time of High Water found from the *Admiralty Tide Tables*, gives the time of the event being described in the Standard Time kept in the area of that event. Due allowance must be made for any seasonal daylight saving time which may be kept.

Wreck information is included where drying or below-water wrecks are relatively permanent features having significance for navigation or anchoring.

Units and terminology used in this volume

Latitude and Longitude given in brackets are approximate and are taken from the chart quoted.

Bearings and directions are referred to the true compass and when given in degrees are reckoned clockwise from 000° (North) to 359°
Bearings used for positioning are given from the reference object.
Bearings of objects, alignments and light sectors are given as seen from the vessel.
Courses always refer to the course to be made good over the ground.

Winds are described by the direction from which they blow.

Tidal streams and currents are described by the direction towards which they flow.

Distances are expressed in sea miles of 60 to a degree of latitude and sub-divided into cables of one tenth of a sea mile.

Depths are given below chart datum, except where otherwise stated.

Heights of objects refer to the height of the structure above the ground and are invariably expressed as "... m in height".

Elevations, as distinct from heights, are given above Mean High Water Springs or Mean Higher High Water whichever is quoted in *Admiralty Tide Tables*, and expressed as, "an elevation of ... m". However the elevation of natural features such as hills may alternatively be expressed as "... m high" since in this case there can be no confusion between elevation and height.

Metric units are used for all measurements of depths, heights and short distances, but where feet/fathoms charts are referred to, these latter units are given in brackets after the metric values for depths and heights shown on the chart.

Time is expressed in the four-figure notation beginning at midnight and is given in local time unless otherwise stated. Details of local time kept will be found in *Admiralty List of Radio Signals Volume 2*.

Bands is the word used to indicate horizontal marking.

Stripes is the word used to indicate markings which are vertical, unless stated to be diagonal.

Conspicuous objects are natural and artificial marks which are outstanding, easily identifiable and clearly visible to the mariner over a large area of sea in varying conditions of light. If the scale is large enough they will normally be shown on the chart in bold capitals and may be marked "conspic".

Prominent objects are those which are easily identifiable, but do not justify being classified as conspicuous.

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ABBREVIATIONS

The following abbreviations are used in the text.

Directions

N	north (northerly, northward, northern, northernmost)
NNE	north-north-east
NE	north-east
ENE	east-north-east
E	east
ESE	east-south-east
SE	south-east
SSE	south-south-east
S	south
SSW	south-south-west
SW	south-west
WSW	west-south-west
W	west
WNW	west-north-west
NW	north-west
NNW	north-north-west

Navigation

AIS	Automatic Indentification System
CVTS	Co–operative Vessel Traffic System
DGPS	Differential Global Positioning System
GPS	Global Positioning System
Lanby	Large automatic navigation buoy
MCTS	Marine Communications and Traffic Services Centres
ODAS	Ocean Data Acquisition System
Satnav	Satellite navigation
TSS	Traffic Separation Scheme
VMRS	Vessel Movement Reporting System
VTC	Vessel Traffic Centre
VTS	Vessel Traffic Services
VTMS	Vessel Traffic Management System

Offshore operations

ALC	Articulated loading column
ALP	Articulated loading platform
CALM	Catenary anchor leg mooring
CBM	Conventional buoy mooring
ELSBM	Exposed location single buoy mooring
FPSO	Floating production storage and offloading vessel
FSO	Floating storage and offloading vessel
PLEM	Pipe line end manifold
SALM	Single anchor leg mooring system
SALS	Single anchored leg storage system
SBM	Single buoy mooring
SPM	Single point mooring

Organizations

EU	European Union
IALA	International Association of Lighthouse Authorities
IHO	International Hydrographic Organization
IMO	International Maritime Organization
NATO	North Atlantic Treaty Organization
RN	Royal Navy
UKHO	United Kingdom Hydrographic Office

Radio

DF	direction finding
HF	high frequency
LF	low frequency
MF	medium frequency
Navtex	Navigational Telex System
RT	radio telephony
UHF	ultra high frequency
VHF	very high frequency
WT	radio (wireless) telegraphy

Rescue and distress

AMVER	Automated Mutual Assistance Vessel Rescue System
EPIRB	Emergency Position Indicating Radio Beacon
GMDSS	Global Maritime Distress and Safety System
JRCC	Joint Rescue Cooperation Centre
MRCC	Maritime Rescue Co-ordination Centre
MRSC	Maritime Rescue Sub-Centre
SAR	Search and Rescue

Tides

HAT	Highest Astronomical Tide
HW	High Water
LAT	Lowest Astronomical Tide
LW	Low Water
MHHW	Mean Higher High Water
MHLW	Mean Higher Low Water
MHW	Mean High Water
MHWN	Mean High Water Neaps
MHWS	Mean High Water Springs
MLHW	Mean Lower High Water
MLLW	Mean Lower Low Water
MLW	Mean Low Water
MLWN	Mean Low Water Neaps
MLWS	Mean Low Water Springs
MSL	Mean Sea Level

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Times

ETA	estimated time of arrival	UT	Universal Time
ETD	estimated time of departure	UTC	Co-ordinated Universal Time

Units and miscellaneous

°C	degrees Celsius	kHz	kilohertz
DG	degaussing	km	kilometre(s)
dwt	deadweight tonnage	kn	knot(s)
DZ	danger zone	kW	kilowatt(s)
feu	forty foot equivalent unit	m	metre(s)
fm	fathom(s)	mb	millibar(s)
ft	foot (feet)	MHz	megahertz
g/cm^3	gram per cubic centimetre	mm	millimetre(s)
GRP	glass reinforced plastic	MW	megawatt(s)
grt	gross register tonnage	No	number
gt	gross tonnage	nrt	nett register tonnage
hp	horse power	teu	twenty foot equivalent unit
hPa	hectopascal		

Vessels and cargo

CDC	Certain Dangerous Cargo	MV	Motor Vessel
HMS	Her (His) Majesty's Ship	MY	Motor Yacht
HSC	High Speed Craft	POL	Petrol, Oil & Lubricants
LASH	Lighter Aboard Ship	RMS	Royal Mail Ship
LHG	Liquefied Hazardous Gas	Ro-Ro	Roll-on, Roll-off
LNG	Liquefied Natural Gas	SS	Steamship
LOA	Length overall	ULCC	Ultra Large Crude Carrier
LPG	Liquefied Petroleum Gas	VLCC	Very Large Crude Carrier

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GLOSSARY

Breton (B), French (F) and Spanish terms and words found on charts and in the Sailing Directions, and notes on Breton names.

BRETON AND FRENCH

Foreign word	*Language*	*English meaning*
aber	B	estuary, river mouth
abri, abrité	F	shelter, sheltered
aigu, –e	F	pointed, sharp
aiguille	F	needle, spire
amer	F	landmark, beacon
amont	F	upstream, landward
anse	F	bay, cove
aod	B	shore, coast
appontement	F	wharf, landing stage
ar	B	the, on
archipel	F	archipelago
argile	F	clay
arrière–port	F	inner harbour
arvor	B	coastland
asséchant	F	drying
aval	F	downstream, seaward
avant–port	F	outer harbour
aven	B	river, stream
azur	F	blue
bac	F	ferry
baie	F	bay
balise; balisé	F	beacon; buoyed, beaconed
banc	F	bank, shoal
bann	B	hill, height
barr	B	summit, rocky shoal
barre	F	bar
bas,–se	F	low
basse	F	shoal
basse mer (BM)	F	low water (LW)
bassin	F	basin, dock
bassin à flot	F	non–tidal basin
bassin de radoub	F	dry dock
baz	B	shoal; shallow
bec	F	beak, promontory
beg	B	point, cape, summit
beniged, beniget	B	gulf, pass
benn	B	hill
benven	B	large rock that never covers
bian, bihan	B	little
bili	B	shingle
bir	B	spit, spire, needle
biz	B	north–east
blanc, –he	F	white
bleu, –e	F	blue
bod	B	hamlet, small village
bois	F	woods
bosven	B	large rock that never covers
bouche	F	mouth (of a river)
boue	F	ooze
bouée	F	buoy
bras, braz	B	great
bre, brenn	B	hill
bri, brienn	B	height cliff, coast
brisant, brisants	F	shoal, reef; breakers
brise–lames	F	breakwater
brouillard	F	fog
brume	F	mist
butte	F	knoll, mound
caboteur	F	coaster
cale	F	ramp, slip
canal	F	canal, channel
cap	F	cape, headland
carré, –e	F	square
chaîne	F	chain, range of mountains
chalutage	F	trawling
champ–de–tir	F	firing danger area
chantier	F	dockyard
château	F	castle, mansion
château d'eau	F	water tower
chaussée	F	rocky, tidal flat, causeway
chenal	F	channel
cinq	F	five
coffre d'amarrage	F	mooring buoy
col	F	neck, mountain pass
colline	F	hill
côte	F	coast
courant	F	current
crête	F	ridge, crest
crique	F	creek
croix	F	cross
daou	B	two
darse	F	basin
débarcadère	F	landing
découvrant	F	uncovering, drying
détroit	F	strait, narrows
deux	F	two
déversoir	F	weir
digue	F	embankment, mole, breakwater
don, doun	B	deep
douane	F	customs
dour	B	water
dragué	F	dredged
droit	F	right (side)
du	B	black
duc d'albe	F	piled dolphin
dur, –e	F	hard
échouage	F	drying (harbour, berth)
écluse	F	lock of canal or basin sluice
écueil	F	rock, reef
église	F	church
er	B	the
ell	B	rock, shoal
enez	B	island, islet
éolienne	F	wind motor
épave	F	wreck
épi	F	spur, short mole
erienn(ou)	B	cliff, dune
est	F	east
estuaire	F	estuary
étale	F	slack water
étang	F	lake, lagoon
étier	F	creek that can receive small craft
falaise	F	cliff
fank	B	mud
feu	F	light
feux d'alignement	F	lights in line
flèche	F	spire
fleuve	F	river, stream
flot	F	flood tide
fond, –s	F	ground, bottom
fôret	F	forest
fosse	F	trench, deep, ditch
fred, freu, froud	B	strong flow, river
gabare	F	lighter
galets	F	shingle
garo	B	rugged, rough, hard
gauche	F	left (side)
gevred	B	south–east
glas	B	green
goad	B	woods

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Foreign word	*Language*	*English meaning*
goban	B	shoal
golfe	F	gulf
goulet	F	inlet, narrow entrance sound
gravier	F	gravel
grève	F	sandy beach
gris, –e	F	grey
gromell, gromilli	B	roaring
gros, –se	F	coarse, large
guérite	F	watch tower, turret
guet	F	watch house
gwenn	B	white
gwrac'h	B	old
harz	B	boundary, boundary stone
haut, –e	F	high, tall
haut–fond	F	shoal
havre	F	haven
hir	B	long
hoc'h, houc'h	B	pig
huître	F	oyster
île	F	island, isle
iliz	B	church
îlot	F	islet
inis	B	island, islet
Instructions Nautiques	F	Sailing Directions
interdit	F	prohibited
isthme	F	isthmus
izel	B	low, shallow
jaune	F	yellow
jetée	F	jetty, pier, breakwater
jusant	F	ebb tide
kan(iou), kanal	B	channel
karn	B	cairn
karreg (karek)	B	rock
kastel	B	castle
kein	B	shoal
kel(ou)	B	large rock
ker	B	house, hamlet
kern	B	peak, pointed summit
kleiz	B	north
kleuz(iou)	B	hole, deep
koad	B	woods
kog, kogeun	B	knoll
konk	B	angle, corner
kornog	B	horned, shoal
kornok	B	west
korvenn	B	eddy
koz	B	old
krech, kréac'h	B	hillock, knoll, summit
kreiz	B	middle
krenn	B	round, bulky, large and squat
kriben	B	ridge, crest
lac	F	lake
laez	B	high, tall
lamanage	F	inshore pilotage
lan, lann	B	monastery
laon, laouenn(ou),	B	flat rocky shoal
leac'h, lec'h	B	flat rock
lec'hid	B	mud
ledan, ledonek	B	wide, broad
lemm	B	sharp, pointed
leoneg	B	place, locality
loc'h	B	lake, pond
lok	B	monastery
lost, lostenn	B	tail, projection
louzaouenn(ou)	B	shoal, reef
mab	B	son
maison	F	house
malsain	F	foul
marais	F	marsh, swamp
marc'h	B	horse
marée	F	tide
meilh(ou)	B	mill
mein	B	rock, stone
melen	B	yellow
men	B	rock, stone
menez	B	mountain, hill
menhir	F	large raised stone
mer	F	sea
merc'h	B	daughter, girl
méridional, –e	F	southern
meur	B	large
mez	B	open sea
milieu	F	middle
moal	B	bare
môle	F	pier, jetty, mole
mont, montagne	F	mount, mountain
mor	B	sea, salt water
morlenn	B	creek, bay
morte–eau (ME)	F	neap–tide
mouillage	F	anchorage
moules	F	mussels
moulin	F	mill
mur	F	wall
musoir	F	mole or pierhead
neuf, –ve	F	new
nevez	B	new
nez	F	nose, promontory
nœud	F	knot
noir, –e	F	black
nord	F	north
nouveau, –el, –elle	F	new
occidental, –e	F	western
oriental, –e	F	eastern
ouest	F	west
palud(ou)	B	marsh, dune
passe	F	passage, pass, fairway
pêche	F	fish
pell	B	distant, remote
penn	B	head, extremity, point
pertuis	F	opening, strait
petit,–e	F	small
peul	B	post
phare	F	lighthouse
pic	F	peak
puerre	F	stone
pieu	F	pile, post
pignon	F	gable
pin	F	pine or fir tree
pladenn	B	rocky underwater plateau
plage	F	shore, beach
plat, –e	F	flat, level
pleine mer (PM)	F	high water (HW)
plo, plou, plu	B	parish
pointe	F	point
pont	F	bridge, deck
port	F	port, harbour
porz, porzig	B	harbour, cove, creek
poste	F	berth
poul	B	roadstead
poull	B	cove, pool, trench, shoal
pratique	F	unofficial pilot
presqu'île	F	peninsula
quai	F	quay, wharf
quatre	F	four
rade	F	roadstead
raz	B	strait, tide race
récif	F	reef
redoute	F	redoubt, fort
reor, revr	B	rear, behind
ressac	F	surf
reter	B	east
rivage	F	shore
rive	F	river bank
rivière	F	river

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Foreign word	*Language*	*English meaning*
roc'h(ou), roh	B	rock
roche	F	rock
rocher	F	rock generally above water
ros, roz	B	wooded hillock
rouge	F	red
roulier	F	ro–ro vessel
roux, rousse	F	reddish
ruisseau	F	rivulet
run(iou)	B	hill
ruz	B	red
sable	F	sand
sablon	F	fine sand
saline	F	salt pan, saltings
sas	F	lock
septentrional, –e	F	northern
seuil	F	sill
sommet	F	summit
sous–marin	F	submarine, underwater
ster	B	river, creek
stiff, stiv	B	spring, source
sud	F	south
tal	B	front, in front of
tenue	F	holding ground
terre–plein	F	levelled open ground, platform
tertre	F	hillock, knoll
tête	F	head
teven, tevenneg	B	cliff, dune
toull	B	cave, hole, pass, shoal
tour	F	tower, circuit
tourelle	F	small tower, turret
traon, traou	B	low, west, valley
traverse	F	shallow ridge across channel or river
treiz, –ig	B	pass
trez	B	sand, beach
tribord	F	starboard
trois	F	three
uhel	B	high, tall
un, –e	F	one
val	F	narrow valley
vallée	F	valley
vase	F	mud
vasière	F	mudbank
vert, –e	F	green
vigie	F	lookout station
village	F	village
ville	F	city, town
vir	B	spit, spire, needle
vive–eau (VE)	F	spring tide
voie	F	track
vor	B	sea, salt water
yoc'h	B	pile of rocks, stack

Notes on Breton geographical names

The language of Brittany, or Armorica, belongs to the Brythonic or southern Celtic group; it is akin to that of the Welsh and Old Cornish, by whom it was introduced in the fifth and sixth centuries. Breton (Brezoneg) is spoken westward of a line from Baie de Saint–Brieuc to the mouth of La Vilaine. There are four main dialects; that of Vannes is the most distinct, particularly in keeping the stress on the final, instead of on the penultimate, syllable.

The orthography of Breton names is much gallicised, eg k often becomes c or qu; g before e or i becomes gu; em, en, become French nasal im, in, etc, eg Kemper becomes Quimper.

The definite article is ar, which becomes al before l and an before d, n, t, or a vowel.

Pronunciation. The digraph ch is pronounced sh as in shop, while c'h is the hard aspirated gutteral, as in Scottish loch.

Initial consonants are subject to 'Mutations', but there is no nasal form as in Welsh, though Breton is full of nasal sounds. The consonants g, b, d, are also subject, when medial, to 'Provections', ie after certain words they become k, p, t.

The following is the Table of Mutations and Provection:

Radical Form	*Middle Mutation*	*Weak Mutation*	*Provection*
k	g	c'h	
p	b	f	
t	d	z	
g	c'h		k
b	v		p
d	z		t
m	v		
s	z		
gw	w		kw

Examples: Karreg Greiz (Kreiz), Roc'h Zu (Du), Lizen Ven (Men).

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SPANISH

Spanish	*English*
abra	cove, creek, haven
acantilado	cliff
aduana	custom house
afuera	outer, outside
aguas muertas	neap tide
aguas vivas	spring tide
agudo	sharp, pointed
albufera	lagoon, pond
aldea	village
alto	height
altura	elevation, latitude, ocean–going
amarillo	yellow
amarradero	mooring, berth
ancho	wide, broad
ancladero	anchorage
ancón	open bay, roadstead
angostura	narrows
angra	small bay, cove
archipiélago	archipelago
arena	sand
arenal	extensive area of sand
arrecife	reef
arroyo	stream, rivulet
astillero	shipyard
atalaya	lookout, watch tower
atraq ue	berth
azul	blue
bahia	bay
bajamar (BM)	low water (LW)
bajo	shoal, low, below, under
baliza	beacon
banco	bank, shoal
barlovento	windward
barra	bar
barranco	ravine
blanco	white
boca	mouth, entrance
boquerón	wide mouth, opening or entrance
boquette	narrow entrance
bosque	woods
boya	buoy
bravo	exposed (coast etc)
braza	fathom
brazo	arm of the sea
bruma	fog, mist
buque	ship
cabeza	head, summit
cabezo	shoal patch, hillock
cabo	cape
cala	narrow cove, steep sided inlet
calado	draught, depth
caleta	cove
canal	channel, canal
canalizo	narrow channel between islands
canto	bluff
capilla	chapel
cargadero	ship–loading (island) structure
carrera, carreiro	narrow channel, passage
casa	house
cascada	waterfall
cascajo	gravel
caserío	hamlet, group of houses
castillo	castle
castro	hill or headland surmounted by ruins
cayo	cay
cerro	hill
chico	small
cima	summit
cinco	five
ciudad	city, town
ciudadela	citadel
có	rock, rocky shoal
colina	hill, hillock
collado	hillock, mountain pass

Spanish	*English*
colonia	colony, settlement
colorado	reddish in colour
combustible	fuel
concha	cove
contradique	counter–breakwater
cordillera	mountain range
corona	crown, summit
corriente	current
cortadura	pass, cut, narrow channel
costa	coast
creciente	flood tide
cruz	cross
cuatro	four
cuesta	sloping ground
cueva	cave
cuña	quoin, wedge
cúspide	summit
dársena	basin, dock, backwater
Derrotero	Sailing Directions
desembarcadero	landing place
desembocadura	mouth of a river
dia	day
dique	mole, breakwater, dock, embankment
dos	two
draga	dredger
duna	dune
duque de alba	dolphin
embarcadero	wharf, landing
embocadura	mouth of river, narrows
enfilación	transit
ensenada	bay
entrada	entrance, fairway
ermita	hermitage, chapel
esclusa	lock
escollera	wave trap, breakwater
escollo	shallow rock, reef awash
espigón	spur, spit, jetty, wharf
este	east
estero	creek, inlet
estrecho	strait, narrows
estribor	starboard
estuario	estuary
fango	mud
farallón	stack, steep rocky islet
faro	lighthouse
fondeadero	anchorage
fondo	ground, bottom
fortaleza	fortress
fraile	friar, monk
freo	strait
freu	pass between island and mainland
frontón	bluff
fuerte	fort
garganta	narrow passage, sound
garita	hut, lookout
golfo	gulf
gran, grande	large, great, big
granja	farm
grus	grey
gruía	crane
grupo	group
hacienda	large farm
herradura	horseshoe–shaped bay
iglesia	church
isla	island
isleta	islet
islita	small island, islet
islote, islottillo, islotito	small barren islet, skerry
istmo	isthmus
la, –s, los	the
lago	lake

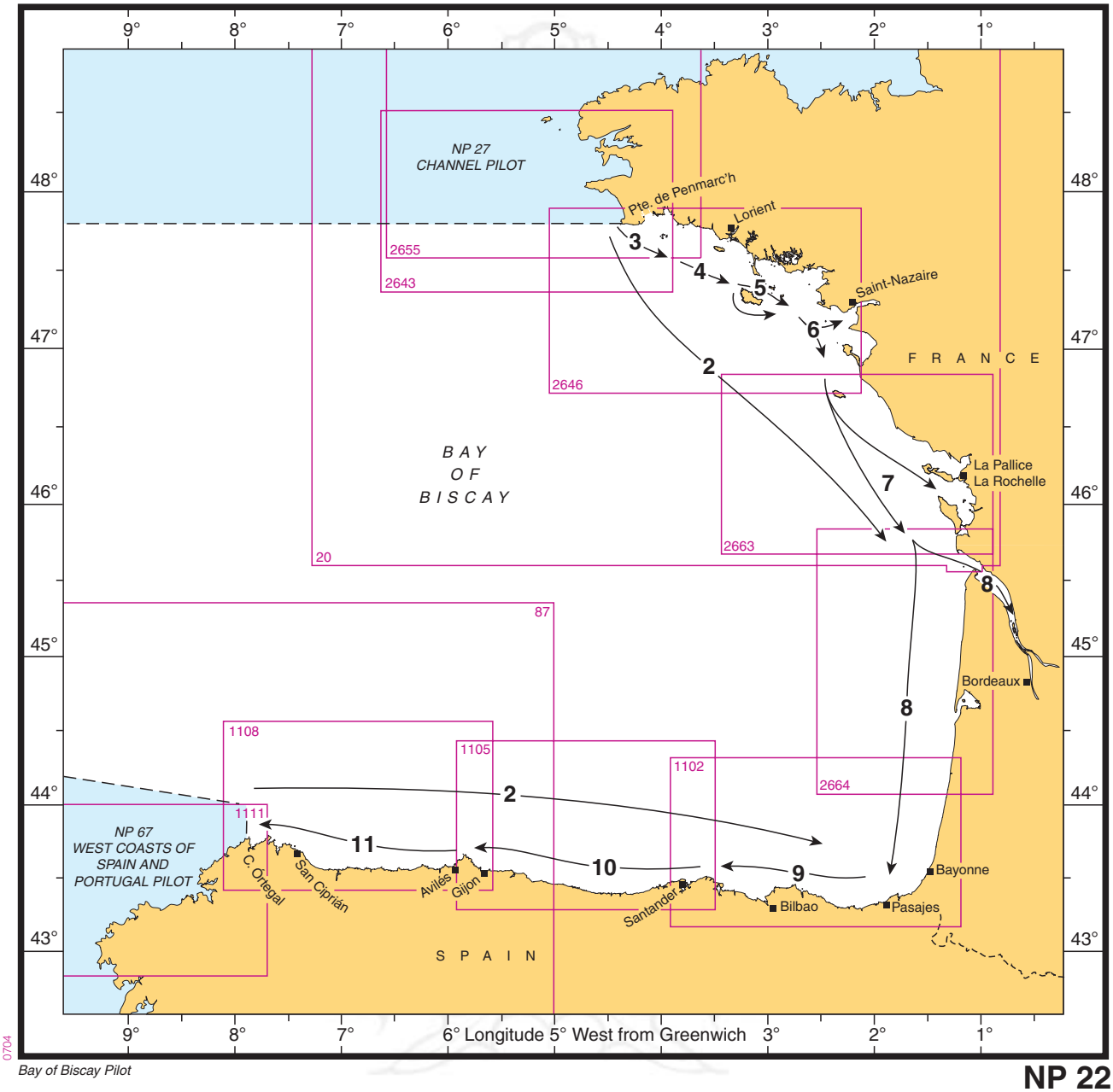
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Spanish	*English*
laguna	lagoon
laja	flat rock
lama	soft mud
lancha	lighter, launch
largo	long
lastra	rocky ledge
levante	eastern
llana, llano, llanuro	plain, flat
lodo	soft mud
loma	hillock, low ridge
luces de enfilación	leading lights
malecón	mole, breakwater
mar	sea
marea	tide
margen	shore, river bank
marisma	marsh
mastil	mast
médano, medaño	dune, sandhill
medio	middle half, mean
meridional	southern
mesa, meseta	tableland, plateau
mogote	tableknoll, islet, isolated rock
molino	mill
montaña, monte	mountain
montículo	knoll
moreno	brown
morro	headland, bluff, breakwater head
muelle	quay, pier, jetty, mole
naufragio	wreck
negro	black
niebla	fog
nordeste	north–east
noroeste	north–west
norte	north
nudo	knot
nuevo	new
occidental	western
oeste	west
oriental	eastern
orilla	shore, edge, river bank
oscuro	dark
palo	mast, spar
pan de azúcar	sugar loaf
pantano	swamp marsh
pardo	dun, brown
pasaje	passage, ferry
paseo	promenade
paso	pass
pedregal	stony or rocky patch
peligro	danger
peña	rock
peñasco	large rock
península	peninsula
peñón	rocky mountain
pequeño	small
pescado	fish
petón	pinnacle rock
pichacho	sharp peak
pico	peak
pié	foot
piedra	stone, rock
piloto	pilot (official)
placer	shoal

Spanish	*English*
playa	beach
pleamar (PM)	high water (HW)
población	town
poblado	village
poniente	western
pozo	well, hole
práctico	pilot
presa	barrage, weir
profundidad	depth
pueblecito	small town, village
pueblito	hamlet
pueblo	town
puente	bridge
puerto	port, harbour
punta	point
puntal	narrow point
quebrada	ravine, gully, cut, gap
quebradero	breaker
rada	roadstead
redondo	round
remolcador	tug
restinga	reef, spit
reventazones	breakers
ría	inlet, estuary
ribera	coast, river bank
río	river
roca aislada	isolated rock
rochel	rocky patch
rodal	shoal, usually rocky and of some extent
rojo	red
rompeolas	breakwater
rompientes	breakers
roquerio	rocky shoal
salinas	saltpans
san, santa	saint
seco	dry
selva	forest
señal	signal
seno	bight, sound
septentrional	northern
sierra	mountain range
silla	saddle
sotavento	leeward
sucio	foul
sud, sur	south
surgidero	anchorage
tenedero	holding ground
teta	nipple, pap
tierra	land
torre	tower
tres	three
umbral	sill
uno, una	one
vaciante	ebb tide
valle	valley
varadero	slipway, patent slip
vega	fertile plain
verde	green
viejo	old
vigía	lookout, watch tower
villa	town, villa
volcán	volcano

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Chapter Index Diagram



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LAWS AND REGULATIONS APPERTAINING TO NAVIGATION

While, in the interests of the safety of shipping, the United Kingdom Hydrographic Office makes every endeavour to include in its hydrographic publications details of the laws and regulations of all countries appertaining to navigation, it must be clearly understood:-

(a) that no liability whatever will be accepted for failure to publish details of any particular law or regulation, and

(b) that publication of details of a law or regulation is solely for the safety and convenience of shipping and implies no recognition of the international validity of the law or regulation.

BAY OF BISCAY PILOT

CHAPTER 1

NAVIGATION AND REGULATIONS
COUNTRIES AND PORTS
NATURAL CONDITION

NAVIGATION AND REGULATIONS

LIMITS OF THE BOOK

Chart 4103

Area covered.

1.1

1 This volume contains Sailing Directions for the W coast of France S from close N of Pointe de Penmarc'h, the N coast of Spain W to Cape Ortegal, and portions of Celtic Sea and the North Atlantic within the limits defined below:

	Lat N	*Long W*
From the French coast at:	47°50′	4°21′
W to position:	47°50′	20°00′
Thence S to position:	45°20′	20°00′
Thence E to position:	44°00′	7°55′
Thence S to the Spanish coast at:	43°45′	7°55′

NAVIGATIONAL DANGERS AND HAZARDS

Coastal conditions

1.2

1 **Poor visibility** is associated with onshore winds especially in the region of the entrance points to Bay of Biscay, see 2.8 for further details.

Westerly gales produce a heavy swell, especially the *Galernas* (1.138) encountered along the N coast of Spain where they also produce strong E-going currents, see 1.104 for further details.

Ice

1.3

1 Ice is very rarely encountered in the area covered by this volume, see 1.116 for further details.

TRAFFIC AND OPERATIONS

Traffic

Concentrations

1.4

1 The greatest concentrations of shipping are likely to be encountered on the through route across the entrance to Bay of Biscay (2.8) and in the approaches to the major ports (1.96) especially Bilbao and the rivers La Loire and La Gironde.

Vessels requiring special consideration

1.5

1 See *The Mariner's Handbook* for details of vessels requiring special consideration.

1.6

1 **French submarines** may exhibit a very quick yellow (amber) anti-collision light with a rate of 120 or more flashes per minute similar to those exhibited by air-cushion vessels when operating in the non-displacement mode.

2 **French surveying ships** carrying out wire-drag surveys usually work in pairs and are connected by a wire up to 3000 m in length supported by floats. They display two black balls. Other vessels should keep well clear in accordance with Rules 1 and 18 of *International Regulations for Preventing Collisions at Sea (1972)* and in particular should not pass between the pair. Details of these surveys are promulgated in local navigation warnings (1.47).

Yachts

1.7

1 In the summer at the weekend several thousand pleasure craft may be at sea in the area between Pointe de Penmarc'h and La Gironde.

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Fishing

General

1.8

1 Bay of Biscay is an area of intensive fishing activity with large fishing fleets based on the numerous fishing ports lying on the NE and S shores of the bay.

Marine farms and fish havens (charted) have been established close offshore in the waters of the bay, and should be avoided.

Fishing grounds

1.9

1 The Tuna fleet amounting to about 250 vessels moves slowly NE from a position about 350 miles SW of Cabo Ortegal in June to a position about 140 miles N of the cape in August. The fleet then divides, one part moving NW then W to reach a point about 350 miles W of Île d'Ouessant in October, the other part moving E, then S, then SW reaching a point about 60 miles NNW of Santander at the same time. The fleet is usually widely dispersed in June but tends to concentrate in August and September.

2 Spanish vessels that fish for tuna from July to November work within 60 miles of the coast during the rest of the year. The larger vessels, usually of 50 to 200 tonnes, catch mackerel in March and anchovy from March to June using purse seine nets. The smaller vessels, mainly within the 20 to 50 tonne range, fish for hake from November to June, and also for mackerel in March and April, using hooks.

1.10

1 **Trawlers** work up to 100 miles offshore SW and W of the coast of Brittany but elsewhere in Bay of Biscay they are seldom found more than 50 miles from land.

1.11

1 **Shellfish** are cultivated intensively in French inshore waters between Pointe de Penmarc'h and Coureau d'Oléron and in Bassin d'Arcachon. Where shellfish beds are known to exist they are shown on the charts; those that are adjacent to waterways and anchorages are mentioned in the text of this volume. Mussel beds often contain posts which cover and uncover and are an especial hazard to small craft.

Exercise areas

Firing practice and naval exercises

1.12

1 French authorities have established numerous firing practice and naval exercise areas in the N and E parts of Bay of Biscay. The principal types of practice carried out and the warning signals used are similar to those described in *Annual Summary of Admiralty Notices to Mariners.* Warning signals displayed ashore are described in the appropriate place in the body of this book.

2 Notice of firing practices and naval exercises is promulgated in French local notices to mariners and broadcast by coastal radio warnings (1.47). The notice details the type of exercise, its duration and restrictions on navigation (if any) but if an established exercise area is used only its title and not its limits are given; these are defined in *Instructions Nautiques*, the sailing directions published by the French Hydrographic Office (1.19).

1.13

1 Spanish sailing directions mention established firing practice areas but none of them lie within the area covered by this volume.

The principal types of practice carried out and the warning signals used are similar to those described in *Annual Summary of Admiralty Notices to Mariners.* Warnings of firing practices are broadcast by radio.

Submarine exercises

1.14

1 Submarines on exercise may be encountered in almost any of the waters covered by this volume. Certain areas where submarines exercise most frequently are indicated on chart 1104 and mentioned in the appropriate place in the body of this book but none have specified limits.

1.15

1 For general information on the characteristics of submarines and visual signals used to denote their presence see *The Mariner's Handbook* and *Annual Summary of Admiralty Notices to Mariners.* The latter also gives details of the pyrotechnics and smoke candles used by submerged submarines and the procedure to be followed by vessels finding evidence of a submarine sinking. French and Spanish submarines and warships use similar signals, pyrotechnics, smoke candles and indicator buoys to those described.

Minelaying and mine countermeasures exercises

1.16

1 Exercise minefields may be laid anywhere off the French coast, normally in inshore waters. Each is activated for brief periods only.

Minelaying and mine countermeasures exercises in French waters are carried out in a similar manner to those described in *The Mariner's Handbook* and *Annual Summary of Admiralty Notices to Mariners.*

CHARTS

Admiralty charts

1.17

1 British Admiralty charts of the area covered by this volume are adopted or compiled from French and Spanish Government charts and are all metric. These charts are based on surveys of varying dates, those of the major ports and their approaches mostly being carried out in the last 40 years using echo sounders. In other coastal waters, especially those used infrequently except by small vessels, they are compiled from older lead line surveys.

2 Soundings off the continental shelf were mostly obtained by HM Surveying Ships and other vessels on passage and are not the results of systematic surveys.

1.18

1 In certain areas where British Admiralty charts show insufficient detail for navigation close inshore these Sailing Directions have been written using foreign charts. These are not quoted as reference charts in the text which has been written on the assumption that mariners wishing to navigate in those areas will have provided themselves with suitable charts on which to do so.

Foreign charts

1.19

1 Charts of French and Spanish coastal waters and ports are published by the French and Spanish Hydrographic Services respectively. In most cases these charts are of a larger scale and sometimes of a more recent date than the equivalent Admiralty chart, though they are not necessarily compiled from more recent information.

2 French and Spanish charts may be obtained from the publishing authorities shown below and in *Catalogue of*

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Admiralty Charts and Publications; they are not issued by the Hydrographic Office nor are they corrected by *Admiralty Notices to Mariners.*

3 French charts: L'Établissement Principal du Service Hydrographique et Océanographique de la Marine, postal address:

L'EPSHOM, section 'Délivrances', BP426–29275 BREST–CEDEX.

Spanish charts:

Instituto Hidrográfico de la Marina,
Tolosa Latour No 1,
11007 CÁDIZ.

Datums

Chart datum

1.20

1 On British Admiralty, French and Spanish charts of the area covered by this volume depths are reduced to chart datum which is approximately the level of LAT.

Elevations and heights

1.21

1 On British Admiralty charts of the shores of Bay of Biscay elevations and heights are given above MHWS.

On French charts and British Admiralty adoptions of French charts, heights are given above MSL and elevations of lights are given above MHWS or MSL.

2 On Spanish charts and British Admiralty adoptions of Spanish charts, heights and elevations are given above MSL. Vertical clearances on British Admiralty charts, French charts and British Admiralty adoptions of French charts are given above MHWS, or in certain cases, above the highest known river water level. On Spanish charts and British Admiralty adoptions of Spanish charts, the vertical clearances are given above MHWS or HAT.

Underlined figures on all charts of the area are drying heights above chart datum.

Horizontal datums

1.22

1 On British Admiralty, French and Spanish charts of the area covered by this volume, the positions are based on either World Geodetic System 84 Datum or European Datum. The amount of the shift between WGS and European Datum positions on the shores of Bay of Biscay does not exceed 0′·1 in latitude or longitude.

AIDS TO NAVIGATION

Lights

France

1.23

1 Lights are the responsibility of the Service des Phares et Balises et de la Navigation.

Lights are exhibited at night from evening to morning civil twilight and by day in fog or poor visibility. Exceptionally certain leading lights are exhibited throughout 24 hours sometimes with different characteristics by day.

Spain

1.24

1 Lights are the responsibility of Naval and Government Authorities. They are exhibited from 15 minutes after sunset until 15 minutes before sunrise.

Many lights on the N and NW coasts of Spain are placed at such elevations as to be frequently obscured by mist; the mariner may therefore have little warning of their proximity.

Buoys and beacons

1.25

1 **IALA Maritime Buoyage System (Region A)** (Red to Port) is in use on the coasts and in the harbours covered by this volume. A full description of this system is given in *The Mariner's Handbook.*

Radar reflectors are not charted nor mentioned in the description of buoys and beacons in this book. It can be assumed that most major buoys are fitted with radar reflectors.

2 **ODAS and Wave Recorder Buoys** may be encountered moored off the coasts of the countries covered by this volume, both offshore and close inshore, with some established in the approaches to major ports.

3 These buoy systems vary considerably in size and may be either moored or free-floaing. As far as possible the positions of moored systems will be promulgated by the country concerned and those systems considered to be of a more permanent nature are charted. The systems should be given a clearance of at least 1 mile, or 2½ miles in the case of vessels towing underwater gear.

4 Wave Recorder buoys, generally of smaller dimensions than ODAS buoys, coloured yellow and exhibiting similar lights, may also be encounted off these coasts. They should be given a berth of at least 5 cables. For further information about ODAS buoys see *The Mariner's Handbook*.

Landmarks

1.26

1 Caution is necessary when evaluating the descriptions given in this volume concerning landmarks, such as trees, and the colour and shape of buildings and other marks. New buildings may have been erected and old trees or houses destroyed, so that marks, which may at one time have been conspicuous on account of their isolation, shape or colour, may no longer exist or may now be difficult to identify.

Daymarks

France

1.27

1 The fairway beneath bridges is marked by the following system of lateral daymarks:

Starboard hand: green or black triangle on white square background.

Port hand: red rectangle with a white border.

2 These daymarks are painted on the span of the bridge above the limits of the fairway or on the piers if the whole channel between them is navigable. At night the daymarks may be illuminated or green or red lights may be exhibited from the same positions.

Similar daymarks may be found on the head of breakwaters and moles at the entrance to a harbour and on piers and jetties within them, but daymarks in these situations are no longer being maintained.

PILOTAGE

French ports

1.28

1 At French ports of any consequence pilotage is carried out by pilots commissioned by the state and belonging to an organisation associated with each port authority. It is compulsory for vessels of a certain length or tonnage as

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laid down for each port. Further details are given in the text of this book.

In naval ports the pilotage service comes under the authority of the Harbour Master and pilotage is provided by naval pilots.

1.29

1 In ports where pilotage is compulsory, requests for a pilot should be made between 12 and 48 hours in advance of arrival, or on leaving the previous port of call if this is later. Pilotage fees are surcharged if the request is late.

2 Vessels requiring a pilot are required to make the usual signals given in *International Code of Signals* on entering the pilotage district.

Masters are required to tell the pilot, when he boards, the draught, speed and any special conditions affecting the manoeuvrability of their vessels.

1.30

1 At a few small ports where pilotage is not compulsory and there is no commissioned pilot, pilotage is provided by experienced seamen usually fishermen entitled *Pratiques.* Where information is available on the procedure for making contact with these unofficial pilots it is given in the text of this book, otherwise it is suggested that the request for pilotage be addressed to the Port Authority or Affaires Maritimes (1.82) through the nearest coast radio station.

1.31

1 **French pilot vessels** have the following distinguishing features:

Black hull with narrow white band.
Anchor painted on funnel (if any).
Letters indicating the pilotage station painted in white on the bulwarks forward and aft.

Spanish ports

1.32

1 At the larger Spanish ports the Corporación de Prácticos usually provides the pilotage service and controls berthing and movements. Pilotage is compulsory in all Spanish ports for vessels of more than 500 gt

Requests for pilotage normally should be made 24 hours in advance and may be passed through a Spanish coast radio station.

2 At smaller Spanish commercial ports pilotage is usually compulsory for vessels of more than 50 gt and either a registered or an unlicensed pilot is available.

Further details concerning pilotage at individual ports are given in the body of this book and in *Admiralty List of Radio Signals Volume 6(2).*

1.33

1 **Spanish pilot vessels** generally display a blue flag with a white letter 'P' on it by day; at night they exhibit the lights prescribed by *International Regulations for Preventing Collisions at Sea, 1972.*

RADIO FACILITIES

Electronic position fixing systems

General information

1.34

1 Loran-C, a long range ocean navigation system and DGPS are available in the area covered by this volume.

A summary of these systems is given in the following paragraphs; for further details see *The Mariner's Handbook* and *Admiralty List of Radio Signals Volume (2).*

Warnings concerning transmission failures and known propagation anomalies affecting these systems are promulgated in area or coastal radio navigation warnings (1.44) as appropriate.

1.35

1 In French coastal waters the Toran and Sylédis systems are also available. Publications and latticed charts connected with these systems are published by the French Hydrographic Service, see 1.19 for address.

Loran-C

1.36

1 All waters covered by this volume lie within the limits of skywave coverage by Loran-C Chains.

Differential Global Positioning System stations

1.37

1 Pen Men, (47°39′N, 3°30′W).
Les Sables-d'Olonne (46°31′N, 1°48′W)
Cap Ferret Light (44°39′N, 1°15′W).
Punta Estaca de Bares Light (43°47′N, 7°41′W).

Radio aids to navigation

Radio direction-finding services

1.38

1 A VHF direction-finding service, for emergency use only, is provided along the French coast; for further details see *Admiralty List of Radio Signals Volume 2.*

Radar stations

1.39

1 **Radar surveillance** systems cover the entrances to La Loire and La Gironde (8.40). For further details see *Admiralty List of Radio Signals Volume 6(2).*

Radar beacons

1.40

1 **Radar beacons** (Racons) are located at a number of lighthouses and buoys as described in the text; for further details see *Admiralty List of Radio Signals Volume 2.*

Radio stations

France

1.41

1 **Port radio stations.** All the ports frequented by merchant vessels, except for a few used only by coasters, operate VHF stations. For further information see *Admiralty List of Radio Signals Volume 6(2)*

Most French marinas and yacht harbours are equipped with VHF stations and keep watch on channel 09 when the Bureau du Port is open for business. For further information see *Admiralty Maritime Communications.*

Spain

1.42

1 **Coast radio stations.** Centro Nacional de Comunicaciones at Madrid remotely controls several RT(MF) stations. In addition Centros Regional de Comunicaciones Radiomaritimas at Bilbao and La Coruña operate several remotely controlled VHF stations that cover the N coast of Spain. For further details see *Admiralty List of Radio Signals Volume 1(1).*

1.43

1 **Port radio stations** at the major ports usually are operated by the Pilotage Service; for further details see *Admiralty List of Radio Signals Volume 6(2).* At the smaller ports the port authority, pilotage service or ship's agent may be obtainable through an adjacent coast radio station, see *Admiralty Maritime Communications* for further details.

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Radio navigational warnings

General information

1.44

1 The World-Wide Navigational Warning Service is described in *The Mariner's Handbook, Annual Summary of Admiralty Notices to Mariners* and *Admiralty List of Radio Signals Volume 3(1);* the last named publication also contains particulars of radio stations and warning messages.

Navarea warnings

1.45

1 The area covered by this volume lies within NAVAREA II; the Area Co-ordinator is the French Hydrographic Service (1.19).

Navtex

1.46

1 A Navtex Service is provided by coast radio stations at Corsen (48°28′N, 5°03′W) and Coruña (43°30′N, 8°18′W).

Coastal warnings

1.47

1 **Brest Avurnavs** covering the French coast between Mont Saint-Michel (48°38′N, 1°31′W) and the Spanish frontier are co-ordinated by the Regional Maritime Authority. Urgent messages are broadcast on receipt and after the next silence periods. All messages extant are broadcast at the routine times given in *Admiralty List of Radio Signals Volumes 1(1) and 3(1).*

1.48

1 **Spanish** coastal warnings of an urgent or important nature are broadcast in English and Spanish by Machichaco, Cabo Peñas and La Coruña Coast Radio Stations on RT(MF) on receipt and/or after the next silence periods. In addition these stations broadcast, in both languages, all warnings concerning all or part of the N coast of Spain on their RT(MF) working frequency at the routine times given in *Admiralty List of Radio Signals Volumes 1(1) and 3(1).*

Radio weather services

1.49

1 Details of radio weather services (1.117) and diagrams relating to weather reporting and forecast areas are contained in *Admiralty List of Radio Signals Volume 3(1).*

REGULATIONS

International regulations

Submarine cables and pipelines

1.50

1 For information on *The International Convention for the Protection of Submarine Cables, 1884*, as extended by the *Convention on the High Seas, 1958*, see *The Mariner's Handbook.*

Pollution of the sea

1.51

1 For information on *The International Convention for the Prevention of Pollution from Ships, 1973,* modified by the Protocol of 1978, known as *MARPOL 73/78,* see *The Mariner's Handbook.*

French regulations

Regulations for tankers and vessels carrying dangerous substances off the North and West coasts of France (SURNAV).

1.52

1 **General.** Tankers and vessels carrying dangerous or polluting cargoes, which are over 1600 grt, must keep at least 7 miles from the French coast in the area covered by this volume, unless within:

The access channel to Concarneau, Lorient, La Loire, Les Sables d'Olonne, La Rochelle-Pallice, La Gironde and Bayonne.

1.53

1 **Reports.** Tankers and vessels carrying dangerous or polluting cargoes which intend to enter French territorial waters, or sail from a French port or anchorage, must inform the appropriate Centre Régional Opérationnel de Surveillance et de Sauvetage (CROSS). The message must be prefixed SURNAV-FRANCE and sent 6 hours before entering French territorial waters, or getting underway if already in territorial waters. Amendments must be reported immediately. Full details are given in *Admiralty List of Radio Signals Volume 6(2).*

1.54

1 **Reporting maritime incidents, accidents, defects and assistance.** All vessels of 300 gt or more, on commercial pasage within the French Economic Zone and within 50 miles of the French coast must report in the SURNAV format any such occurrence to CROSS (Griz-Nez, Jobourg, Corsen or Étel). Additionally, any vessel sighting pollution, oil slicks, containers or packages afloat in the area must report same to the aforementioned CROSS.

2 The same regulations apply to all vessels of 300 gt or more whilst navigating within a Marine Nature Reserve. In this instance the report must be made to CROSS La Garde.

A vessel going to the assistance of a damaged vessel within 50 miles of the French coast is also required to report to the same authorities.

3 For further details of signals required by the above regulations and detailed format, see *Admiralty List of Radio Signals Vol 6(1).*

4 Vessels with defects affecting their ability to manoeuvre or navigate safely, whilst within French territorial waters, are required to take such action as the Préfet Maritime may require to ensure the safety of navigation and avoid pollution.

1.55

1 **Single-hulled tankers** more than 15 years old and carrying heavy fuel oil, tar, asphaltic bitumen or heavy crude oil intending to enter the French Exclusive Economic Zone must give at least 24 hours notice to the relevant French MRCC/CROSS, see 1.73. Such access is strictly controlled by the French authorities.

2 Additionally, all single-hulled tankers of whatever age, irrespective of their flag, transporting heavy petroleum products in areas under French jurisdiction are not authorised to enter, depart from or anchor adjacent to, any French port or sea terminal without permission to do so.

Navigation in internal waters

1.56

1 **Introduction.** The regulations summarised in the next paragraph apply to vessels 25 m or more in length not entitled to fly the French flag, and in certain circumstances may also be applied to vessels of a lesser length, while they are in French Internal Waters (i.e. waters lying between the coast and the straight base lines or bay closing

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lines) between Pointe du Grouin (48°43′N, 1°50′W) *(Channel Pilot)* and Négade Beacon (45°29′N, 1°09′W) (8.55) and also in Bassin d'Arcachon (44°42′N, 1°08′W) (8.200). The Maritime Authority mentioned in the regulations is the Préfet Maritime de la Deuxième Région or any authority acting in his name.

1.57

1 **Navigation** is not allowed except in the following circumstances:

To reach harbour, after giving the requisite notice of arrival, and to leave harbour, or:

The passage is part of the vessel's customary function (coastal transportation, exploitation of resources, maritime work), on condition that the exception to the national monopoly for the activity in question has been granted, or:

2 In the event of foul weather, damage or *force majeure,* having first informed the Maritime Authority, or:

In other circumstances, after authorisation by the Maritime Authority.

Anchoring or stopping are not allowed except:

In an established waiting area for a period of less than 72 hours, after notifying the Port Authority, whilst waiting to enter harbour, or:

3 When anchoring or stopping is part of the vessels normal function, on condition that the exception to the national monopoly for the activity in question has been granted, or:

In the event of foul weather, damage or *force majeure,* having first informed the Maritime Authority who will specify the location and set the conditions of anchorage.

4 The period at anchor allowed for a vessel waiting to enter harbour may be extended at the request of the Port Authority.

Vessels at anchor shall signal their intention to get under way 6 hours in advance to the Port Authority or the relevant CROSS (1.73) or the nearest coastguard station (1.75).

5 **Other activities.** Special permission must be obtained from the Maritime Authority before engaging in any activity not mentioned above which within the Territorial Sea would cause the passage to lose its innocent character, such as launching a boat, landing or diving. See *The Mariner's Handbook* for information on territorial waters and innocent passage.

1.58

1 Vessels described at 1.56 must keep watch on VHF channel 16, or the special frequency prescribed for certain areas, and respond to any request for information from the French authorities.

Reports and authorisation requests mentioned in 1.57 should be addressed:

2 By post or telegraph to Préfet Maritime de la Deuxième Région (telegraphic address Marine Brest) or:

By VHF radio or any other method of signalling to a CROSS (1.73) or to a coastguard station (1.75).

Quarantine

1.59

1 On entering French Territorial Waters from a foreign port a vessel should display flag 'Q' of *International Code of Signals* by day; at night, but only within the port limits, she should exhibit a red light over a white light.

French ports that can grant pratique by radio are listed in *Admiralty List of Radio Signals Volume 1(1).*

2 There must be no contact with the shore until pratique has been granted. Special measures may be taken in the case of ships considered to be a health hazard; these include landing and hospital treatment for the sick, isolation, vaccination, disinfection of cabins and baggage. If passengers are allowed to disembark and proceed to their destinations, they may have to do so under medical supervision.

3 Maritime declarations of health are waived for all vessels, irrespective of flag, proceeding from one port to another in countries of the European Union (EU), provided they do not call at a port in a third country. In normal circumstances pratique need not be requested for these vessels.

Any case of illness suspected to be of an infectious nature on board, or that has occurred during the voyage, must be reported to the Port Health Authority by radio, see *Admiralty List of Radio Signals Volume 1(1)* for further details, or immediately on arrival if the vessel has no radio.

Measured distances

1.60

1 Vessels carrying out speed trials on measured distances (1.101) must display the signal laid down in *International Code of Signals.* Other vessels in the vicinity must keep well clear. Trawling and fishing are prohibited on the running track of a measured distance.

Discovery of suspicious objects

1.61

1 Any vessel at sea discovering an object suspected of containing dangerous material especially a weapon such as a bomb, shell, mine or torpedo should make every effort to mark it and should make a report by radio to CROSS CORSEN or CROSS ÉTEL (1.73) or, if they cannot be contacted, the Chef du Quartier des Affaires Maritimes or the nearest Capitaine du Port.

2 If the suspicious object has been landed on deck or caught in nets or a trawl, the vessel must not enter port except with the permission of the Port Authority, must keep clear of other vessels and the coast and should try to reach one of the Temporary Holding Areas for Dangerous or Suspicious Objects listed in Appendix I. The position where the object is deposited should be marked with care. If it is considered that depositing the object would be dangerous, the vessel should anchor in the zone until a disposal unit arrives.

3 Vessels in port discovering a suspicious object must cease all work and contact the nearest signal station or CROSS giving a description of the object, its geographical position and the depth, if submersed.

Protection of wildlife

1.62

1 Several islands and islets off the coast of Brittany and in Golfe du Morbihan are nature reserves. Landing on them is controlled and at certain times of the year prohibited, especially during the nesting season. Further details are given where these islands are mentioned in this book.

Spanish regulations

Temporary closure of ports

1.63

1 Access to Spanish ports may be prohibited or subject to certain regulations, on account of naval manoeuvres, exercises or other causes.

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In such cases a warning signal consisting of three balls disposed vertically by day, or three red lights similarly disposed at night, will be displayed from a conspicuous position and also by watch vessels.

2 Vessels wishing to enter or leave when these signals are displayed shall by day make the signal for a pilot in accordance with *International Code of Signals* followed by her callsign; at night burn one or several bright lights and also sound her whistle, and await the arrival of a watch vessel.

If a watch vessel hails or fires a gun a vessel must immediately stop or heave-to.

3 Vessels arriving shall, should the occasion arise, submit to a visit from the watch vessel which will give them the following information:

If a special examination service is established and where it is to be found.

If the port is closed and for how long.

Any special directions for navigating within a particular area.

4 Vessels leaving will receive their instructions from the Port Authority.

Masters of vessels not complying with these regulations do so at their risk and peril, and are liable for any damage they may cause.

Prohibited tankers

1.64

1 **Single-hulled tankers** carrying heavy fuel, tar, asphaltic bitumen or heavy crude oil are forbidden entry to Spanish ports, terminals and mooring areas.

Quarantine

1.65

1 Spanish quarantine regulations are similar to those of France (1.59).

SIGNALS

International signals

Port traffic signals

1.66

1 The International Port Traffic Signals, described in *The Mariner's Handbook,* have been adopted at all French Port Signal Stations mentioned in this book; any local instructions and auxiliary signals known to be in use are described at the appropriate place in the text.

International Port Traffic Signals are also in use at some Spanish ports; where this is known to be the case it is mentioned in the description of the port.

Storm warning signals

1.67

1 The International System of Visual Storm Warning Signals prescribed by *International Convention for the Safety of Life at Sea (SOLAS) 1974* and described in *The Mariner's Handbook* is used in France and Spain.

French signals

Signal stations

1.68

1 French naval signal stations are located at prominent positions along the coast, see 1.75 for further details. They are charted as coastguard stations on British and French charts; on older British charts they are shown as signal or semaphore stations and on older French charts as *'Vigie'* if they keep permanent watch and *'Sémaphore'* if they keep watch by day only.

2 In addition to their coastguard functions (1.75) these stations:

Display storm warning signals (1.67).

Promulgate urgent safety messages and small craft strong wind warnings.

Respond to requests for information from pleasure craft.

They communicate with vessels by VHF RT, flashing lamp or flag signals of *International Code of Signals.*

Small craft strong wind warnings

1.69

1 White rhythmic lights are exhibited, by day only, at the entrance to certain harbours and landlocked waters when winds force 6 or more are forecast. The imminence of winds of this strength is indicated by the character of the light:

Within 6 hours: eight flashes in 4 seconds followed by 4 seconds dark.

Within 3 hours or already occurring: very quick flashes.

Maritime police vessels

1.70

1 French warships and other vessels when employed on maritime law enforcement duties:

By day display a white and blue triangular flag with the letter 'P' on the white part.

At night exhibit an all round violet quick flashing light.

DISTRESS AND RESCUE

General information

1.71

1 For general information concerning Distress and Rescue see *Annual Summary of Admiralty Notices to Mariners* and *The Mariner's Handbook.*

Rescue services

United Kingdom

1.72

1 Rescue services in the United Kingdom Search and Rescue Region are described in the *Annual Summary of Admiralty Notices to Mariners.*

The NW part of the area covered by this volume, N of 45°N and W of 8°W, lies within the Falmouth SAR Region, see *Channel Pilot* for further details.

France

1.73

1 In France the Préfets Maritimes have general responsibility for maritime SAR; co-ordination of SAR operations is carried out by Centres Régionaux Opérationnels de Surveillance et de Sauvetage (CROSS).

2 CROSS Etel located at Château de la Garenne (47°40′N, 3°12′W) is responsible to the Préfet Maritime de la Deuxième Région (Marine Brest) for the area S of the latitude of Pointe de Penmarc'h (47°48′N), E of the Falmouth SAR Region and N of a line drawn from position 45°N, 8°W through position 44°20′N, 4°00′W to the frontier with Spain.

3 Co-ordination of operations in the area S of the latitude of Pointe du Grouin-du-Cou (46°21′N) is delegated to SOUS-CROSS Soulac (45°31′N, 1°07′W) except from 15th September to 15th June when it is retained by CROSS Étel between the hours of 2200 and 0700.

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4 The various services that the CROSS can call upon are similar to those of the United Kingdom; they include warships and maritime patrol aircraft kept in readiness at Lorient and also the lifeboat stations listed at 1.75. Ocean-going tugs are based at Saint-Nazaire (6.108), La Rochelle-Pallice (7.207) and Bordeaux (8.167). For information concerning CROSS Étel and SOUS-CROSS Soulac communications seet *Admiralty List of Radio Signals Volume 5*.

Spain

1.74

1 The national Rescue Co-ordination Centre at Madrid co-ordinates SAR operations and has two regional MRCCs at Bilbao and Gijón, and a MRSC at Santander. SAR aircraft, including helicopters, are based at Madrid and SAR helicopters at La Coruña. An ocean-going salvage tug is based at Gijón (10.177).

Coastguard stations

1.75

1 French naval signal stations, in addition to their duties described at 1.68, are responsible in conjunction with the CROSS for initiating rescue operations. They also use their radar to inform and guide rescue vessels. Their locations and periods on watch are:

Place	*Watch*
Penmarc'h (3.11)	Permanent
Beg-Meil (3.148)	Day
Beg Melen, Île de Groix (4.26)	Day
Fort Saint-Julien, Quiberon (5.30)	Day
Pointe du Talut, Belle-Île (5.9)	Day
Piriac-sur-Mer (5.387)	Day
Pointe de Chémoulin (6.27)	Permanent
Saint-Sauveur, Île d'Yeu (7.14)	Day
Les Baleines, Île de Ré (7.149)	Day
Chassiron, Île d'Oléron (7.149)	Day
Pointe de Grave (8.37)	Day
Cap Ferret (8.195)	Day
Messanges (8.235)	Day
Socoa (8.253)	Permanent

Spain

1.76

1 In Spain coastguard duties are carried out by the Guardia Civil. They have numerous stations around the coast, but only those that are prominent or important for other reasons are mentioned in the body of this volume.

Lifeboat stations

France

1.77

1 The Société Nationale de Sauvetage en Mer (SNSM) maintains offshore lifeboats at constant readiness at the following places:
Saint-Guénolé (3.11).
Le Guilvinec (3.11).
Étel (4.199).
2 Le Palais (5.30).
L'Herbaudière (6.27).
Port Joinville (7.14).
Les Sables-d'Olonne (7.51).
La Cotinière (7.149).
Port Bloc (8.37).
3 Cap Ferret (8.195).
L'Ardour, Anglet (8.253).
Saint-Jean-de-Luz (8.253).
The society also maintains smaller lifeboats at:
Loctudy (3.84).
Bénodet (3.84).
4 Trévignon (3.148).
Beg-Meil (3.148).
Doëlan (Clohars-Carnoët) (4.26).
Port-Tudy (4.79).
Port Maria, Quiberon (5.30).
5 La Trinité-sur-Mer (5.145).
Le Crouesty (5.145).
Arradon (5.247).
Damgan (5.295).
Pénestin (5.355).
La Turballe (5.395)
Le Croisic (5.387).
6 Pornichet (6.62).
Pornic (6.186).
L'Herbaudière (6.27).
Saint-Gilles-Croix-de-Vie (7.51).
La Rochelle-Les Minimes (7.180).
7 Île d'Aix (7.249).
Royan (8.37).
Pauillac (8.92).
Capbreton (8.195).
Arcachon (8.207).
Hendaye (8.253).

Spain

1.78

1 **Lifeboats** are stationed at:
San Sebastián (9.49).
Bermeo (9.133).
Santander (10.14).
Gijón (10.149).

These vessels are maintained at 20 minutes notice and have the following characteristics: crew of six; length 13·5 m; beam 3·7 m; speed 13 kn, range 290 miles; equipment MF and VHF radio, VHF DF.

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COUNTRIES AND PORTS

FRANCE

General description

Chart 1104

1.79

1 France, formally called La République Française by the French, occupies the W coast of Europe between the parallels 51°05′N and 42°20′N. It is bounded N by the English Channel called La Manche by the French, NE by Belgium and Luxembourg, E by Germany, Switzerland and Italy, S by the Mediterranean, SW by Spain and Andorra and W by the Atlantic Ocean. The total area is 549 090 square km.

National limits

1.80

1 France claims a limit of 12 miles for its territorial waters, 12 miles fishery zone (FZ), 12 miles contiguous zone (CZ) and 200 miles Exclusive Economic Zone (EEZ). For further details see *Annual Summary of Admiralty Notices to Mariners* and *The Mariner's Handbook.*

History

1.81

1 France, descended from the Roman province of Gaul, may be said to have come into being in 987 when Hugh Capet, ruler of the western Franks first became King of France.

Medieval France was a feudal monarchy which grew in strength, reaching its zenith in the reign of Louis XIV (1643–1715).

2 The French monarchy was overthrown by the revolution of 1789–92, and the First Republic came into being, lasting until 1804. This period had a notable achievement in the production of the metric system of weights and measures, since adopted by most countries.

3 In 1804, Napoléon Bonaparte became Emperor, and for the next 10 years continued his career of conquest which at one time made him master of most of Europe. After the Napoleonic wars, the monarchy was restored in 1815 and lasted until the revolution of 1848, when it gave way to the Second Republic. Louis Napoléon, nephew of Napoléon Bonaparte, who was elected President, later ruled as Napoléon II until the Franco-Prussian war of 1870, a period known as the Second Empire.

4 The Third Republic, which came into existence in 1871 and lasted until 1940, was a period of comparative calm and prosperity marred only by the war of 1914–18. During the German occupation, 1940–44, Maréchal Pétain ruled France as a dictator.

After the liberation of Paris in 1944 a provisional government was formed under Général de Gaulle.

5 The Fourth Republic, following a referendum, was set up in 1944. Its constitution, however, favoured political instability and France had 26 governments in 14 years. In 1958 Général de Gaulle was temporarily invested with dictatorial powers and invited to reform the constitution, introducing the Fifth Republic.

France is a member of the United Nations (UN), the EU and of NATO.

Government

1.82

1 Under the constitution of the Fifth Republic the President is elected by universal suffrage for a period of 5 years. He presides over the Council of Ministers. After consultation with the Prime Minister and the Presidents of the two Houses, he can dissolve the National Assembly. In an emergency he may assume special powers, but cannot dissolve the National Assembly during such a period. He may submit disputed legislation to a referendum.

2 The Prime Minister is appointed by the President as is the Council of Ministers on the Prime Minister's recommendation. They are responsible to Parliament which consists of the National Assembly elected by direct suffrage and the Senate elected by indirect suffrage.

There is a Constitutional Council which supervises elections and referenda and acts as guardian of the constitution.

3 For administrative purposes the country is divided into 96 Départements each governed by a directly elected General Council. The Départements are sub-divided into Arrondissements and further sub-divided into Cantons which contain a number of Communes. The affairs of a Commune are under a Municipal Council, elected by universal suffrage, which elects a Mayor.

4 The Départements are also grouped into 22 Établissements Publics Régionaux for national development work, planning and budgetary policy. Executive power is vested in the Presidents of the Regional Councils which are directly elected. Coastal Regions within the area covered by this volume (and their chief towns) are: Bretagne (Rennes); Pays de Loire (Nantes); Poitou-Charente (Poitiers); Aquitaine (Bordeaux).

5 For defence purposes the N and W coasts of France are divided into two Régions Maritimes each commanded by a Préfet Maritime. Préfet Maritime de la Deuxième Région with headquarters at Brest is responsible for French coastal waters in the area covered by this volume.

The policing and regulation of navigation, pilotage, merchant shipping and fisheries comes under the jurisdiction of the Service des Affaires Maritimes.

Population

1.83

1 In June 2000 the estimated population was 59·3 million. It includes nearly 4 million resident foreigners, the largest groups being Algerian, Portuguese and Moroccan.

Languages

1.84

1 The principal and official language of the country is French which has numerous regional dialects.

Breton a Celtic language is spoken by nearly 1 million people in Brittany. Further details are given in the Glossary.

Basque is spoken in the region close to the Spanish frontier.

Physical features

1.85

1 The coast from Pointe de Penmarc'h to the estuary of La Loire is rocky and broken; it is backed by a low plateau and fronted by reefs in many places and by a number of islands of which Île de Groix and Belle-Île are the largest.

2 Between La Loire and La Gironde estuaries the coastland is generally low and flat. It consists mainly of

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dunes where it faces the ocean and marshland where it is indented and sheltered by Îles de Noirmoutier, de Ré and d'Oléron.

3 Between La Gironde and L'Adour rivers the coastland consists of dunes backed by a low sandy plain covered in conifer forests. Thence to the Spanish frontier the coast becomes rocky and indented and is backed by the W end of the Pyrenean mountain range.

1.86

1 The principal rivers flowing into Bay of Biscay are La Loire (6.3) and La Gironde (8.6); they carry the major portion of the maritime traffic calling at French ports covered by this volume. La Charente (7.276) and L'Adour (8.258) also carry considerable maritime traffic.

2 A well developed system of inland waterways includes the following canals terminating in the area covered by this volume:

Canal de Nantes à Brest (4.183) connecting Hennebont on La Blavet river above Lorient with Nantes (6.176) via Redon on La Vilaine river.

Canal d'Ille-et-Rance (5.383) connecting Redon with English Channel at Saint-Malo.

Canaux du Midi (8.8) connecting Castets-en-Dorthe on La Garonne above Bordeaux with the Mediterranean.

Industry and trade

1.87

1 France is nearly self-sufficient in agriculture; chief products are cereals, sugar-beet, potatoes, fruit, vegetables, beef, pork and poultry. Wine production is second in the world league and forestry is an important industry.

The fishing industry is adequate for the country's needs; shellfish account for a third of the catch by weight.

2 Mineral and energy resources are varied, but insufficient for the country's needs. They consist of coal, iron ore, bauxite, uranium, potash and sulphur. There is an important oil-refining industry chiefly utilising imported crude oil. Natural gas production plays an important part in serving the nation's need for energy.

3 Principal imports are: crude oil, coal, iron ore, timber and wood pulp, phosphates, cattle feed, wool, cotton, jute, rubber, vegetables, fruit, coffee, cocoa, machine tools and manufactured goods.

Principal exports are: wine, cereals, sugar, fruit, early vegetables, sulphur, textiles, motor vehicles, luxury goods and manufactured products.

4 France's main trading partners are: other members of the European Union, the United States, Japan and territories formerly part of the French empire.

SPAIN

General description

1.88

1 Spain, known to the Spanish as España, occupies about five-sixths of the Iberian peninsula which forms the SW extremity of Europe. It is bounded N by Bay of Biscay and the Pyrenees, E and S by the Mediterranean and Straits of Gibraltar, SW by the Atlantic and W by Portugal and the Atlantic. Continental Spain has an area of 492 592 square km.

National limits

1.89

1 Spain claims a limit of 12 miles for its territorial waters, 12 miles fishery zone (FZ) and 200 miles exclusive economic zone (EEZ). For further details see *Annual Summary of Admiralty Notices to Mariners* and *The Mariner's Handbook.*

History

1.90

1 Modern Spain is descended from the kingdoms of Léon, Castilla, Navarra, and Aragón, which survived in the N part of the country after the Moorish conquest of 711 AD. During the next 700 years these kingdoms gradually united, and at the same time pressed the Moors S. The final unification, brought about by the marriage of Ferdinand of Aragón to Isabella of Castilla, took place in 1479, and the reconquest of the country was completed in 1492. Four months later, Columbus sailed on his voyage of discovery, the first step in the foundation of Spain's empire which, during the seventeenth and eighteenth centuries, included most of South and Central America, and Philippine Islands.

2 During the nineteenth century Spain was rent by civil wars and her colonies gradually became independent. After the 1931 elections, the king left the country in order to avert civil war, and a republic was set up which lasted until 1936, when a military revolt in Spanish Morocco led to the outbreak of civil war. The civil war ended in 1939, and the country was then ruled by General Franco until his death in 1975, when he was succeeded by King Juan Carlos I.

Regional patriotism is strong having its origin in the kingdoms from which the modern state is descended. There are separatist movements among the Basques and Catalans.

3 Spain is a member of the United Nations (UN), the EU and NATO.

Government

1.91

1 Spain is a parliamentary monarchy, established by a constitution approved by referendum in 1978, with King Juan Carlos I as head of state.

Legislative power is vested in the Cortes, a bicameral parliament composed of the Congress of Deputies (lower house) and the Senate (upper house) elected by universal adult suffrage for a term of 4 years liable to dissolution. Executive power is vested in the President of the Government, with his cabinet; he is elected by the Congress of Deputies.

2 For administrative purposes the country is divided into 17 Autonomous Communities each having a parliament and a regional government. Seven Autonomous Communities consist of a single Province; the other 10 contain two or more Provinces each of which is administered by a Provincial Council. In all there are 50 Provinces.

3 The Provinces are constituted by the association of Municipalities. In 1991 there were 8077 Municipalities each administered by an Ayuntamiento (Municipal Council) whose members are elected in a universal ballot every 4 years and in turn elect one of their number as Alcalde (Mayor).

4 Coastal Autonomous Communities within the area covered by this volume (and their capitals), listed from E to W, are: The Basque Country (Vitoria) containing the Provinces of Guipúzcoa (San Sebastián) and Vizcaya (Bilbao); Cantabria (Santander); Asturias (Oviedo); Galicia (Santiago de Compostella) containing the Provinces of Lugo (Lugo) and La Coruña (La Coruña).

Population

1.92

1 On 1 January 2000 the population of Spain was 40 499 791.

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Languages

1.93

1 Castilian, commonly known as Spanish, is the native tongue of two-thirds of the population and is the official language of the state.

Galician, a language closely related to Portuguese, is spoken by most people in Galicia. Catalan is spoken by two-thirds of the residents of Cataluña and half those of the Valencian community, in the NE of Spain. Basque, said to have been the language of the original inhabitants of the peninsula, is spoken by one quarter of the population of the Basque Country. These are also official languages in the corresponding Autonomous Communities.

Physical features

1.94

1 The interior of the Iberian peninsula consists of an elevated tableland surrounded by mountain ranges. The N coast is bold and rocky being formed by the slopes of the Cordillera Cantábrica which runs parallel to and about 35 to 55 km from the coast. None of the numerous short rivers flowing into Bay of Biscay are navigable for more than a few miles and nearly all of them are obstructed by bars at their entrances.

Industry and trade

1.95

1 Agriculture has declined in relative importance in recent years but still accounts for a sixth of the working population and of the value of exports. Chief crops are cereals, sugar-beet, vegetables, cotton, sunflower and olive oil. The production of wine and citrus fruits are important industries. Livestock and poultry account for two-fifths of the agricultural revenue.

Fishing is a major and growing industry.

2 Mineral resources are considerable and varied but mostly found in small or moderate quantities. Coal and iron ore are produced in the NW Provinces and in Andalucia where copper is also mined. Zinc, lead, tin, wolfram and uranium are also produced.

There is a considerable oil-refining industry chiefly utilising imported crude oil.

3 Spain's main trading partners are: other members of the EU, the United States; Latin America and Japan.

Principal imports are: crude oil, vehicles including engines and parts, electrical and electronic goods, machinery.

4 Principal exports are: vehicles and tyres, fruit and vegetables, petroleum products, footwear, iron and steel.

PRINCIPAL PORTS, HARBOURS AND ANCHORAGES

France

Northern W coast

1.96

Place and position	*Remarks*
Sainte-Marine en Combrit (3.131) (47°53′N, 4°07′W)	Moorings on Rivière de l'Odet
Concarneau (3.217) (47°52′N, 3°55′W)	Major fishing and minor commercial port
Lorient (4.105) (47°45′N, 3°21′W)	Naval dockyard, commercial and major fishing port

Port Autonome Nantes-Saint-Nazaire

Grande Rade de la Loire (6.50) (47°08′N,2°24′W)	Waiting anchorage.
Saint-Nazaire (6.91) (47°16′N, 2°12′W)	Major shipyard and docks at entrance to La Loire
Montoir (6.141) (47°18′N, 2°08′W)	Major commercial port on La Loire
Donges (6.146) (47°18′N, 2°05′W)	Major oil port on La Loire handles ULCC
Cordemais (6.160) (47°17′N, 1°53′W)	Fuel terminal for large power station on La Loire
Nantes (6.166) (47°12′N, 1°34′W)	Commercial port on La Loire

Central W coast

Les Sables-d'Olonne (7.65) (46°30′N, 1°47′W)	Minor commercial dock and fishing port
Rade des Basques (7.187) (46°05′N, 1°15′W)	Waiting anchorage for La Rochelle
La Rochelle-Pallice (7.190) (46°09′N, 1°14′W)	Major commercial port with VLCC terminal
Rade de l'Île d'Aix (7.255) (46°01′N, 1°10′W)	Waiting anchorage for La Charente river
Rochefort (7.299) (45°56′N, 0°58′W)	Minor commercial dock on La Charente
Tonnay-Charente (7.310) (45°56′N, 0°53′W)	Minor commercial port on La Charente

Port Autonome de Bordeaux

Le Verdon (8.73) (45°33′N, 1°03′W)	Container and Ro- Ro terminal at entrance to La Gironde
Pauillac (8.112) (45°13′N, 0°45′W)	Oil terminal and waiting berth on La Gironde
Blaye (8.118) (45°07′N, 0°40′W)	Bulk cargo terminals on La Gironde
Ambès (8.125) (45°00′N, 0°32′W)	Oil terminals: Bec d'Ambès on La Dordogne; Le Marquis on La Garonne
Bordeaux (8.142) (44°50′N, 0°34′W)	Major commercial port, shipyard on La Garonne
Izon (8.181) (44°56′N, 0°22′W)	Minor commercial port on La Dordogne

Southern W coast

Bayonne (8.258) (43°31′N, 1°30′W)	Commercial river port on L'Adour
Saint-Jean-de-Luz (8.301) (43°23′N, 1°40′W)	Small protected anchorage and fishing port

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Spain

Eastern N coast

Place and position	*Remarks*
Pasajes (9.15) (43°22′N, 1°55′W)	Commercial and fishing port
Bermeo (9.139) (43°25′N, 2°43′W)	Major fishing and minor commercial port

Puerto Autónomo de Bilbao (9.174)

El Abra de Bilbao (9.193) (43°22′N, 3°04′W)	Protected waiting anchorage
Petronor Oil Terminal (9.197) (43°22′N, 3°06′W)	Tanker terminal with ULCC berths at Punta Lucero
Santurce docks (9.199) (43°20′N, 3°02′W)	Major commercial and fishing port at head of El Abra
Ría de Bilbao (9.200) (43°17′N, 2°58′W)	Major commercial river port and shipbuilding berths on Río Nervión

Central N coast

Santander (10.20) (43°27′N, 3°48′W)	Major commercial, fishing and shipbuilding port
Gijón (10.160) (43°34′N, 5°41′W)	Major commercial, fishing and shipbuilding port

Western N coast

Avilés (11.14) (43°34′N, 5°55′W)	Commercial and fishing port
Ribadeo (11.104) (43°32′N, 7°02′W)	Fishing and minor commercial port
Burela (11.127) (43°40′N, 7°21′W)	Major fishing and minor commercial port
Puerto de Alúmina Española (11.142) (43°43′N, 7°28′W)	Private industrial port in Ensenada de San Ciprian
Cillero (11.168) (43°41′N, 7°35′W)	Fishing and minor commercial port at head of Ría de Vivero
Cariño (11.192) (43°44′N, 7°52′W)	Fishing and minor commercial port.

PORT SERVICES—SUMMARY

Docking facilities

1.97

1 Le Guilvinec. Shiplift; 225 tonnes (3.42).
Concarneau. Shiplift; capacity 2000 tonnes; Slip; lifting capacity 350 tonnes (3.238).
Lorient. Four patent slips; capacity 1300 tonnes. Three dry docks: largest; length 203·4 m, breadth at entrance 36·0 m, depth on sill 7·0 m (4.151).
Le Croisic. Shiplift; capacity 180 tonnes (5.417).
Saint-Nazaire. Four dry docks: largest capacity up to 240 000 dwt (6.107).

2 La Rochelle-Pallice. Two dry docks: larger 176 m in length (7.224).
Bordeaux. Dry dock: 247 m in length. Patent slip; capacity 1500 tonnes (8.166).
Arcachon. Shiplift; capacity 180 tonnes (8.219).
Bayonne. Dry dock; length 98 m (8.280).
Saint-Jean-de-Luz. Patent slip; lifting capacity 250 tonnes (8.312).

3 Hendaye. Shiplift; capacity 300 tonnes (8.328).
Pasajes. Two floating docks: larger has capacity of 4200 tonnes. (9.40).
Orio. Slip: lifting capacity 150 tonnes (9.73).
Zumaya. Slips; lifting capacity more than 200 tonnes (the maximum size of vessel handled at the port) (9.89).
Ondárroa. Patent slips: largest has a lifting capacity of 600 tonnes (9.119).
Bermeo. Several patent slips: three largest; lifting capacity 250 tonnes (9.148).

4 Bilbao. Two dry docks: largest capacity 15 000 dwt (9.218).
Santoña. Two patent slips: larger; lifting capacity 500 tonnes (9.257).
Santander, Astillero. Two dry docks; capacity of larger 55 000 dwt. Three slips; lifting capacity of largest 11 800 tonnes. (10.55).
Gijón. Four dry docks: largest capacity 26 800 dwt (10.176).
Avilés. Four slips; lifting capacity 1500 tonnes. Dry dock; capacity 600 dwt (11.36).

5 San Esteban de Pravia. Three patent slips: largest lifting capacity 700 dwt (11.60).
Navia. Three slips: largest lifting capacity 500 dwt (11.89).
Figueras. Patent slips: largest lifting capacity 700 tonnes (11.117).
Cillero. Three patent slips; lifting capacity 500 tonnes (11.173).

Other facilities

Salvage services

1.98

Saint-Nazaire (6.108).
Bordeaux (8.167).
Gijón (10.177).

Deratting

1.99

1 Deratting and deratting certificates:
Lorient (4.152).
Saint-Nazaire (6.108).
Nantes (6.174).
Bordeaux (8.167).
Pasajes (9.41).
San Sebastián (9.64).
Bilbao (9.219).
Santander (10.56).
Gijón (10.177).
Avilés (11.37).

1.100

1 Exemption certificates only:
Concarneau (3.239)
La Rochelle-Pallice (7.224).
Bayonne (8.281).

Measured distances

1.101

1 Penmarc'h-Glénan (3.10).
Groix-Kerroc'h (4.76).
Bilbao W approach (9.227).
San Lorenzo-Quintes (Gijón) (10.148).

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NATURAL CONDITIONS

MARITIME TOPOGRAPHY

Charts 1104, 4103

1.102

1 Biscay Abyssal Plain occupies some 30 000 square miles of Bay of Biscay and its W approaches and extends WNW to connect with Porcupine Abyssal Plain. Theta Abyssal Gap (43°45′N, 12°45′W) connects with Iberian Abyssal Plain that lies S of the area covered by this volume.

2 The continental shelf extends about 75 miles SW from the NW part of the French coast; off its S part the width decreases to 25 miles at the head of Bay of Biscay. Along the S shore of the bay the edge of the narrow shelf lies parallel to the Spanish coast at a distance varying from 7 to 33 miles. The continental slope comprises numerous canyons.

3 The principal feature of interest offshore is Gouf de Capbreton (43°40′N, 1°35′W), a submarine canyon that runs in an E—W direction and at its head attains depths of more than 365 m within 3 miles of the shore. North-west of Gouf de Capbreton the submarine contours off the shelf diverge gently; S of it they run roughly parallel to the coast and the slope is steeper.

4 The slope of the contours indicates that sediments are mainly derived from the segment of the shelf that extends NW from Gouf de Capbreton, which receives the effluence of La Loire and La Gironde. Very little sediment originates from the Spanish shore of the bay where the coast is closely backed by Cordillera Cantábrica and the river outlets are small. The general shelf sediments are well sorted sands near the shore merging into less well sorted sands, silts and clays towards the shelf edge. Sediments off the slope in the abyssal plain are comprised almost entirely of mud.

CURRENTS, TIDAL STREAMS AND FLOW

Currents

General remarks

1.103

1 The area covered by this volume (1.1) lies on the SE periphery of the North Atlantic Drift.

The general circulation of the surface currents is shown on Diagram 1.103 which indicates the broad summer and winter patterns. Constancies are generally low; the predominance of a particular direction is often only marginal, as emphasised by the current roses, and the duration of any current varies considerably.

2 Observations of currents within Bay of Biscay are sparse. Where useful details regarding local conditions in coastal waters are available they are given in the appropriate place in subsequent chapters.

Regional patterns

1.104

1 In the W half of the area covered by this volume the predominant sets are E-going throughout the year. Constancies are low indicating marked variability. Taking the year as a whole, only a quarter of the currents are of 1 kn or more and of these a small number exceed 2 kn.

2 In the approaches to Bay of Biscay currents from any direction may be encountered at any time of the year. The predominant sets are markedly variable but do show a slight and consistent change throughout the year. The dominant E-going sets of the winter months relax N as S to SW-going sets extend W. This is probably due to the gradual extension NE of a ridge of high pressure from the semi-permanent Azores anticyclone and the filling of the Icelandic Low. As winter approaches the frequency of deep Atlantic depressions increases and SW to W winds, often of gale force, bring the E-going sets S and E again.

3 The configuration of the N part of the French coast, the numerous islands and the width of the continental shelf lying off it, lead to anomalous inshore currents and eddies, many of which produce onshore drifts.

Along the Spanish coast during the summer, when pressure over the Iberian plateau is relatively low, E winds produce a W-going current. This seldom exceeds 2 kn and is often retarded by W winds. In winter the dominant W winds reverse the current which, it has been reported, can attain a rate of 4 or even 5 kn towards the head of the bay after prolonged W to NW gales.

Tidal streams

1.105

1 Off the French coast between Pointe de Penmarc'h (47°48′N, 4°22′W) and La Gironde estuary the tidal streams are rotary clockwise and set generally NW at the time of LW at Brest, onshore while the tide is rising, and SE when it is HW at Brest. Offshore the tidal streams are comparatively weak but near land especially off salient points and in the channels and estuaries they may be quite strong, see *Admiralty Tidal Stream Atlas France West Coast* for further details.

2 For information on the tidal streams in the W approaches to Pointe de Penmarc'h see 2.9.

No tidal stream data is available for the waters off the N coast of Spain and the W coast of France S of Pointe d'Arcachon. The tidal streams in this area are said to be very weak except off salient points and in narrow channels. Available information of a general nature concerning a few locations and areas is given at the appropriate place in later chapters.

Flow

1.106

1 In the area covered by this volume the effect of the wind is normally the major feature contributing to the combined effect of the tidal stream and the current, except off the N part of the French coast and even there it has a marked influence.

2 Factors to be considered when making a judgement as to the flow likely to be experienced at any time are many but the most important are probably: the recent, prevailing and forecast synoptic situation, see *The Mariner's Handbook* for information on the effect of wind on currents; the proximity of the 200 m depth contour where a change in the direction of flow may occur; tidal streams if relatively close inshore; proximity to large scale effluent from estuaries and rivers. Any of these factors may increase, reduce or even reverse the accepted predominant current.

SEA LEVEL AND TIDES

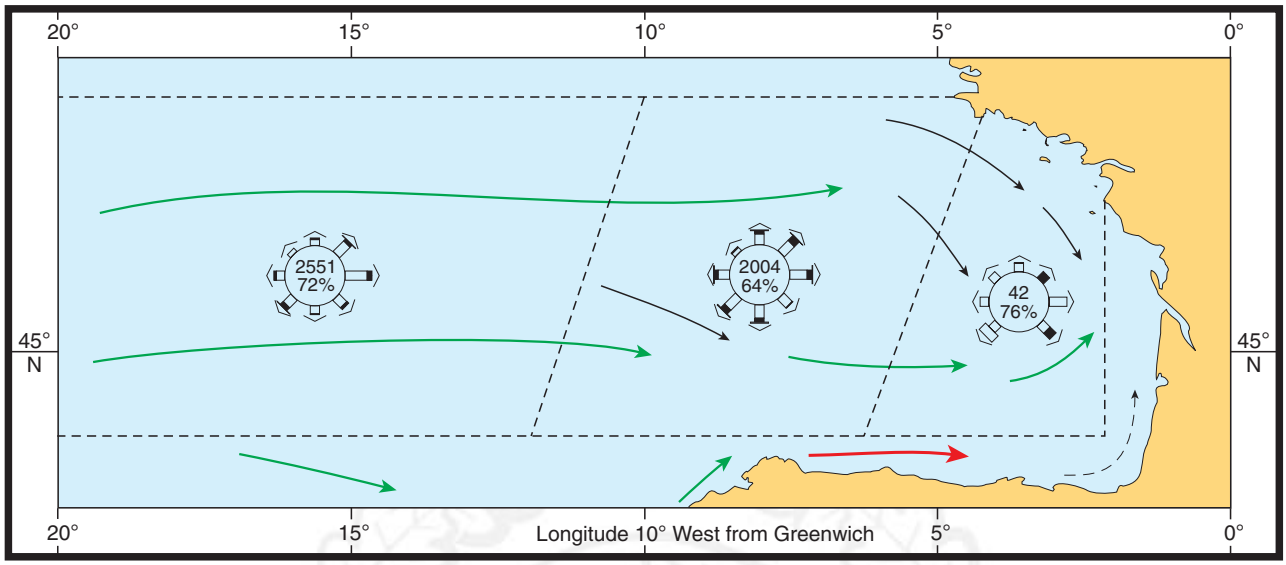
Sea level

1.107

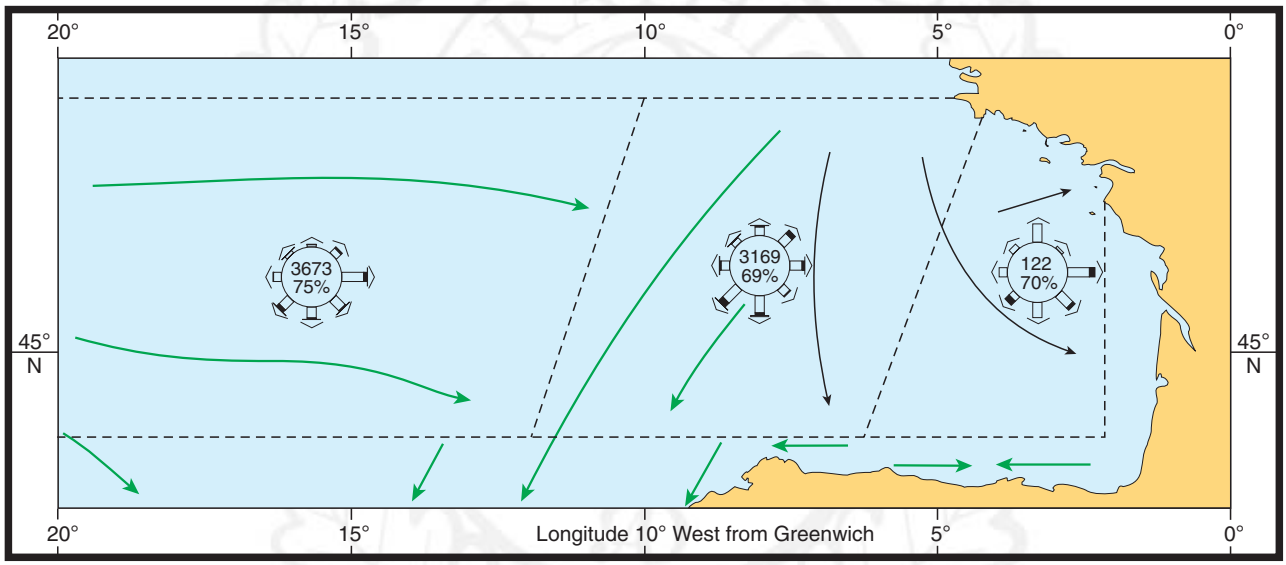
1 The general effect of meteorological conditions on sea level is described in *The Mariner's Handbook* and in *Admiralty Tide Tables.*

In French waters abnormal water levels due to the wind occur in La Loire (6.132) and La Gironde (8.85). The

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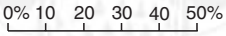
Winter (December- February)



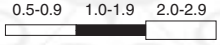
Summer (June-August)

EXPLANATION

Current roses are derived from all available observations made within each of the three areas enclosed by pecked lines. Within each rose the upper figure shows the total number of observations, the lower figure the percentage with rates of less than 0.5 kn. The frequency of currents of 0.5kn or more in each direction is given by the length of the arrow, measured from the circumference of the circle, according to the scale:



The arrow is subdivided to show the frequency of currents of different rates in kn according to the legend:



Arrows indicate the mean direction of currents within the predominant sector (the 90° sector containing the greatest proportion of all the observed currents). The thickness of the arrow shows the constancy of the current (the proportion, of the total number of observations, that set within the predominant sector), thus:

- > 75%: High.
- 50%-75%: Moderate.
- < 50%: Low; implies marked variability in rate and direction, especially the latter.
- Probable direction when observation is low.

Figures show the average rate (to the nearest 1/4kn) of the highest 50% of rates observed in the predominant sector. It is emphasized that rates above and below those indicated may be experienced.

Predominance and variability of currents (1.103)

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barometric pressure also has a noticeable effect on the water level of La Garonne (8.85).

2 On the N coast of Spain meteorological conditions, principally strong winds, give rise to abnormal water levels. In general winds from a W quarter raise the sea level by 0·2 to 1·4 m, those from an E quarter lower it by 0·2 to 0·8 m. Local variations in the cause and extent of abnormal water levels are included in the list of limiting conditions in the description of the ports concerned.

Seasonal changes in MSL are negligible towards the head of Bay of Biscay; elsewhere the changes average only 0·1 m except in the upper navigable reaches of La Loire. For further details see *Admiralty Tide Tables Volume 1*.

Tides

1.108

1 Tides in Bay of Biscay are semi-diurnal in character.

On the French coast between Pointe de Penmarc'h and the mouth of La Gironde, the differences in the time of HW at the various coastal ports, and also in the time of LW, is normally less than 1 hour. The range of spring tides at these ports varies between 4 and 5 m.

On the N coast of Spain the differences in the time of HW, and also in the time of LW, between the coastal ports is also less than 1 hour. The range of the tide at springs at these ports is approximately 3·5 m.

SEA AND SWELL

Waves

1.109

1 For general information on sea, swell, abnormal waves and rollers see *The Mariner's Handbook.*

Abnormal waves and rollers have been reported to occur off the NW coast of Spain.

Swell conditions

1.110

1 Diagrams 1.110.1 to 1.110.4 give swell roses for several areas for January, April, July and October. The roses show the percentage of observations recording swell waves from each sector and for several ranges of wave height.

2 Swell waves in Bay of Biscay come predominantly from between W and NW at all seasons. In the autumn and winter months more than 70% of observations record a swell from this sector and this increases to about 80% in the SE part of the bay where swells from other directions are precluded by the land mass. Incidence of swells from other directions shows some increase on moving out of the bay towards the open Atlantic; of particular note is the N swell which often affects the sea area off NW Spain in spring and summer.

Sea conditions

1.111

1 Sea waves generated locally by the wind are much more variable in direction but the heaviest seas are from between SW and NW.

Winter is naturally the stormiest season when some 20% of observations record either a heavy or very heavy sea.

SEA WATER CHARACTERISTICS

Density

1.112

1 For an explanation of density as applied to sea water, and units used, see *The Mariner's Handbook.*

In winter the surface density ranges from a maximum of 1·0272 g/cm^3 in the NE part of Bay of Biscay to a minimum of 1·0269 g/cm^3 in the area SW of a line drawn from Pointe de Penmarc'h to the mouth of La Gironde.

In spring the density decreases to 1·0268 g/cm^3 in the centre of the bay, and to a minimum in the vicinity of La Gironde estuary of less than 1·0255 g/cm^3.

2 With the onset of summer density further decreases to 1·0258 g/cm^3 in the centre of the area and falls sharply to 1·0241 g/cm^3 at the head of the bay.

In autumn, when salinities are beginning to revert to winter conditions, density starts to increase with maximum values of 1·0266 g/cm^3 and minimum values, in La Gironde region, of 1·0261 g/cm^3.

The lowest values are to be found in the estuarine areas of the W coast of France where densities are less than 1·0240 g/cm^3.

Salinity

1.113

1 For an explanation of salinity as applied to sea water, and units used, see *The Mariner's Handbook.*

The mean surface salinity in the Bay of Biscay is 35·75 decreasing to 35·25 over the edge of the continental shelf and reducing further as the coast is approached. River run off along the W coast of France, mainly from La Loire and La Gironde, has a marked effect reducing salinity values to 33 in coastal waters and even lower in estuarine areas; this reduction is most noticeable in the spring.

2 In the late spring and summer a slight increase in salinity in the ocean occurs giving rise to values of up to 35·8.

In the autumn levels begin to return to winter conditions; 35·75 in the deeper waters with salinities reducing towards the head of Bay of Biscay with minimum values of 33.

Sea surface temperature

Mean values

1.114

1 Sea surface temperatures are at their lowest in late February or March when values range between 9°C in the N and 12°C in the S.

Maximum temperatures are attained in August when they exceed 21°C in the SE of Bay of Biscay.

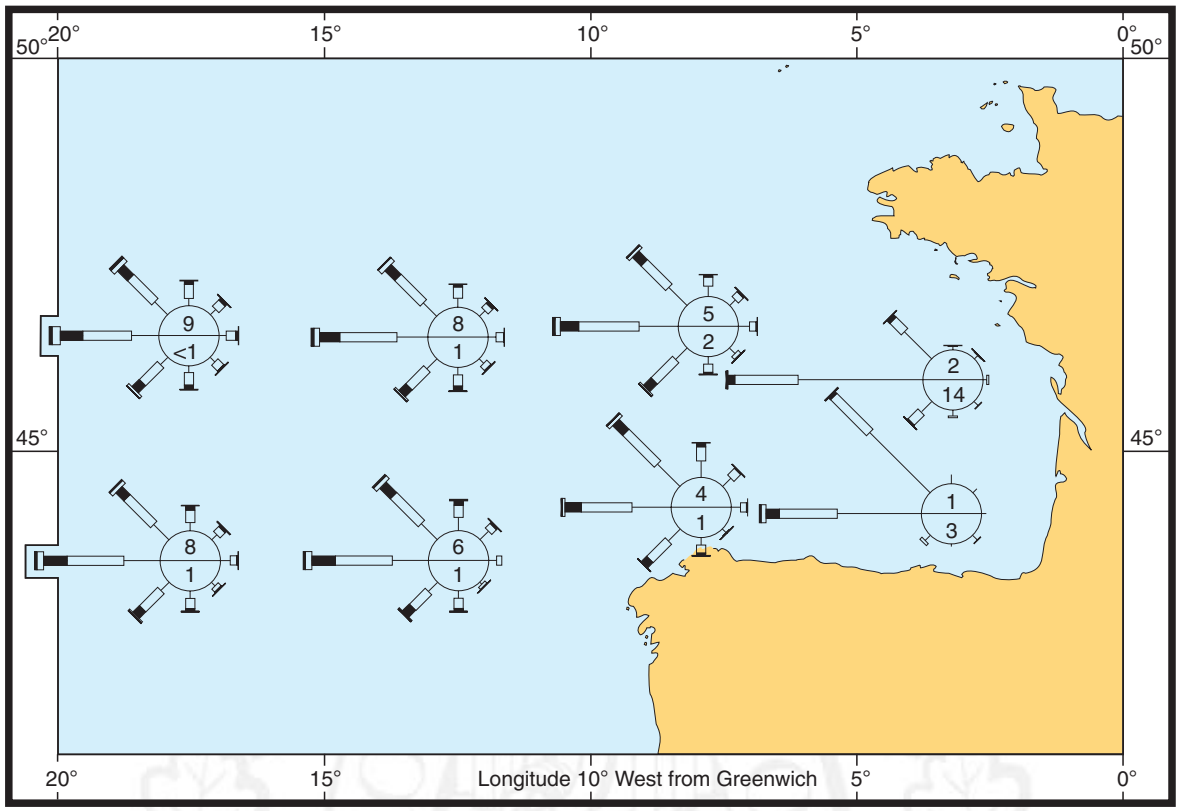
Diagrams 1.114.1 to 1.114.4 show the distribution of mean sea surface temperature for February, May, August and November.

Variability

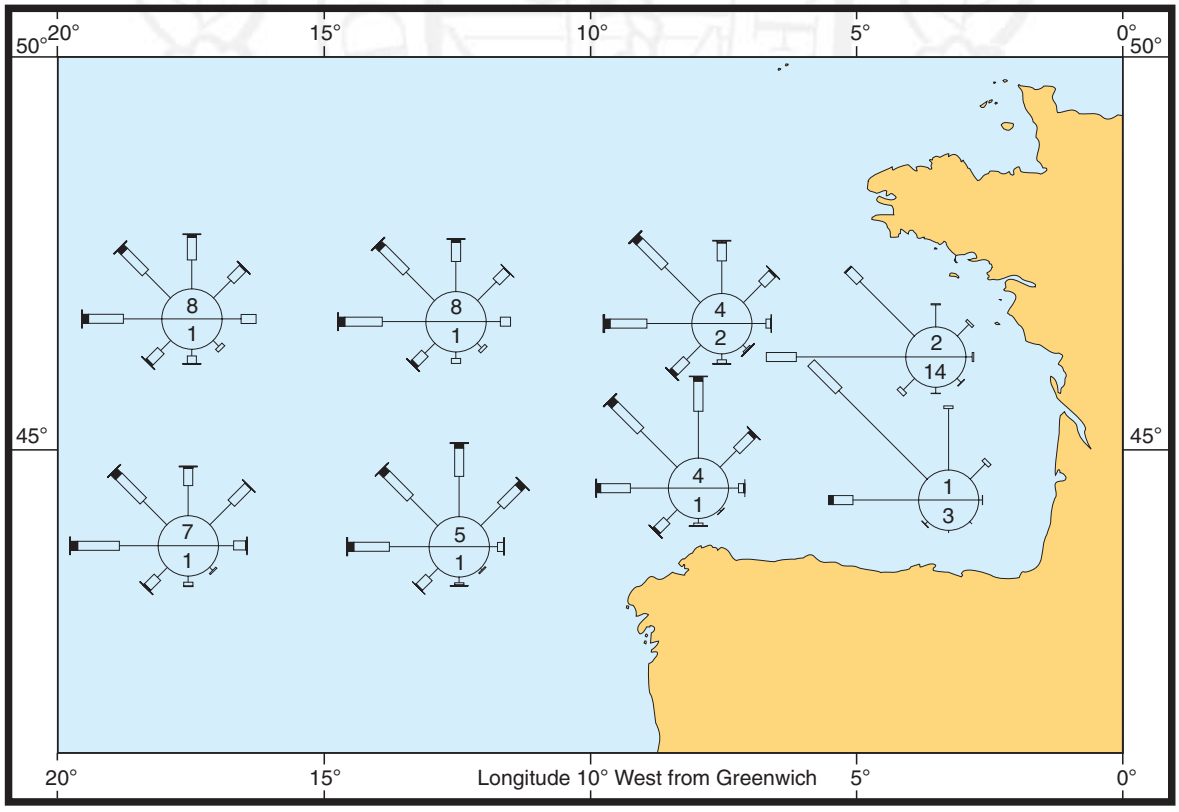
1.115

1 Sea surface temperature can vary considerably from one occasion to another. Variability tends to be smallest in winter when temperatures are usually within 1½° to 2°C of the mean values. In summer the variability increases slightly and is greatest in the E of the bay where on occasions the temperature may differ by more than 3°C from the mean.

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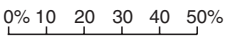


Swell distribrution - frequency of swell waves from various directions and of different heights JANUARY (1.110.1)

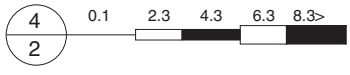


Swell distribrution - frequency of swell waves from various directions and of different heights APRIL (1.110.2)

EXPLANATION. The frequency of swell waves from any direction is given according to the scale:-



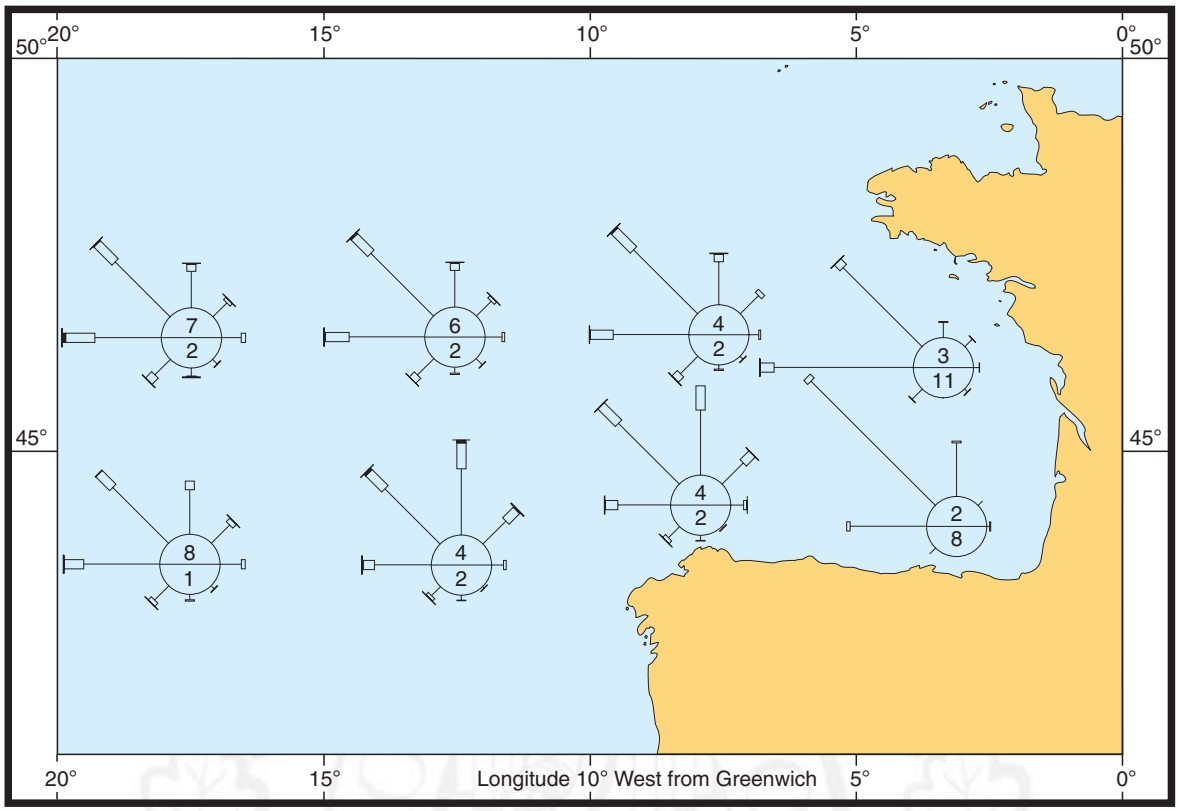
This scale is further subdivided to indicate the frequency of swell waves of different heights (in metres) according to the legend:-



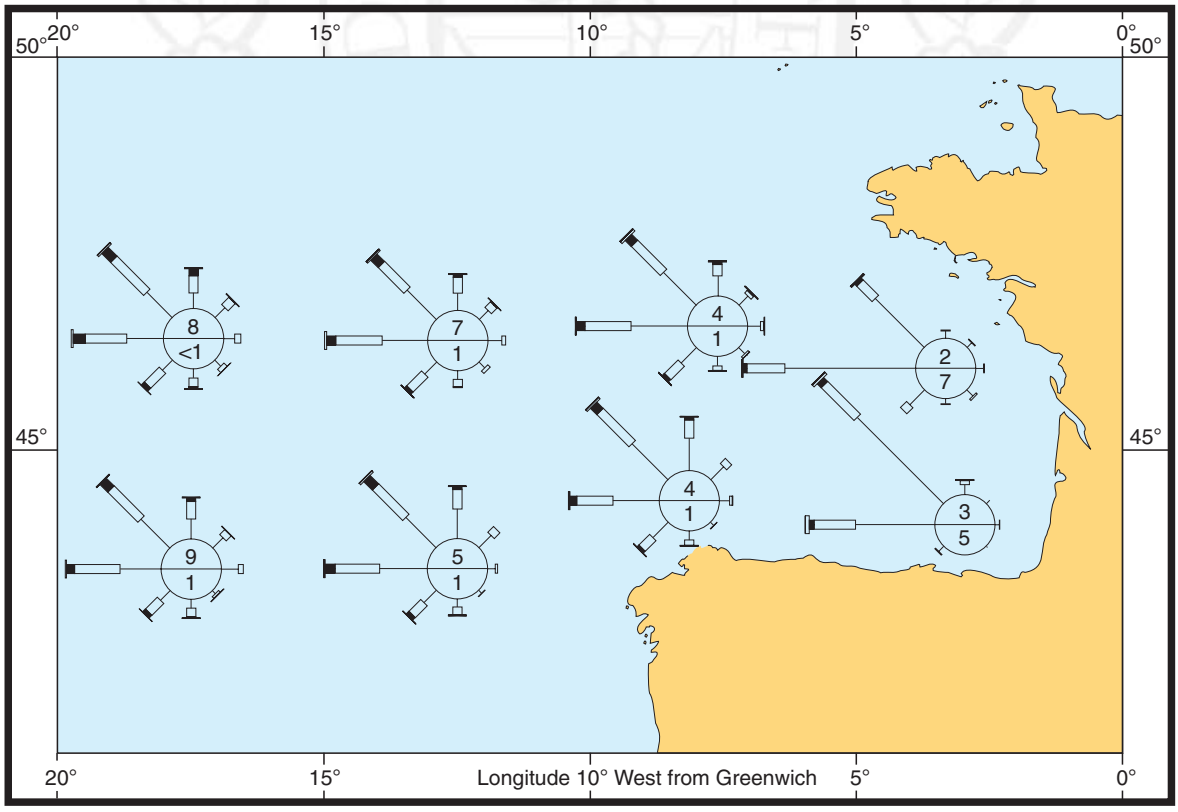
The direction in which the swell waves travel is towards the circle centre. The upper figure in the circle gives the percentage of variable swells; the lower figure gives the percentage of occasions with no swell

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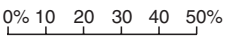


Swell distribrution - frequency of swell waves from various directions and of different heights JULY (1.110.3)

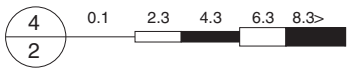


Swell distribrution - frequency of swell waves from various directions and of different heights OCTOBER (1.110.4)

EXPLANATION.The frequency of swell waves from any direction is given according to the scale:-



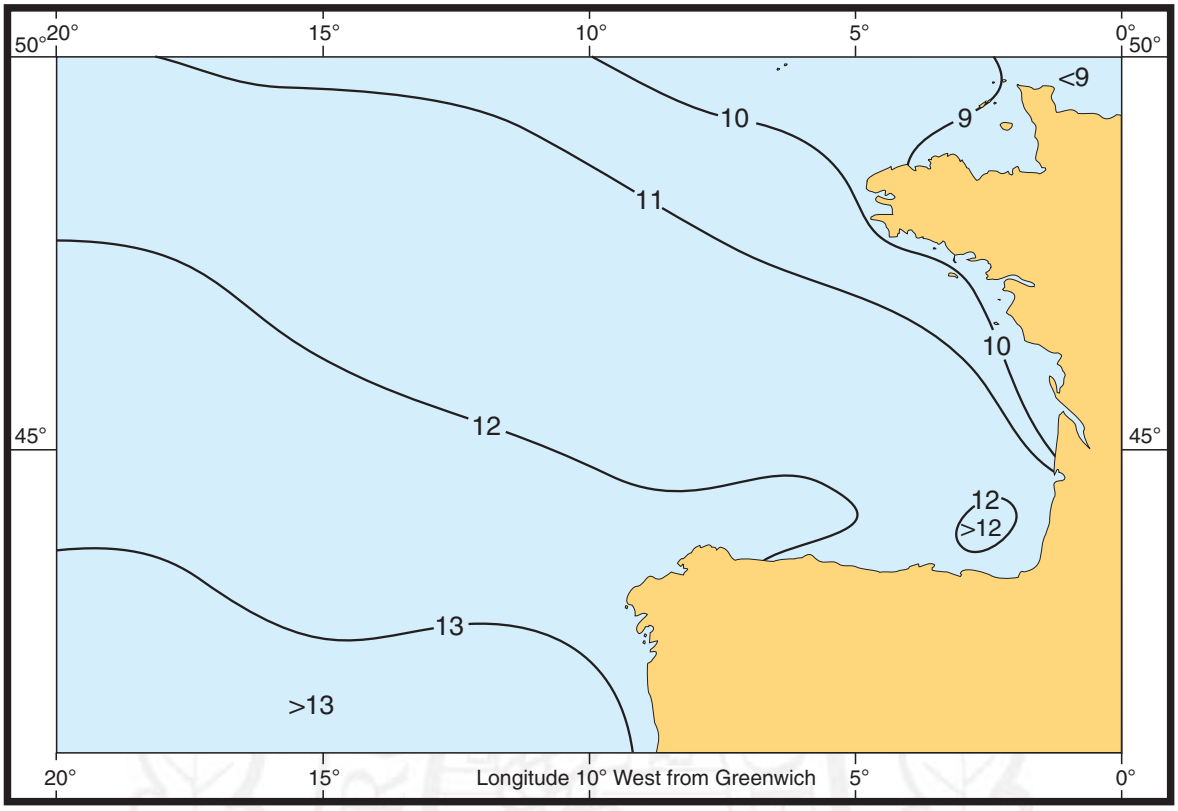
This scale is further subdivided to indicate the frequency of swell waves of different heights (in metres) according to the legend:-



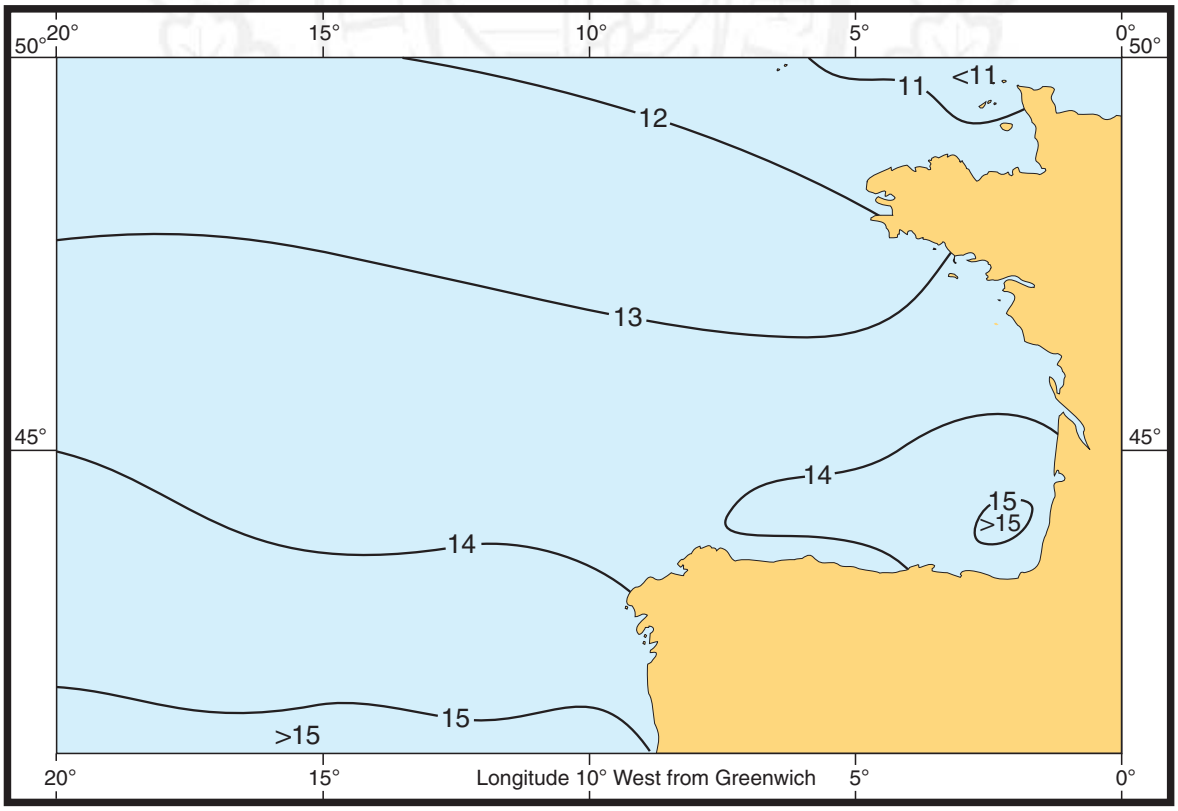
The direction in which the swell waves travel is towards the circle centre. The upper figure in the circle gives the percentage of variable swells;the lower figure gives the percentage of occasions with no swell

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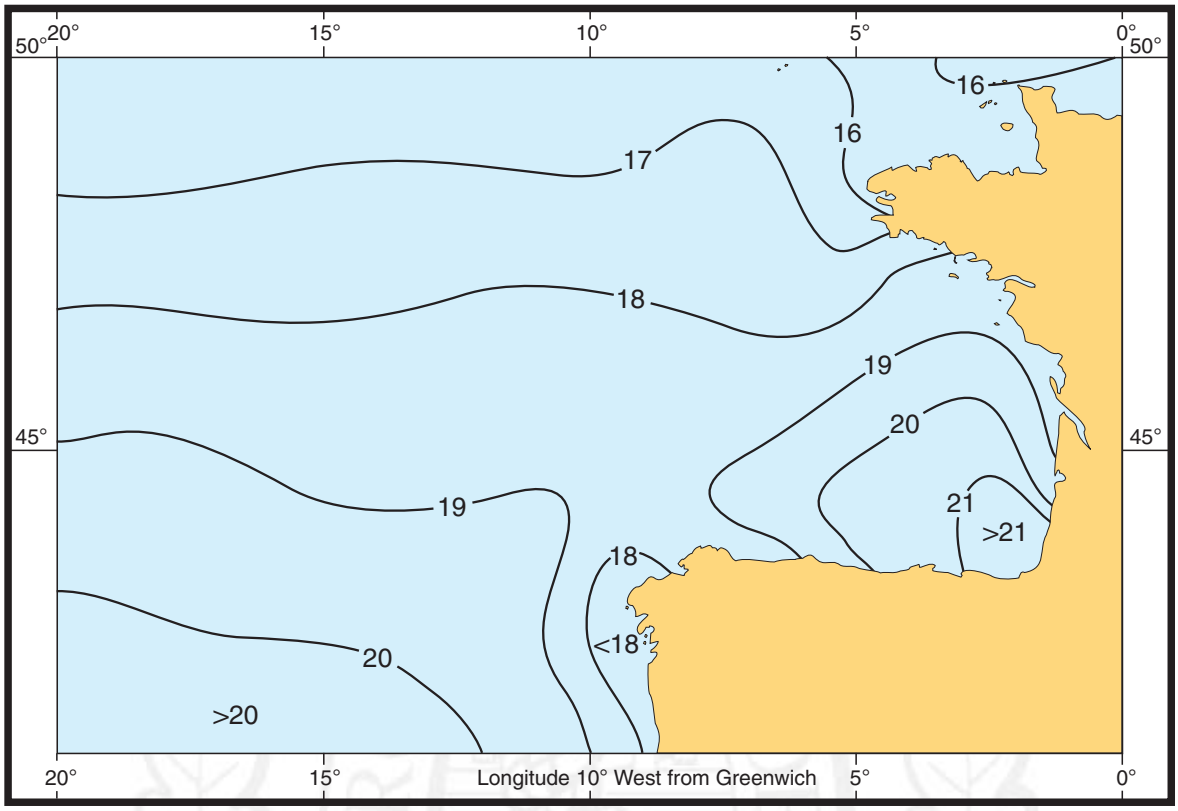
Mean sea surface temperature (°C) FEBRUARY (1.114.1)



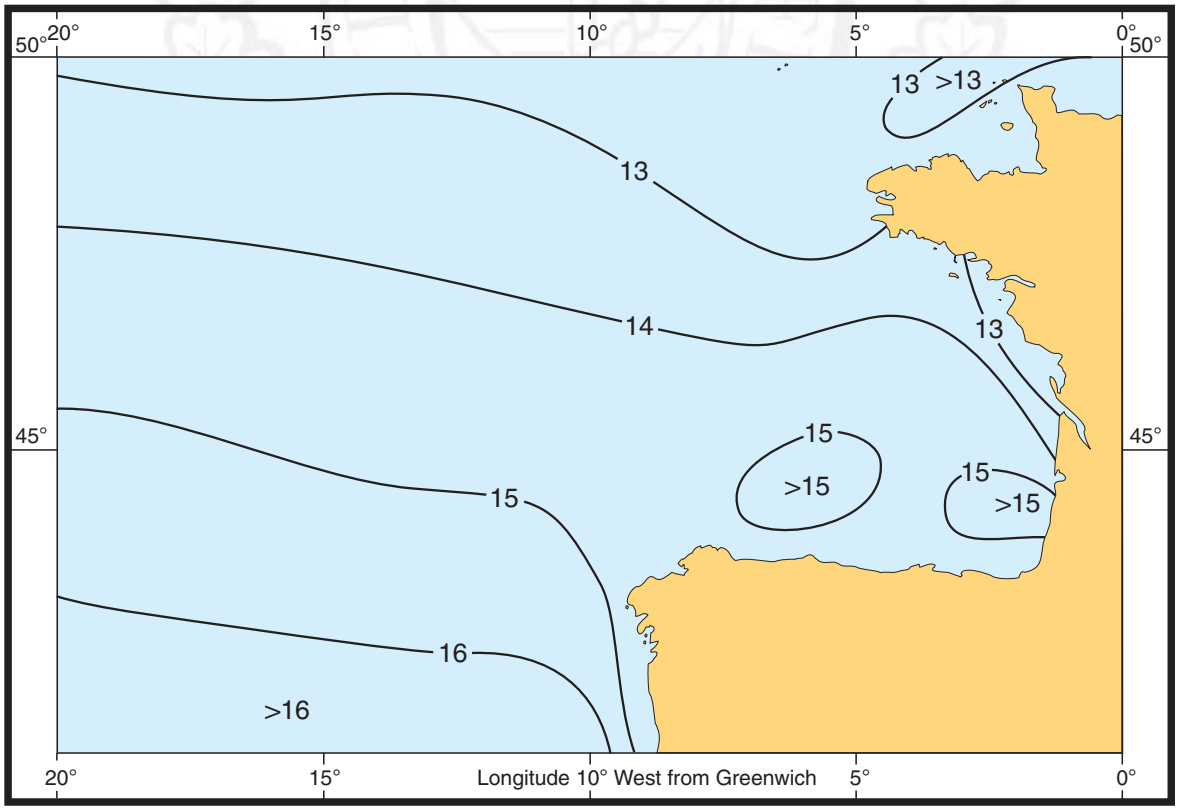
Mean sea surface temperature (°C) MAY (1.114.2)

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Mean sea surface temperature (°C) AUGUST (1.114.3)



Mean sea surface temperature (°C) NOVEMBER (1.114.4)

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ICE CONDITIONS

1.116

1 In exceptionally severe winters sea ice may form in bays and other shallow regions on the W coast of France and river ice has been known to halt the movement of shipping in La Loire at night.

CLIMATE AND WEATHER

General information

1.117

1 The following information should be read in conjunction with relevant chapters of *The Mariner's Handbook.*

Weather reports and forecasts are broadcast regularly from shore stations and warnings of hazardous conditions are also issued when appropriate. Schedules and details are given in *Admiralty List of Radio Signals Volume 3(1).*

General conditions

1.118

1 The climate of the region covered by this volume is largely dominated by the Azores anticyclone (1.122) together with the numerous mobile frontal depressions (1.125) which pass along a general E track to the N of the region, but occasionally across Bay of Biscay.

2 The mainly W airstreams bring a temperate maritime climate to the area with mild winters, cool summers and moderate to copious rainfall. In the N mobile depressions give very variable and sometimes stormy conditions, particularly in winter and spring. The S is rather less unsettled. The large and high land mass of Spain is very cool in winter and hot in summer; this modifies the large scale circulation in coastal regions of Spain with a tendency for air to flow from relatively cool sea to land in summer and from cool land to relatively warm sea in winter.

3 A notable climatic variation may result from the development of high pressure over Europe in winter possibly by a W extension of the Asian winter anticyclone (1.123). When this occurs an E or NE airstream becomes established over Bay of Biscay bringing exceptionally cold conditions which can persist up to several weeks.

Pressure

1.119

1 **Average pressure distribution** at MSL in January, April, July and October is shown in Diagrams 1.119.1 to 1.119.4.

Dominant features of the pressure field throughout the greater part of the year are the Azores anticyclone and the relatively low pressure zone farther N. The latter reflects the presence of the semi-permanent Icelandic low pressure area but it also results from the many mobile depressions which develop and move along the N flank of the Azores High.

2 Thus in winter the general pressure gradient over the area is for a broad SW flow with numerous depressions transiting towards the E. As pressure rises over Bay of Biscay in spring and summer the depression tracks tend to be displaced farther N and disturbances crossing the area are less frequent.

3 Of significance, particularly in the N coastal region of Spain, are the relatively high pressure zone over the cold Iberian peninsula in winter and the relatively low pressure cell induced by the hot land mass of Spain in summer.

1.120

1 **Pressure variability.** It is stressed that the average conditions described above are the means of very changeable pressure fields which vary markedly from day to day. Thus the synoptic weather chart at any time may be quite different from the average pattern. On occasion, especially in winter, the actual pressure distribution may be the complete reverse of the mean when high pressure becomes established over N Europe with relatively low pressure to the S.

1.121

1 **Diurnal variation** of pressure is slight, about 1 to ½ hPa amplitude. Maxima are at about 1000 and 2200 local time and minima around 0400 and 1600. This daily oscillation is often obscured by the larger pressure changes associated with movement and developments in the general pressure pattern.

Anticyclones

1.122

1 **The Azores anticyclone** is the dominating feature of the pressure field in this region for most of the year. It is generally centred around 30° to 35°N in winter and migrates slightly N in summer to around 38°N. In summer a high pressure ridge often extends NE across Bay of Biscay to France thus displacing mobile depressions to more N tracks and giving more settled weather conditions over Bay of Biscay. It is not unusual for a separate anticyclone centre to develop in the ridge area; movement of such a system is generally slowly E.

1.123

1 **The Asiatic anticyclone** which develops in winter and is normally centred over Siberia sometimes extends a ridge W to NW Europe bringing very cold NE winds to Bay of Biscay region. Exceptionally cold spells lasting up to several weeks may be caused when in winter an anticyclone cell becomes centred over NW Europe and the NE Atlantic with a low pressure area to the S. In this event mobile depressions are prevented from approaching the region and the pressure field remains almost static until the anticyclone collapses or recedes.

Depressions

1.124

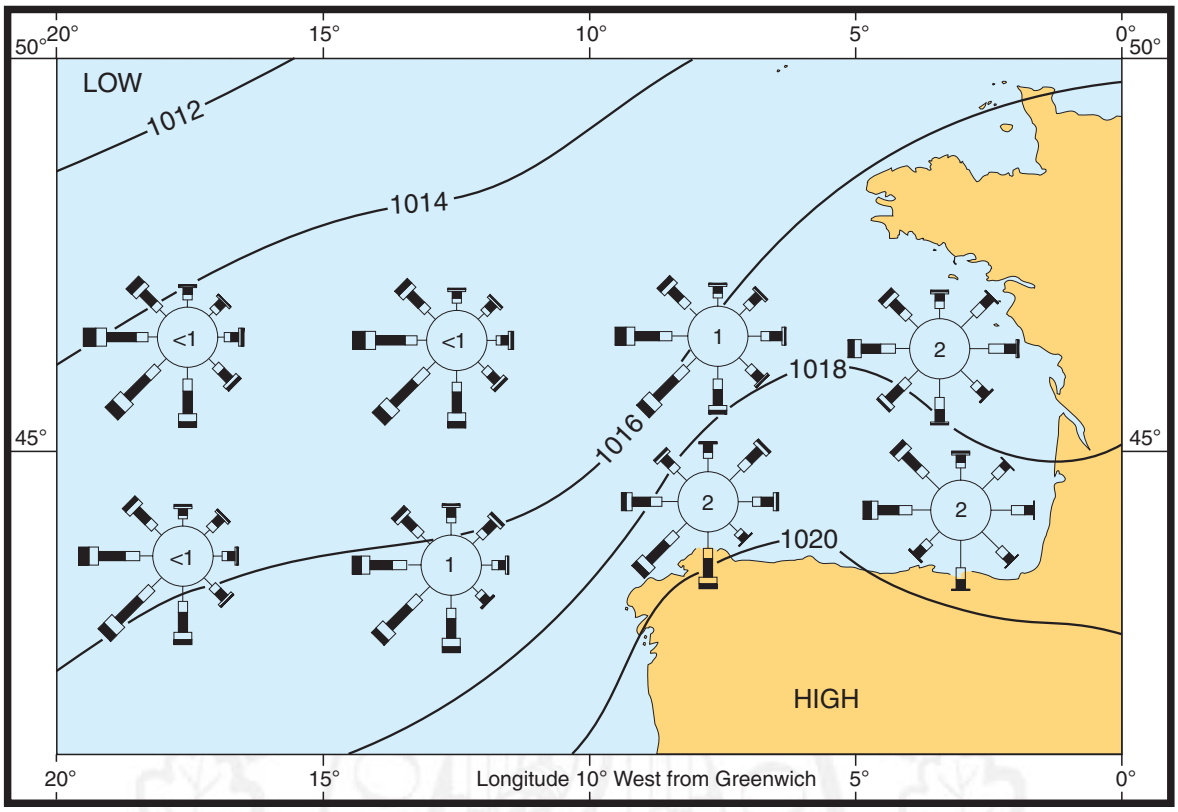
1 Depressions of several types may affect this region at any time of year. Most usually they travel along an E to NE track over or to the N of Britain but in many cases their circulations are sufficiently extensive to cover a part or the whole of Bay of Biscay. It is also not uncommon for depressions to track across Bay of Biscay as they move SE or E on their way to the Mediterranean. A considerable number of depressions do develop and deepen over Bay of Biscay. Diagram 1.124 shows typical depression tracks.

1.125

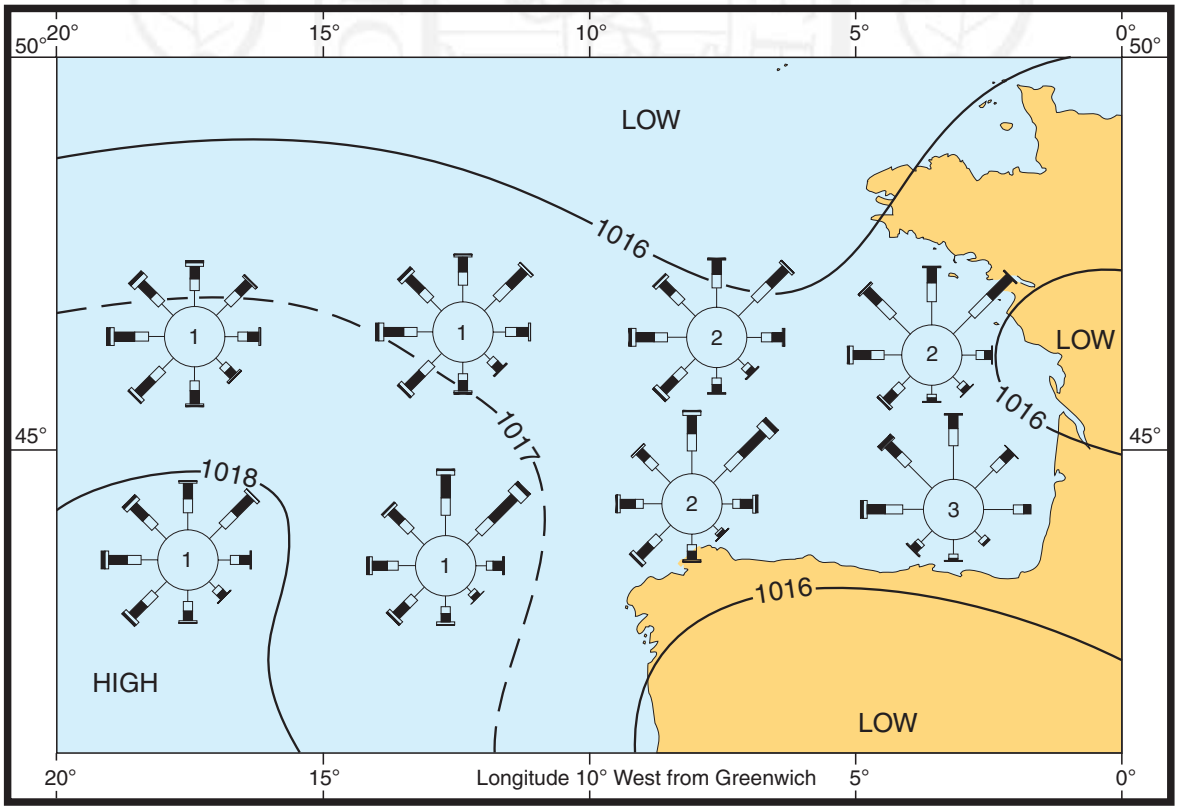
1 **Mobile frontal depressions** are a common feature of this region. They usually appear initially as wave depressions on the polar front and deepen as they move E or NE along the N flank of the Azores High. Movement may be very rapid when the depressions are small and in the formative stages but they can very quickly develop into vigorous systems and give rise to very strong winds or gales.

2 The depressions commonly develop into large scale features spanning several hundred miles with gale and even storm force winds in their circulation. Associated frontal troughs can bring rain, squalls, and severely reduced visibility; the cold fronts trailing behind a mobile

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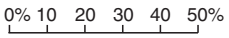


Mean barometric pressure (hPa) and wind distribution JANUARY (1.119.1)

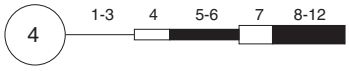


Mean barometric pressure (hPa) and wind distribution APRIL (1.119.2)

EXPLANATION.The frequency of wind from any direction is given according to the scale:-



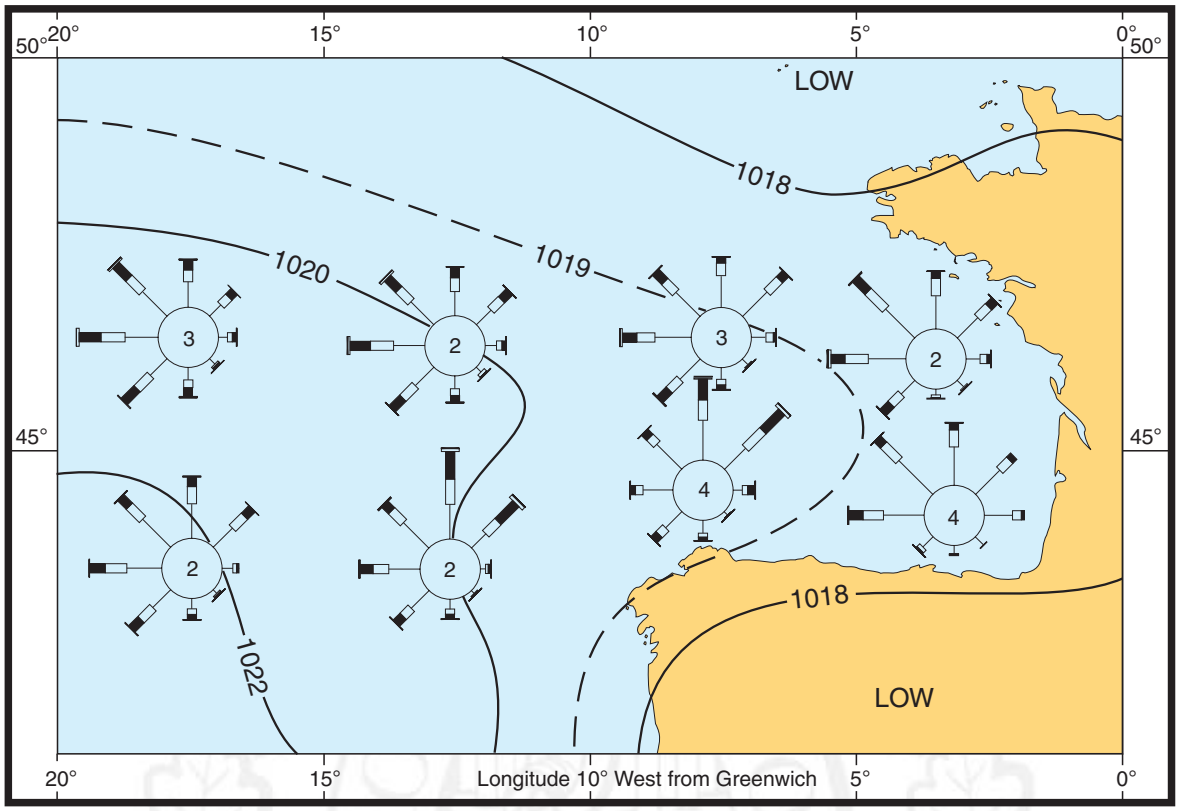
This scale is further subdivided to indicate the frequency of winds of different Beaufort force according to the legend:-



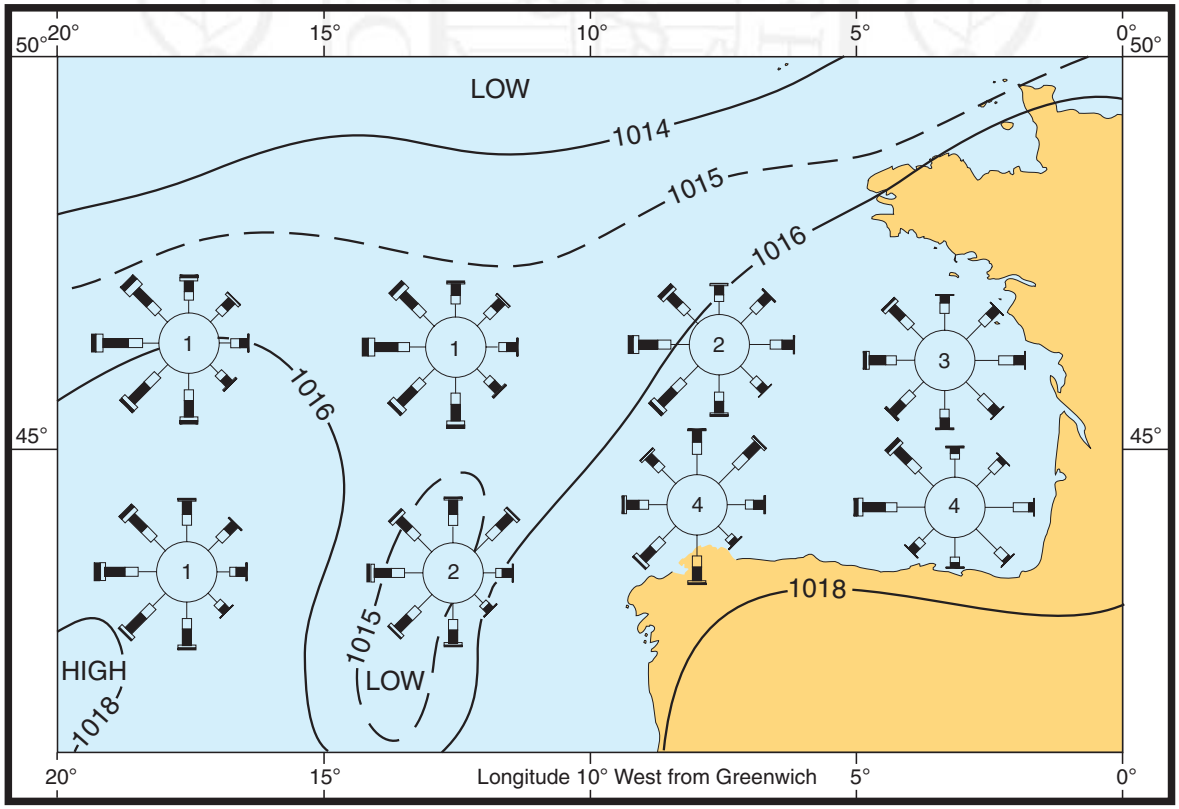
Wind direction is towards the circle centre. The figure within the circle gives the percentage of calms.

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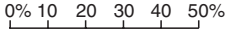


Mean barometric pressure (hPa) and wind distribution JULY (1.119.3)

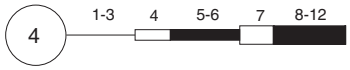


Mean barometric pressure (hPa) and wind distribution OCTOBER (1.119.4)

EXPLANATION.The frequency of wind from any direction is given according to the scale:-



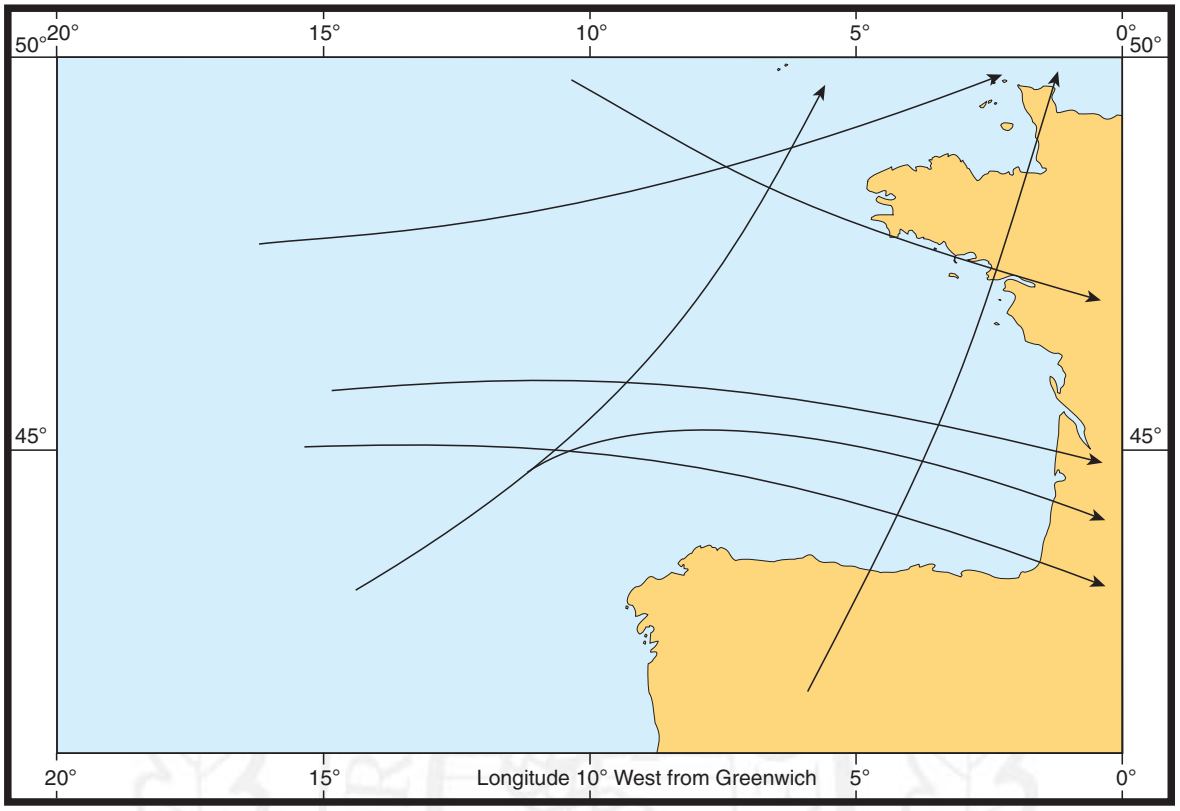
This scale is further subdivided to indicate the frequency of winds of different Beaufort force according to the legend:-



Wind direction is towards the circle centre. The figure within the circle gives the percentage of calms.

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Some typical tracks of depressions (1.124)

depression are often the birthplace for further secondary wave depressions.

3 For a detailed description of the formation, structure and weather associated with frontal depressions see *The Mariner's Handbook.*

1.126

1 **Heat low** is the name given to the type of depression which sometimes develops due to excessive heating of land masses; such lows commonly form over the Iberian peninsula in summer and significantly affect the general circulation of the region by increasing the tendency for on-shore winds around the coasts of the peninsula.

Occasionally in late spring and summer thundery depressions originating as heat lows over Spain break away and move N to Bay of Biscay and France.

Fronts

Polar front

1.127

1 The polar front which is a major influence in this region marks the boundary between the cold air moving S from high latitudes and the warm moist air originating in the sub-tropical high pressure belt generally the Azores anticyclone. The majority of the mobile depressions which so frequently affect this region originate in the polar frontal zone as wave depressions and grow into large features with the embedded frontal wave forming the characteristic warm and cold fronts within the circulation.

Warm and cold fronts

1.128

1 Both warm and cold fronts are very active in the area and are responsible for much of the bad weather in the region. Even depressions passing well to the N of Bay of Biscay may have fronts which extend S to the Bay.

1.129

1 **Warm fronts** approaching from the W generally bring extensive lowering cloud of stratiform type with rain which may be persistent and heavy. Deteriorating visibility may result in fog banks notably in exposed areas along the French Atlantic coast, and over cooler areas of sea. The passage of the front often heralds the onset of SW winds which may be strong and accompanied by cloudy conditions and poor visibility.

1.130

1 **Cold fronts** often bring a clearance of the cloud and poor visibility of the warm sector. But the frontal passage may be accompanied by a period of heavy rain with squalls, sometimes severe and occasionally with thunder.

Seamen should be particularly alert to the possibility that a cold front may bring a sudden shift of wind to W or NW and the onset of very strong winds and squally conditions. The N coast of Spain is an area where exceptionally dangerous conditions of this nature can ensue.

2 A trailing cold front in the rear of a mobile depression is a frequent location for the birth and development of small secondary wave depressions which can give unexpected periods of bad weather and strong, shifting winds.

Winds

Variability

1.131

1 The winds of this region are to a large extent controlled by mobile depressions and associated troughs of low pressure. Thus a feature of the area is the marked

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variability of both wind direction and speed; seldom do steady wind conditions persist for as much as a day.

Open sea

1.132

1 Wind roses showing the wind distribution over the open sea in January, April, July and October are given in Diagrams 1.119.1 to 1.119.4.

In autumn and winter (October to March) wind direction is very varied with winds from a W point slightly exceeding those from other directions over the greater part of the region; off NW Spain N to NE winds are also a common feature. Strongest winds are experienced at this season with December the stormiest month when some 15% to 18% of observations report force 7 or greater in the N part of the Bay of Biscay and around 12% in the S.

2 **In spring and summer** winds from between SW and NW remain common but there is a marked increase in the incidence of N and NE winds, particularly off NW Spain where this is the predominant direction. South to SE winds are unusual. Strong winds and gales are considerably less frequent than in winter; less than 3% of observations record winds of force 7 and over in midsummer (July and August).

Coastal areas

1.133

1 As over the open sea, the pressure pattern at any time has a major influence on the wind but within about 20 miles of the coast local modifications may be caused by topography and by land and sea breeze effects (for further explanation see *The Mariner's Handbook).*

The climatic tables (1.156) at the end of this chapter give information on winds at a number of coastal stations.

1.134

1 **Seasonal variation** is very noticeable in the coastal waters of N Spain. The large and high land mass of the Iberian peninsula is cool in winter and hot in summer, giving rise to a general air flow from sea to land in summer and from land to sea in winter.

In summer the most frequent direction of wind along the N coast of Spain is between NW and NE but these are generally moderate breezes which are often replaced by offshore land breezes at night. In winter S to SW winds are most common.

1.135

1 **Land and sea breeze** effects occur along the coasts of Bay of Biscay in summer and are particularly evident in the S of the area due to enhanced heating of the land by day.

2 The sea breeze usually sets in towards noon blowing onshore perpendicular to the coast and then veering slowly to blow almost along the coastline. It reaches maximum strength by about 1600 local time with wind speeds of 10 to 12 kn and dies away around 1900. Land breezes may blow from about midnight to 0700. They are especially noticeable on the S coast of Brittany where they are known locally as the *Vent Solaire.*

3 The sea and land breeze cycle is most evident in generally calm or light wind conditions. At other times the effect may be to intensify or weaken the prevailing wind according to whether the sea-land breeze component is in support or opposition.

1.136

1 **North coast of Spain.** The very high ground of the Pyrenees and Cordillera Cantábrica has important effects on the wind.

Strong S winds may be considerably intensified to give very violent conditions locally in coastal waters due to katabatic or downslope effects and by funnelling of the wind along steep sided valleys. Conditions can be particularly unpleasant and dangerous for small craft in the Bilbao/Santoña/Santander coastal area (3°W to 4°W).

2 Strong NW winds blowing towards this mountainous coastline are deflected to blow with increased strength along the coast from a broadly W direction.

Gales

1.137

1 Gales may blow from any direction but at all seasons they are most likely to blow from a W point. Depressions travelling SE across Bay of Biscay towards the Mediterranean can give N to NE gales with very stormy and thick weather, raising high seas along the N coast of Spain and creating very difficult conditions for entering harbour.

2 **In winter** gales reach their highest frequency and from November to February the wind can be expected to reach force 8 or more on around 7 to 9 days per month in the N of the region and on 4 to 7 days per month in the S.

In summer gale frequency decreases considerably with gales of force 8 or more to be expected on only 1 to 3 days per month.

1.138

1 **Galernas** are a particularly dangerous type of gale or squall which occur along the N coast of Spain especially in July, August and September. They are often associated with cold frontal troughs moving along the coast from W to E. As the front approaches warm S or SW winds increase gradually as the sky becomes overcast but some coastal waters in the lee of the mountains of N Spain may remain sheltered. With the passage of the front a thundery squall may occur with a sudden shift of wind to NW and a violent NW gale ensues which is intensified along the coast by the presence of the high ground to the S. Galernas are dangerous both because of their extreme severity and their sudden onset.

1.139

1 **Severe squalls** may occur E of Bilbao (43°20′N, 3°01′W) in the hot season after a period of NE winds. Dense cloud development is followed by a very strong W blow and heavy rain and then a sudden shift of wind to NW; the gale may persist for two or three days.

Cloud

1.140

1 Cloud type and amount are closely related to the proximity of depressions and fronts. Thus the N of the area is more cloudy than the S and winter is cloudier than summer throughout the region.

In the N average amounts of cloud at sea exceed 6 oktas in December. Rather less than 40% of observations record similar amounts in the summer months.

2 South of about 45°N cloud cover averages somewhat less than 4 oktas in August which is the least cloudy month, but in winter over 40% of observations record cloudy to overcast conditions.

The climatic tables (1.156) at the end of this chapter give average cloud amounts for each month of the year for a number of coastal stations.

Precipitation

1.141

1 The climatic tables (1.156) give the average amounts of precipitation for each month at several coastal stations and

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the mean number of days in each month when significant precipitation is recorded.

Rain

1.142

1 Rain can be expected throughout the year in all parts of the area. The summer months June, July and August generally are the driest whilst October to January is the wettest period.

Much of the rainfall results from frontal systems moving across the area. Amounts received vary considerably from one point to another and in coastal regions they are particularly influenced by the degree of exposure to prevailing winds and the proximity of high ground.

2 Over the open sea it is estimated that rainfall is similar to the amounts received along the French Atlantic coast to the N of Bordeaux (44°50′N), averaging around 600 to 800 mm annually.

In coastal areas to the S of Bordeaux the influence of the Pyrenees causes a large increase in rainfall and annual amounts in the extreme SE corner of Bay of Biscay are copious and normally as much as 1400 to 1700 mm.

3 Along the N coast of Spain the annual fall decreases rapidly to the W of the border with France but again high ground in this region has a significant influence; around 1000 mm is normal on the coast and considerably more inland.

Thunderstorms

1.143

1 Thunderstorms are infrequent over the open sea and in the N of the area, occurring on around 1 day per month with a slightly higher incidence in summer and autumn than at other times of year.

2 In the SE corner of Bay of Biscay S of La Gironde (45°30′N) they are rather more common and there is a pronounced increase in summer when thunder can be expected on some 6 days or more per month.

On the N coast of Spain thunder occurs on around 2 to 3 days per month in summer in the Santander locality and about half that frequency in winter, but incidence decreases slightly farther W along the coast.

Snow

1.144

1 Snow may fall in coastal areas between November and April and is most likely from January to March when it may snow on 1 or 2 days per month as an average. Snow over the open sea is rare, even in mid-winter.

Fog and visibility

Open sea

1.145

1 Fog (visibility less than 1 km) and poor visibility are most frequently encountered at sea in Bay of Biscay in late spring and summer when warm moist air blows over relatively cool sea. From November to April incidence of fog is much lower and in winter it is a rare occurrence although visibility may fall to near fog limits in precipitation and particularly in the vicinity of frontal troughs.

Poor visibility is less likely in the SE corner of Bay of Biscay than elsewhere.

Coastal areas

1.146

1 Along the Atlantic coast of France incidence of fog and poor visibility varies markedly from one location to another. At stations exposed to onshore winds fog is most frequent in winter, notably in the vicinity of warm fronts and in the warm sectors of depressions.

2 In more sheltered areas such as river estuaries incidence of fog may be considerably higher due to a tendency for radiation fogs to form on clear, calm nights particularly in winter and especially near large towns and industrial areas which produce much smoke. Thus ports such as Nantes and Bordeaux have high fog frequency in autumn and winter. Radiation fog usually disperses by afternoon and in summer shortly after sunrise.

1.147

1 The coast near the Franco-Spanish border has very low incidence of fog but E winds sometimes give morning mists which obscure the coastline.

The N coast of Spain may be affected by fog and poor visibility at all times of the year. It is more frequent in late spring and summer than at other times of year but fog in these parts is usually of brief duration. In Golfo de Foz (43°35′N, 7°15′W), however, fog and mist brought in by light winds from the sea may persist for 2 or 3 days.

2 The climatic tables (1.156) give for several coastal stations the average number of days each month on which fog is recorded.

Air temperature

General information

1.148

1 In general the coldest time of year is January and February and the warmest is July and August. However temperatures can be extremely variable from one day to another particularly in winter due to the numerous frontal depressions which bring frequent changes in airstream to affect the region. High pressure over N Europe can bring exceptionally cold spells with E winds in winter; but in summer the same situation gives a warm E airstream over Bay of Biscay.

Winter

1.149

1 Average temperatures at sea range from around 7°C in the N of the area to about 9°C off NW Spain. Along the French Atlantic coast the coldest parts are S of La Loire (47°15′N) where in mid-winter averages of 5° to 7°C are normal, but in the far S and along the N coast of Spain mean temperatures of around 9°C are to be expected.

Changes in wind direction may produce large variations in temperature. Cold E winds can give spells when daily temperatures do not rise above 2° to 4°C and with minima around –1° to –4°C on the French coast; in extreme cases temperatures below –15°C have been recorded.

1.150

1 Frost may be expected from November to early April and this also applies along the N coast of Spain where temperatures occasionally fall below freezing point, usually when cold NE winds blow or when an anticyclone over the Iberian peninsula gives cool calm conditions.

Abnormally warm spells in winter may be associated with S winds, especially in the lee of the Pyrenees and Cordillera Cantábrica of N Spain due to Föhn effect (1.155); temperatures may rise to 15° or 16°C.

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Summer

1.151

1 Average temperatures at sea and in coastal regions range from around 17°C in the N to about 21°C in the S.

In coastal areas, normal daily maximum temperatures in July and August are around 24° to 26°C and minima about 15°C but this daily variation of temperature increases considerably when moving inland away from the coast. Coolest conditions are generally associated with W or NW winds, and sea breezes too have a cooling influence in coastal areas. Warm spells are associated with S winds when in extreme cases temperatures may rise to well over 30°C in the SE.

Humidity

1.152

1 Humidity is closely related to temperature and is generally high when air temperature is low and decreases as air temperature rises. Thus on a diurnal basis, highest relative humidity tends to be in the early morning, the coolest time of day; minimum relative humidity occurs usually in an afternoon when highest daily temperatures obtain. At sea and at island stations the diurnal variation of humidity is small.

1.153

1 Along the French Atlantic coast relative humidities in the early morning (around 0600 UT) are high and average about 90% or more all the year round. In winter these values decrease only slightly by afternoon but in summer a considerable fall is usual particularly in the S when mean relative humidities in the afternoon are about 60% to 70%.

1.154

1 In the extreme SE of Bay of Biscay and along the N coast of Spain a rather different cycle applies. Seasonal offshore breezes from the Iberian peninsula in winter give slightly lower humidities at that season than in summer when moister onshore winds are usual. Thus early morning relative humidities average around 80% in winter and 85% to 90% in summer; these values decrease by about 10% in the afternoon.

1.155

1 **Very low humidities** are associated with dry E winds which sometimes affect the French Atlantic coast in late spring and summer; relative humidities of 30% or less may be recorded in the afternoon. Similar conditions may be experienced on the N coast of Spain when Föhn winds (warm dry winds occurring to leeward of mountain ridges) blow from S.

CLIMATIC TABLES

1.156

1 The climatic tables which follow give data for several coastal stations (Diagram 1.156) for which regular weather observations are available for many years. It is emphasised that these data are average conditions and refer to the specific location of the observing station; they may thus not be representative of conditions to be expected over the open sea or in approaches to ports in the vicinity.

2 **Local modifications.** The following brief comments list some of the differences to be expected between conditions over the open sea and those at the nearest reporting station (see *The Mariner's Handbook* for further details):

3 Wind speeds tend to be higher at sea with more frequent gales than on land.

Cloud amounts at sea may be quite different from those over land.

Precipitation amounts are generally fairly applicable to nearby coastal waters but become less applicable with increasing distance from the coast and in hilly districts.

4 Fog at sea may be no indication that fog is present inland. Similarly fog on the coast or inland may be no indication that fog is present over the open sea. Thus fog statistics given in the climatic tables are generally inapplicable to neighbouring sea areas.

Temperatures over the sea are less variable than over land.

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Location of climatic stations (1.156)

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1.157

WMO No 07200

PENMARC'H (47° 48′ N, 04° 22′ W) Height above MSL – 22 m

Climatic Table compiled from 15 years observations, 1983 to 1997

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																	Mean wind speed		Number of days with		
												0900									1500											
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0600	1500	0900	1500	Average fall	No. of days with 1 mm or more	N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm	0900	1500	Gale	Fog	Thunder
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																			Knots				
January	1019	10	7	13	–1	89	85	6	6	–	–	10	10	19	6	9	21	12	12	1	8	6	15	12	13	20	14	12	⊕	17	18	6	2	⊕
February	1018	9	6	12	0	89	84	6	6	–	–	11	14	19	10	11	14	11	10	1	10	9	13	18	12	14	12	12	⊕	16	16	4	3	1
March	1019	11	7	14	1	89	81	6	6	–	–	14	10	14	7	11	13	15	15	2	10	4	7	12	10	17	19	21	1	13	15	2	2	⊕
April	1015	13	8	18	3	87	78	5	5	–	–	17	10	20	8	9	11	12	13	1	11	7	6	11	12	15	18	20	1	14	15	2	2	1
May	1016	15	11	22	7	87	78	5	5	–	–	13	8	21	8	11	11	10	18	1	8	5	6	13	15	16	17	21	⊕	13	14	1	1	1
June	1018	18	13	24	9	89	80	5	5	–	–	19	10	12	8	8	11	12	20	2	11	4	4	7	10	15	21	28	⊕	11	13	1	2	1
July	1019	20	15	25	11	90	82	5	4	–	–	14	6	16	7	6	13	14	23	2	10	2	1	6	9	17	21	33	⊕	11	12	⊕	3	1
August	1018	20	15	26	11	91	81	5	4	–	–	16	7	16	13	6	12	13	16	2	7	2	3	10	10	17	23	27	1	10	12	⊕	2	1
September	1018	18	13	23	9	90	79	5	5	–	–	15	10	18	12	6	13	11	14	1	9	4	4	14	14	15	19	21	1	12	12	1	3	1
October	1016	16	12	20	7	88	80	5	5	–	–	12	12	22	7	11	14	12	9	1	9	5	16	14	14	16	13	11	1	14	15	3	2	1
November	1015	13	9	18	2	87	81	6	6	–	–	10	12	20	8	12	15	12	11	1	8	6	18	12	10	18	11	16	1	15	16	3	2	1
December	1017	11	8	14	1	88	84	6	6	–	–	10	14	18	9	13	15	13	10	⊕	9	8	17	11	13	16	14	12	1	16	17	4	2	1
Means	1017	15	10	28 *	–3§	87	81	5	5	_	_	13	10	18	8	9	14	13	14	1	9	5	9	12	12	16	17	19	1	14	15	_	_	_
Totals	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	27	26	10
Extreme values	_	_	_	30†	–9‡	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
No. of years observations	15	15				15		15				15									15									15		15	15	15

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.158

WMO No 07207

LE TALUT (47° 18′ N, 03° 13′ W) Height above MSL – 43 m

Climatic Table compiled from 15 to 30 years observations, 1960 to 1997

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																		Mean wind speed		Number of days with		
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0600	1500	0900	1500	Average fall	No. of days with 1 mm or more	0900									1500												
												N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm	0900	1500	Gale	Fog	Thunder
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1018	9	6	13	−1	89	85	6	6	74	17	9	14	14	8	9	17	19	10	1	8	11	15	7	11	17	21	11	0	15	16	2	3	⊕
February	1019	9	6	12	0	90	84	6	6	64	15	10	13	19	11	8	14	18	7	⊕	9	11	18	12	8	14	19	9	0	14	15	2	3	⊕
March	1019	11	7	14	2	90	81	6	5	57	14	10	15	12	9	7	13	19	13	2	9	8	8	11	8	14	28	13	1	12	13	1	4	⊕
April	1015	13	8	19	3	90	78	5	5	39	12	13	17	16	8	8	10	15	12	1	5	12	10	9	9	15	26	15	⊕	13	13	⊕	2	⊕
May	1016	16	11	22	6	91	78	5	5	46	12	14	18	15	6	9	14	12	11	1	6	11	10	9	11	16	24	13	⊕	13	12	⊕	2	1
June	1018	19	13	25	9	90	77	5	5	31	9	12	17	12	7	6	11	19	16	0	7	8	5	6	6	13	35	20	1	11	11	⊕	2	1
July	1019	21	15	28	11	90	76	5	4	32	9	15	14	16	5	4	11	19	17	1	4	5	7	3	3	13	41	24	⊕	10	10	⊕	2	2
August	1018	21	15	28	11	91	76	5	4	44	11	11	15	13	8	5	10	17	19	2	4	5	5	5	7	15	40	18	1	10	10	⊕	1	1
September	1018	19	14	24	10	91	76	5	5	63	12	15	16	19	8	5	11	15	11	1	6	9	9	9	6	16	32	13	⊕	11	11	1	2	⊕
October	1017	16	12	20	7	90	81	5	5	68	13	9	19	16	9	10	15	14	7	1	6	13	14	11	10	18	18	10	⊕	14	13	1	2	⊕
November	1016	13	9	16	3	89	83	6	6	80	16	14	11	20	8	7	13	19	7	2	9	13	17	7	9	14	17	12	2	14	14	1	2	⊕
December	1018	11	7	14	0	89	85	6	6	81	17	7	16	19	8	9	17	14	9	1	9	13	18	6	8	17	19	9	⊕	14	15	2	2	⊕
Means	1018	15	10	29 *	−3 §	90	80	5	5	_	_	12	15	16	8	7	13	16	12	1	7	10	11	8	8	15	27	14	⊕	13	13	_	_	_
Totals	_	_	_	_	_	_	_	_	_	679	157	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	10	27	6
Extreme values	_	_	_	35 †	−10 ‡	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
No. of years observations	15	15				15		15		30		15									15									15		15	15	15

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.159

WMO No 07222

NANTES (47° 10′ N, 01° 36′ W) Height above MSL – 27 m

Climatic Table compiled from 24 to 30 years observations, 1960 to 1997

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																Mean wind speed		Number of days with		
												0900									1500											
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0600	1500	0900	1500	Average fall	No. of days with 1 mm or more	N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm	0900	1500	Gale	Fog	Thunder
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1019	9	4	14	–5	92	81	6	6	87	13	5	14	12	11	19	16	12	8	3	7	15	11	8	15	19	16	8	1	8	10	⊕	5	⊕
February	1018	10	4	15	–3	91	74	5	6	70	11	6	18	14	11	17	13	12	7	4	8	19	12	6	14	17	16	7	1	9	11	⊕	4	⊕
March	1018	13	5	20	–1	92	66	5	6	69	11	8	16	10	8	13	18	15	10	2	12	15	6	4	8	19	25	10	⊕	9	11	⊕	3	⊕
April	1016	15	6	22	0	89	61	5	5	50	9	11	30	9	9	9	11	11	10	1	15	24	5	6	4	16	18	11	1	9	11	⊕	2	1
May	1015	20	10	26	4	90	62	5	5	64	11	12	22	10	8	10	14	10	12	1	12	16	10	5	7	18	23	10	1	8	10	0	1	2
June	1017	22	12	30	7	89	60	5	5	45	8	11	22	10	5	6	14	16	15	2	12	16	7	3	5	15	28	13	⊕	7	10	0	1	2
July	1018	25	14	33	10	90	58	5	4	46	7	9	22	11	4	8	16	16	14	1	11	15	8	3	3	17	32	12	⊕	7	9	0	1	3
August	1018	26	15	32	9	92	55	4	4	45	7	10	21	13	4	7	13	16	15	2	11	15	8	2	3	18	30	13	⊕	7	9	0	2	3
September	1018	22	12	28	6	93	60	5	5	62	8	8	21	13	8	13	14	11	9	3	9	18	8	3	9	16	26	11	⊕	7	9	⊕	3	1
October	1016	17	10	24	3	94	70	5	5	79	10	5	17	10	15	18	12	10	10	3	8	15	10	7	12	19	18	11	1	8	9	⊕	4	1
November	1017	12	6	18	–2	94	78	6	6	87	11	5	14	12	15	20	13	11	7	4	7	15	11	9	16	17	18	8	1	7	9	⊕	6	⊕
December	1018	9	4	15	–3	92	82	6	6	84	12	5	21	9	11	19	15	12	8	3	6	20	9	10	16	15	15	9	1	9	9	⊕	6	1
Means	1017	17	8	34 *	–7§	92	67	5	5	_	_	8	20	11	9	13	14	13	10	2	10	17	9	5	9	17	22	10	1	_	_	_	_	_
Totals	_	_	_	_	_	_	_	_	_	788	118	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	⊕	38	14
Extreme values	_	_	_	_	37†	–13‡	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
No. of years observations	24	24				24		24		30		24									24									24		24	24	24

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.160

WMO No 07300

ST SAUVEUR (46° 42′ N, 02° 20′ W) Height above MSL – 48 m
Climatic Table compiled from 15 years observations,1983 to 1997

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																		Mean wind speed		Number of days with		
												0900									1500												
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0600	1500	0900	1500	Average fall	No. of days with 1 mm or more	N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm	0900	1500	Gale	Fog	Thunder
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1020	9	6	12	–2	90	84	6	6	–	–	10	12	13	11	12	18	13	10	2	9	14	9	11	12	17	13	14	1	13	14	2	3	⊕
February	1019	9	5	14	–1	90	80	5	5	–	–	6	15	18	14	10	13	13	10	1	9	14	12	12	11	16	11	14	1	12	13	2	4	⊕
March	1019	12	7	16	2	91	75	5	5	–	–	12	12	16	9	9	12	14	14	2	15	9	6	8	11	17	16	17	1	11	12	1	3	0
April	1015	14	8	20	3	88	71	5	5	–	–	11	16	18	11	9	12	11	12	1	16	10	8	7	10	16	17	17	1	12	12	1	1	1
May	1015	17	11	25	7	89	73	5	5	–	–	15	18	15	9	8	14	9	11	1	13	9	5	7	10	20	14	21	1	11	12	⊕	1	1
June	1018	20	13	26	9	89	73	5	4	–	–	15	20	12	7	5	12	15	14	1	16	5	5	2	7	18	23	23	1	9	11	⊕	1	1
July	1019	23	15	30	12	90	70	4	4	–	–	20	17	12	7	6	10	13	14	1	18	5	3	3	5	14	24	29	⊕	9	11	⊕	1	2
August	1018	23	16	29	12	91	68	5	4	–	–	18	19	9	7	5	13	13	14	1	15	4	2	3	6	16	24	30	1	9	10	⊕	1	2
September	1018	21	14	26	10	90	71	5	4	–	–	13	20	13	11	6	13	12	11	2	18	9	3	7	8	18	18	18	1	10	11	1	1	1
October	1017	17	12	22	6	89	76	5	5	–	–	8	18	16	11	11	15	12	9	1	13	12	9	10	14	15	14	12	1	12	13	1	1	1
November	1016	13	9	17	2	90	80	6	6	–	–	8	12	17	16	11	17	11	6	2	7	13	13	13	14	17	13	9	2	12	13	1	2	1
December	1019	10	7	14	0	90	84	6	6	–	–	8	13	18	12	13	14	13	8	1	7	15	15	10	13	15	14	9	1	13	13	1	2	⊕
Means	1018	16	10	32 *	–4 §	90	75	5	5	_	_	12	16	15	10	9	14	12	11	1	13	10	7	8	10	16	17	18	1	11	12	_	_	_
Totals	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	10	21	10
Extreme values	_	_	_	_	34 †	–10 ‡	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
No. of years observations	15	15				15		15				15									15									15		15	15	15

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.161

WMO No 07315

LA ROCHELLE (46° 09′ N, 01° 09′ W) Height above MSL – 10 m

Climatic Table compiled from 15 to 30 years observations, 1960 to 1997

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																Mean wind speed		Number of days with		
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0600	1500	0900	1500	Average fall	No. of days with 1 mm or more	0900									1500											
												N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm	0900	1500	Gale	Fog	Thunder
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1020	9	4	13	–4	93	84	5	5	80	17	8	13	16	14	15	9	9	9	9	7	16	13	9	14	14	14	10	4	8	9	0	3	⊕
February	1019	10	4	16	–2	91	77	5	5	72	15	7	17	17	12	14	6	11	9	8	6	16	13	6	12	14	15	12	6	8	9	⊕	2	⊕
March	1019	13	6	19	0	90	73	5	5	57	14	8	17	14	12	11	10	11	12	5	7	15	8	4	4	16	24	20	1	8	10	⊕	1	⊕
April	1015	15	8	23	2	88	70	5	4	45	13	8	19	16	8	12	12	12	11	3	8	17	9	2	5	11	28	19	1	9	11	0	⊕	⊕
May	1015	19	11	28	7	89	71	5	5	52	14	11	17	15	7	11	11	15	9	4	7	11	11	2	4	12	28	24	1	8	10	⊕	⊕	1
June	1017	22	14	32	9	88	69	5	4	46	11	9	19	12	4	9	11	21	15	2	8	10	6	1	2	8	39	25	⊕	8	11	0	1	1
July	1018	25	17	33	12	86	67	4	3	38	10	10	14	19	2	7	11	19	14	5	8	7	5	2	1	5	38	36	0	6	11	0	⊕	1
August	1017	25	17	30	12	88	66	4	3	51	12	9	16	17	5	9	8	16	12	9	6	10	5	2	1	7	38	32	⊕	6	10	0	⊕	2
September	1018	22	14	29	9	89	68	4	4	64	13	7	19	15	9	16	11	10	6	6	7	11	9	2	3	8	37	20	1	7	9	0	⊕	1
October	1017	18	11	25	5	91	73	5	5	76	14	7	18	15	12	17	8	8	8	6	5	14	11	6	11	14	20	16	3	8	9	0	1	1
November	1016	13	7	20	0	88	79	5	5	95	16	7	14	18	16	16	6	10	6	9	4	14	15	8	17	12	11	13	6	7	8	0	1	⊕
December	1019	10	5	15	–3	89	84	5	5	86	17	9	16	20	12	17	9	8	4	7	6	19	14	8	18	12	11	7	4	8	8	⊕	3	⊕
Means	1018	17	10	35 *	–6§	89	73	5	4	_	_	8	17	16	10	13	9	12	9	6	7	13	10	4	8	11	25	20	2	8	10	_	_	_
Totals	_	_	_	_	_	_	_	_	_	762	166	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	⊕	12	8
Extreme values	_	_	_	38†	–13‡	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
No. of years observations	15	15				15		15		30		15									15									15		15	15	15

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.162

WMO No 07400

LA COUBRE (45° 42′ N, 01° 14′ W) Height above MSL – 7 m

Climatic Table compiled from 9 to 30 years observations, 1960 to 1991

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																Mean wind speed		Number of days with		
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0600	1500	0900	1500	Average fall	No. of days with 1 mm or more	0900									1500											
												N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm	0900	1500	Gale	Fog	Thunder
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1022	9	3	11	–2	88	82	6	5	84	16	9	8	13	22	8	10	13	9	7	13	8	5	19	13	15	12	13	3	12	12	3	5	⊕
February	1018	10	4	13	–5	85	73	5	5	71	14	8	21	16	21	4	11	11	6	1	12	16	8	18	10	11	13	10	2	12	12	2	3	⊕
March	1019	12	5	15	2	86	72	5	5	55	14	12	14	15	16	7	10	15	9	4	13	10	4	9	9	15	13	27	1	11	12	1	2	⊕
April	1014	15	7	18	5	83	68	5	5	49	12	10	17	11	22	8	11	8	11	2	13	13	6	6	8	15	13	24	2	11	12	1	1	1
May	1016	18	11	21	9	85	70	5	4	51	13	12	11	12	16	8	14	8	19	2	13	4	6	3	4	16	16	35	2	10	11	⊕	1	1
June	1018	21	13	24	12	86	70	5	4	40	10	10	10	5	15	12	12	16	19	2	12	5	3	2	5	16	24	33	⊕	9	12	⊕	1	1
July	1018	23	15	27	14	85	70	4	3	34	10	10	9	11	12	9	14	14	16	4	12	5	3	3	3	10	23	40	2	7	10	⊕	1	2
August	1018	23	15	26	13	86	69	4	3	55	11	13	15	9	16	6	8	10	15	7	14	5	3	2	3	10	18	44	⊕	7	10	⊕	1	2
September	1019	21	14	24	10	85	69	4	4	70	12	10	14	13	23	9	10	9	9	2	15	7	6	9	2	11	20	28	1	9	11	⊕	2	1
October	1018	18	11	20	7	86	72	4	4	75	12	9	9	17	32	9	8	7	7	2	10	11	7	19	10	13	14	17	2	11	11	1	1	1
November	1017	13	6	15	4	87	75	5	5	94	16	7	15	18	26	6	13	7	4	4	10	13	13	24	8	10	10	8	4	11	11	1	2	⊕
December	1021	10	5	13	0	89	83	5	5	92	16	6	20	18	24	6	10	8	4	4	12	18	10	25	8	13	7	4	2	11	10	1	4	⊕
Means	1018	16	9	–*	–§	86	73	5	4	–	–	10	14	13	20	8	11	10	11	3	12	10	6	11	7	13	15	24	2	10	11	–	–	–
Totals	–	–	–	–	–	–	–	–	–	770	156	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	10	24	9
Extreme values	–	–	–	38†	–12‡	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
No. of years observations	9	30				9		9		30		9									9									9		9	9	9

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.163

WMO No 07510

BORDEAUX/MERIGNAC (44° 50′ N, 00° 42′ W) Height above MSL – 61 m

Climatic Table compiled from 24 to 30 years observations, 1960 to 1997

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																Mean wind speed		Number of days with		
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0600	1500	0900	1500	Average fall	No. of days with 1 mm or more	0900									1500											
												N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm	0900	1500	Gale	Fog	Thunder
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1021	10	4	16	–4	93	76	6	6	100	13	7	12	9	19	15	14	10	6	7	11	13	9	17	7	13	17	10	2	6	8	⊕	6	1
February	1018	12	4	19	–4	92	68	6	6	86	12	9	13	8	20	14	12	13	7	4	12	15	10	14	7	11	20	11	1	7	9	⊕	4	1
March	1019	16	6	21	–1	91	60	5	5	76	12	10	14	9	16	11	16	14	9	3	11	16	11	8	3	10	23	18	1	7	10	0	3	1
April	1016	17	7	25	1	89	56	5	5	72	11	12	18	11	13	8	10	15	11	2	15	16	9	9	3	7	22	19	⊕	8	10	0	2	2
May	1015	22	11	29	5	90	57	5	6	77	11	10	12	10	15	10	12	17	12	2	10	15	10	9	4	8	23	21	1	7	9	0	2	5
June	1017	23	14	32	8	90	56	5	5	56	9	11	15	11	9	6	12	20	15	2	13	16	9	6	3	5	25	23	1	7	9	0	2	4
July	1018	27	16	35	11	91	53	4	4	47	7	12	14	11	10	6	12	17	17	2	14	15	6	7	2	5	24	25	1	6	9	0	1	4
August	1018	28	16	34	10	92	54	4	4	54	8	11	16	11	10	8	11	15	14	4	15	16	9	6	3	6	21	24	1	6	8	0	2	5
September	1018	24	13	31	7	93	56	4	4	74	9	8	14	12	17	14	14	10	7	4	13	18	11	9	4	8	22	15	1	6	8	0	4	3
October	1017	19	11	26	3	94	67	5	5	88	10	7	9	9	24	16	14	8	8	4	11	12	9	18	6	12	18	15	1	6	8	0	4	2
November	1018	14	7	20	–2	93	73	6	5	94	12	7	11	10	23	17	12	10	5	6	11	13	10	20	8	12	15	10	2	6	7	0	6	1
December	1019	11	5	18	–3	93	78	6	6	99	12	8	13	9	22	14	15	10	6	5	10	15	12	16	10	14	14	7	2	6	8	0	7	1
Means	1018	17	9	36 *	–6§	92	66	5	5	_	_	9	13	10	16	12	13	13	10	4	12	15	10	12	5	9	20	16	1	7	9	_	_	_
Totals	_	_	_	_	_	_	_	_	_	923	126	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	⊕	43	30
Extreme values	_	_	_	39†	–15‡	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
No. of years observations	24	24				24		24		30		24									24									24		24	24	24

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.164

WMO No 07500

CAP FERRET (44° 38′ N, 01° 15′ W) Height above MSL – 10 m
Climatic Table compiled from 9 years observations, 1983 to 1991

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																		Mean wind speed		Number of days with		
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0600	1500	0900	1500	Average fall	No. of days with 1 mm or more	0900									1500												
												N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm	0900	1500	Gale	Fog	Thunder
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1022	10	5	15	–3	91	84	6	5	–	–	7	10	16	20	13	13	13	6	2	5	14	13	7	14	14	15	13	5	11	11	2	3	⊕
February	1017	11	5	17	–1	90	79	5	5	–	–	5	19	17	21	10	9	12	6	1	12	14	8	11	9	14	15	15	1	10	11	2	2	1
March	1019	13	7	20	1	88	74	5	5	–	–	8	17	14	16	10	8	17	5	5	21	6	2	3	8	11	21	27	1	10	11	1	2	1
April	1014	16	8	25	4	87	69	5	5	–	–	5	15	12	15	12	12	14	12	3	19	6	3	3	7	12	18	32	0	10	12	1	1	1
May	1016	19	12	27	7	87	69	5	4	–	–	10	17	11	6	9	13	17	13	4	21	5	2	1	3	9	19	40	⊕	8	11	⊕	1	2
June	1018	21	14	31	10	88	71	5	4	–	–	9	16	6	4	8	16	16	18	6	22	3	2	1	2	9	24	37	1	7	10	⊕	1	3
July	1018	25	17	34	13	87	66	4	3	–	–	8	17	11	3	7	12	20	15	6	27	5	2	⊕	1	5	20	39	1	7	11	⊕	1	3
August	1018	25	17	33	12	86	65	4	3	–	–	9	22	12	10	8	9	11	11	8	29	4	2	1	⊕	6	15	43	⊕	6	10	⊕	1	2
September	1019	23	15	31	10	88	67	4	4	–	–	3	24	17	9	14	10	10	9	5	21	8	2	1	3	7	17	40	1	7	10	⊕	1	2
October	1018	19	12	26	6	90	72	4	4	–	–	3	16	18	25	13	8	10	5	1	12	8	7	8	13	13	14	21	4	9	10	1	1	1
November	1017	14	8	20	0	90	80	5	5	–	–	4	13	19	30	8	8	12	6	2	9	13	14	17	10	10	13	12	2	10	10	1	2	1
December	1021	11	5	17	–2	90	82	5	5	–	–	4	15	21	24	13	7	10	5	2	5	14	20	16	12	14	10	8	3	10	9	⊕	3	⊕
Means	1018	17	10	35 *	–5 §	89	73	5	4	_	_	6	17	15	15	10	10	14	9	4	17	8	6	6	7	10	17	27	2	9	11	_	_	_
Totals	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	8	19	17
Extreme values	_	_	_	36 †	–10 ‡	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
No. of years observations	9	9				9		9				9									9									9		9	9	9

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.165

WMO No 07600

SOCOA (43° 24′ N, 01° 41′ W) Height above MSL – 47 m

Climatic Table compiled from 8 to 30 years observations, 1960 to 1997

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																		Mean wind speed		Number of days with		
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0600	1500	0900	1500	Average fall	No. of days with 1 mm or more	0900									1500												
												N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm	0900	1500	Gale	Fog	Thunder
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1022	13	5	20	–1	81	72	6	6	123	16	⊕	3	6	17	36	21	6	3	8	12	15	8	5	26	12	9	7	6	8	8	1	1	⊕
February	1023	14	7	22	0	81	70	5	6	111	14	1	1	11	14	32	19	11	6	5	17	15	7	4	16	11	21	8	1	9	10	1	1	1
March	1023	15	8	23	2	82	72	5	5	87	13	5	8	14	15	18	11	13	5	9	26	14	6	2	7	6	19	21	1	7	9	⊕	1	1
April	1018	15	9	25	2	88	75	6	6	92	14	13	7	11	6	10	15	21	13	4	20	9	3	1	5	5	29	29	⊕	8	11	1	⊕	2
May	1016	20	12	30	7	88	75	5	5	110	16	8	12	13	8	14	8	22	13	3	21	14	6	2	7	8	23	20	⊕	7	10	⊕	1	5
June	1019	21	15	30	10	92	78	6	5	95	14	12	11	6	3	2	14	29	22	2	25	7	5	1	2	2	28	30	⊕	7	10	0	⊕	3
July	1020	24	17	33	12	93	79	5	5	86	13	14	13	9	3	4	14	21	18	5	31	11	3	⊕	1	6	24	24	1	6	9	0	⊕	3
August	1019	25	18	32	13	94	79	5	5	117	13	14	10	13	7	8	12	20	11	5	29	10	4	2	2	6	16	28	2	6	8	0	⊕	4
September	1018	22	15	26	10	90	75	5	5	140	14	4	5	16	7	21	23	11	7	6	24	10	6	3	4	10	20	23	⊕	7	9	⊕	1	3
October	1017	20	13	26	5	87	75	5	6	167	15	1	2	15	14	27	25	7	4	6	21	12	8	4	12	11	16	16	2	7	9	⊕	1	1
November	1018	16	10	23	2	84	74	6	6	143	16	4	2	10	16	32	19	10	3	5	11	10	13	5	16	18	15	13	1	8	9	⊕	1	3
December	1020	13	8	20	–1	84	75	6	6	159	17	1	3	11	18	31	17	9	5	5	9	10	15	8	14	20	12	8	4	9	9	1	1	1
Means	1019	18	11	35 *	–3§	87	75	5	6	_	_	7	6	11	11	20	16	15	9	5	20	11	7	3	9	10	19	19	2	7	9	_	_	_
Totals	_	_	_	_	_	_	_	_	_	1430	175	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	4	8	27
Extreme values	_	_	_	_	37†	–9‡	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
No. of years observations	8	8				8		8		30		8									8									8		8	8	8

* Mean of highest each year
§ Mean of lowest each year
† Highest recorded temperature
‡ Lowest recorded temperature
⊕ Rare
⊖ All observations

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1.166

WMO No 08029

SAN SEBASTIAN/FUENTERRABIA (43° 21′ N, 01° 48′ W) Height above MSL – 8 m

Climatic Table compiled from 15 to 30 years observations, 1960 to 1997

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																		Mean wind speed		Number of days with		
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0600	1500	0900	1500	Average fall	No. of days with 1 mm or more	0900									1500												
												N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm	0900	1500	Gale	Fog	Thunder
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1022	14	5	20	–1	83	67	6	6	162	–	2	2	2	8	22	33	11	5	16	18	12	4	5	11	22	14	8	8	5	7	0	1	1
February	1020	14	6	22	–1	82	62	5	6	124	–	3	3	3	7	22	27	15	4	17	23	15	3	3	9	17	16	10	3	5	7	0	⊕	⊕
March	1020	16	7	24	1	82	63	5	5	128	–	6	4	4	4	16	22	12	8	25	26	17	3	2	6	9	14	20	3	5	7	0	1	1
April	1015	18	9	26	3	83	64	5	5	158	–	16	5	4	5	9	22	14	9	15	23	20	3	1	5	9	20	16	2	6	8	0	⊕	1
May	1015	21	12	30	7	85	65	5	6	128	–	21	12	4	3	8	16	15	11	9	29	14	3	2	4	7	17	21	2	5	7	0	⊕	2
June	1017	23	15	31	10	86	68	6	5	91	–	23	12	4	1	3	20	16	12	10	34	16	2	⊕	2	5	16	22	2	5	6	0	⊕	2
July	1018	25	17	34	13	87	70	5	5	79	–	22	16	6	1	3	16	14	10	12	40	18	2	1	1	6	11	21	1	4	6	0	⊕	2
August	1017	26	17	33	12	89	68	5	5	116	–	19	9	5	2	5	20	13	7	21	42	16	1	1	2	4	9	22	4	3	6	0	1	2
September	1018	24	15	29	9	88	67	4	5	116	–	10	4	5	4	15	22	11	5	24	36	19	2	1	2	5	13	18	4	4	6	0	1	2
October	1017	21	12	28	6	84	65	5	5	140	–	4	3	4	5	24	29	8	3	21	24	17	3	3	11	12	11	14	5	5	6	0	1	1
November	1017	17	9	23	2	84	67	6	6	175	–	3	4	2	4	27	27	13	3	17	17	12	5	6	13	16	15	8	9	5	6	0	⊕	1
December	1020	14	7	21	–1	83	69	6	6	164	–	2	4	2	8	22	29	14	5	14	17	12	8	5	12	21	9	9	8	5	6	0	1	1
Means	1018	19	11	36 *	–3 §	85	66	5	5	_	_	11	6	4	4	15	23	13	7	17	28	16	3	2	6	11	14	16	4	5	7	_	_	_
Totals	_	_	_	_	_	_	_	_	_	1581	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0	6	16
Extreme values	_	_	_	40 †	–5 ‡	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
No. of years observations	15	15				15		15		30		15									15									15		15	15	15

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.167

WMO No 08025

BILBAO/SON DICA (43° 18′ N, 02° 56′ W) Height above MSL – 37 m

Climatic Table compiled from 15 to 30 years observations, 1960 to 1987

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																		Mean wind speed		Number of days with		
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0600	1500	0900	1500	Average fall	No. of days with 1 mm or more	0900									1500												
												N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm	0900	1500	Gale	Fog	Thunder
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1022	14	6	20	–1	80	61	6	6	140	17	2	4	24	23	12	10	8	5	11	5	4	11	12	14	14	8	21	9	6	7	⊕	1	1
February	1021	15	6	22	–1	80	58	5	6	98	15	3	3	24	21	9	8	8	9	16	8	7	7	9	12	13	12	28	5	6	8	⊕	1	1
March	1021	16	6	25	0	84	59	5	5	82	16	3	4	23	21	7	4	7	14	17	10	11	7	7	6	4	12	41	3	6	9	⊕	1	1
April	1017	18	8	26	2	83	60	6	6	85	16	3	4	15	14	10	6	11	22	15	9	11	7	5	5	6	15	42	1	7	10	⊕	1	2
May	1016	21	11	30	5	85	61	6	6	84	16	5	3	12	14	8	9	8	28	14	9	9	6	3	3	5	13	49	1	6	9	⊕	1	2
June	1018	23	13	33	7	89	62	5	5	78	13	5	4	15	9	4	5	11	31	16	9	10	5	2	1	2	10	60	2	5	9	⊕	1	2
July	1019	26	16	35	11	90	62	5	5	47	12	4	5	18	9	4	3	9	27	20	13	13	4	1	0	⊕	10	59	⊕	4	9	⊕	1	2
August	1018	26	16	34	11	92	61	5	5	63	13	5	6	22	11	5	3	8	21	21	17	17	5	0	⊕	⊕	10	49	1	4	9	⊕	1	3
September	1018	25	14	34	9	88	59	5	5	131	13	5	2	28	21	8	7	6	9	14	13	12	5	5	3	2	12	47	1	4	8	0	2	1
October	1018	22	12	29	5	83	59	5	5	142	14	2	2	23	24	11	9	6	7	16	11	7	7	12	7	8	10	36	3	5	8	⊕	2	1
November	1017	17	9	24	2	81	62	6	6	125	16	1	2	29	22	10	10	7	8	10	7	5	9	16	12	11	12	21	7	6	7	0	1	1
December	1024	14	7	20	0	79	63	5	6	170	17	3	2	28	23	10	11	4	5	13	4	4	13	17	15	15	10	14	10	6	7	⊕	1	⊕
Means	1019	20	10	38 *	–3§	85	61	5	6	_	_	3	3	22	18	8	7	8	16	15	10	9	7	7	7	7	11	39	3	5	8	_	_	_
Totals	_	_	_	_	_	_	_	_	_	1245	178	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	1	14	17
Extreme values	_	_	_	42†	–7‡	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
No. of years observations	15	15				15		15		30		15									15									15		15	15	15

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.168

WMO No 08023

SANTANDER (43° 28′ N, 03° 49′ W) Height above MSL –65 m

Climatic Table compiled from 15 to 30 years observations, 1960 to 1997

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																		Mean wind speed		Number of days with		
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0600	1500	0900	1500	Average fall	No. of days with 1 mm or more	0900									1500												
												N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm	0900	1500	Gale	Fog	Thunder
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1022	13	8	19	3	75	67	5	5	127	–	2	3	11	17	15	23	13	2	15	4	15	11	7	11	17	21	3	11	5	6	⊕	1	1
February	1020	14	8	21	3	76	66	5	5	99	–	1	3	11	18	12	23	12	3	17	4	26	14	4	9	13	22	5	4	5	6	⊕	2	2
March	1020	15	9	23	4	78	67	5	5	104	–	1	7	12	13	9	17	18	4	19	7	28	13	3	3	11	24	7	3	4	6	⊕	1	1
April	1016	16	10	24	5	79	67	5	5	120	–	3	7	15	8	7	23	22	2	13	8	27	11	2	3	18	23	5	3	6	7	⊕	2	2
May	1016	18	12	26	8	83	70	5	5	92	–	5	13	13	6	5	18	29	3	10	10	25	11	3	2	12	26	8	3	5	7	⊕	2	2
June	1019	20	15	28	11	86	72	5	5	65	–	4	16	13	4	2	19	24	8	11	11	32	9	1	1	12	23	7	3	5	6	0	2	2
July	1019	23	17	29	14	88	74	5	5	51	–	5	14	19	7	1	16	22	4	13	9	35	11	1	1	13	21	7	3	4	6	0	2	3
August	1018	24	18	28	14	87	72	5	5	84	–	3	9	18	9	3	21	21	3	13	10	35	11	1	0	11	22	7	3	4	6	0	2	3
September	1018	22	16	30	12	85	71	5	5	93	–	1	5	17	10	5	20	18	2	22	8	32	13	1	2	15	19	5	5	4	6	⊕	3	2
October	1017	20	14	26	9	81	69	5	5	128	–	2	3	11	16	11	25	10	1	21	7	23	13	4	7	14	21	5	7	4	6	0	3	1
November	1017	16	11	23	6	78	70	6	6	165	–	1	2	10	14	13	27	10	3	20	2	14	14	7	8	19	19	4	11	5	6	⊕	2	1
December	1020	14	9	19	4	74	68	5	6	142	–	1	4	8	14	13	26	11	2	21	4	12	15	7	11	20	18	3	12	5	5	⊕	2	1
Means	1019	18	12	33 *	1 §	81	69	5	5	_	_	2	7	13	11	8	22	18	3	16	7	25	12	3	5	14	22	6	6	5	6	_	_	_
Totals	_	_	_	_	_	_	_	_	_	1270	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	⊕	24	21
Extreme values	_	_	_	36 †	–2 ‡	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
No. of years observations	15	15				15		15		30		15									15									15		15	15	15

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.169

WMO No 08014

GIJON (43° 32′ N, 05° 38′ W) Height above MSL – 10 m

Climatic Table compiled from 1960 to 1997 years observations, 1960 to 1997

Month	Average pressure at MSL	Temperatures				Average humidity		Average cloud cover		Precipitation		Wind distribution – Percentage of observations from																Mean wind speed		Number of days with		
		Mean daily max.	Mean daily min.	Mean highest in each month	Mean lowest in each month	0600	1500	0900	1500	Average fall	No. of days with 1 mm or more	0900									1500											
												N	NE	E	SE	S	SW	W	NW	Calm	N	NE	E	SE	S	SW	W	NW	Calm	0900	1500	Gale	Fog	Thunder
	hPa	°C	°C	°C	°C	%	%	Oktas		mm																				Knots				
January	1021	13	5	19	−1	88	71	5	5	120	17	0	⊕	2	11	11	12	9	2	53	11	8	17	3	4	7	16	10	23	2	5	⊕	1	1
February	1020	14	5	20	0	89	70	5	5	90	15	3	2	2	13	7	14	8	3	48	15	13	25	3	3	5	12	12	12	3	6	⊕	1	1
March	1020	15	7	21	1	90	69	5	5	71	16	2	3	5	11	5	11	12	3	47	16	19	31	2	3	2	7	16	4	3	8	⊕	1	1
April	1016	16	8	22	3	89	70	6	5	64	14	6	5	11	6	6	16	10	8	32	20	26	24	1	1	1	6	18	3	4	8	⊕	1	1
May	1015	18	11	23	6	91	73	6	6	86	16	13	12	13	2	1	7	11	12	28	22	28	23	1	1	1	4	17	4	4	7	⊕	2	1
June	1018	20	14	24	9	91	74	6	5	56	13	19	18	11	4	2	4	7	15	19	26	29	23	1	0	⊕	3	15	3	4	8	⊕	3	1
July	1019	22	16	26	12	92	76	6	5	38	12	14	17	15	4	⊕	5	6	18	22	26	31	23	1	⊕	0	2	12	4	4	8	⊕	3	2
August	1018	23	16	26	12	93	74	6	5	67	12	9	9	9	4	3	5	8	13	39	26	27	26	1	0	1	2	14	3	3	8	0	2	1
September	1018	22	14	27	9	93	74	5	5	79	12	2	2	7	4	1	12	7	5	61	21	24	21	1	1	1	6	17	9	2	6	⊕	3	1
October	1017	19	11	24	5	93	74	5	5	108	14	1	1	4	7	7	11	6	3	59	12	17	26	3	2	3	7	16	13	2	6	⊕	2	⊕
November	1016	16	9	22	2	92	75	6	6	104	15	1	⊕	5	8	6	16	8	3	54	10	10	19	2	4	6	11	13	26	2	5	⊕	1	1
December	1019	14	7	21	0	90	74	6	6	133	16	1	1	2	14	7	11	8	1	55	7	7	20	8	4	8	11	9	27	2	5	⊕	1	1
Means	1018	18	10	29 *	−2§	91	73	6	5	_	_	6	6	7	8	5	10	8	7	43	18	20	23	2	2	3	7	15	10	3	7	_	_	_
Totals	_	_	_	_	_	_	_	_	_	1016	172	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	⊕	21	12
Extreme values	_	_	_	35†	−5‡	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
No. of years observations	15	15				15		15		30		15									15									15		15	15	15

* Mean of highest each year
§ Mean of lowest each year

† Highest recorded temperature
‡ Lowest recorded temperature

⊕ Rare
⊖ All observations

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1.170

METEOROLOGICAL CONVERSION TABLE AND SCALES

Fahrenheit to Celsius

°Fahrenheit

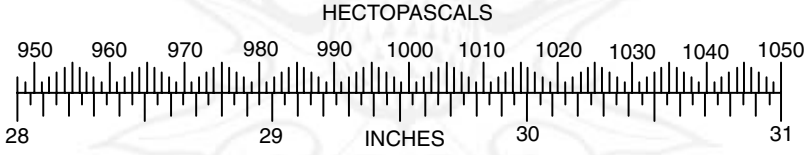
	0	1	2	3	4	5	6	7	8	9
°F				Degrees Celsius						
−100	−73·3	−73·9	−74·4	−75·0	−75·6	−76·1	−76·7	−77·2	−77·8	−78·3
−90	−67·8	−68·3	−68·9	−69·4	−70·0	−70·6	−71·1	−71·7	−72·2	−72·8
−80	−62·2	−62·8	−63·3	−63·9	−64·4	−65·0	−65·6	−66·1	−66·7	−67·2
−70	−56·7	−57·2	−57·8	−58·3	−58·9	−59·4	−60·0	−60·6	−61·1	−61·7
−60	−51·1	−51·7	−52·2	−52·8	−53·3	−53·9	−54·4	−55·0	−55·6	−56·1
−50	−45·6	−46·1	−46·7	−47·2	−47·8	−48·3	−48·9	−49·4	−50·0	−50·6
−40	−40·0	−40·6	−41·1	−41·7	−42·2	−42·8	−43·3	−43·9	−44·4	−45·0
−30	−34·4	−35·0	−35·6	−36·1	−36·7	−37·2	−37·8	−38·3	−38·9	−39·4
−20	−28·9	−29·4	−30·0	−30·6	−31·1	−31·7	−32·2	−32·8	−33·3	−33·9
−10	−23·3	−23·9	−24·4	−25·0	−25·6	−26·1	−26·7	−27·2	−27·8	−28·3
−0	−17·8	−18·3	−18·9	−19·4	−20·0	−20·6	−21·1	−21·7	−22·2	−22·8
+0	−17·8	−17·2	−16·7	−16·1	−15·6	−15·0	−14·4	−13·9	−13·3	−12·8
10	−12·2	−11·7	−11·1	−10·6	−10·0	−9·4	−8·9	−8·3	−7·8	−7·2
20	−6·7	−6·1	−5·6	−5·0	−4·4	−3·9	−3·3	−2·8	−2·2	−1·7
30	−1·1	−0·6	0	+0·6	+1·1	+1·7	+2·2	+2·8	+3·3	+3·9
40	+4·4	+5·0	+5·6	6·1	6·7	7·2	7·8	8·3	8·9	9·4
50	10·0	10·6	11·1	11·7	12·2	12·8	13·3	13·9	14·4	15·0
60	15·6	16·1	16·7	17·2	17·8	18·3	18·9	19·4	20·0	20·6
70	21·1	21·7	22·2	22·8	23·3	23·9	24·4	25·0	25·6	26·1
80	26·7	27·2	27·8	28·3	28·9	29·4	30·0	30·6	31·1	31·7
90	32·2	32·8	33·3	33·9	34·4	35·0	35·6	36·1	36·7	37·2
100	37·8	38·3	38·9	39·4	40·0	40·6	41·1	41·7	42·2	42·8
110	43·3	43·9	44·4	45·0	45·6	46·1	46·7	47·2	47·8	48·3
120	48·9	49·4	50·0	50·6	51·1	51·7	52·2	52·8	53·3	53·9

Celsius to Fahrenheit

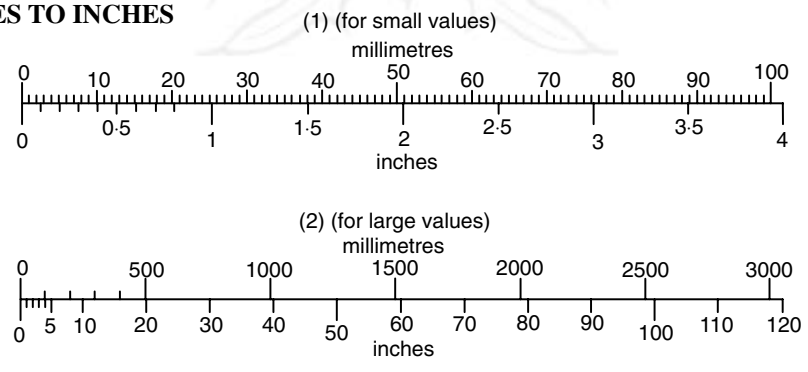
°Celsius

	0	1	2	3	4	5	6	7	8	9
°C				Degrees Fahrenheit						
−70	−94·0	−95·8	−97·6	−99·4	−101·2	−103·0	−104·8	−106·6	−108·4	−110·2
−60	−76·0	−77·8	−79·6	−81·4	−83·2	−85·0	−86·8	−88·6	−90·4	−92·2
−50	−58·0	−59·8	−61·6	−63·4	−65·2	−67·0	−68·8	−70·6	−72·4	−74·2
−40	−40·0	−41·8	−43·6	−45·4	−47·2	−49·0	−50·8	−52·6	−54·4	−56·2
−30	−22·0	−23·8	−25·6	−27·4	−29·2	−31·0	−32·8	−34·6	−36·4	−38·2
−20	−4·0	−5·8	−7·6	−9·4	−11·2	−13·0	−14·8	−16·6	18·4	−20·2
−10	+14·0	+12·2	+10·4	+8·6	+6·8	+5·0	+3·2	+1·4	−0·4	−2·2
−0	32·0	30·2	28·4	26·6	24·8	23·0	21·2	19·4	+17·6	+15·8
+0	32·0	33·8	35·6	37·4	39·2	41·0	42·8	44·6	46·4	48·2
10	50·0	51·8	53·6	55·4	57·2	59·0	60·8	62·6	64·4	66·2
20	68·0	69·8	71·6	73·4	75·2	77·0	78·8	80·6	82·4	84·2
30	86·0	87·8	89·6	91·4	93·2	95·0	96·8	98·6	100·4	102·2
40	104·0	105·8	107·6	109·4	111·2	113·0	114·8	116·6	118·4	120·2
50	122·0	123·8	125·6	127·4	129·2	131·0	132·8	134·6	136·4	138·2

HECTOPASCALS TO INCHES

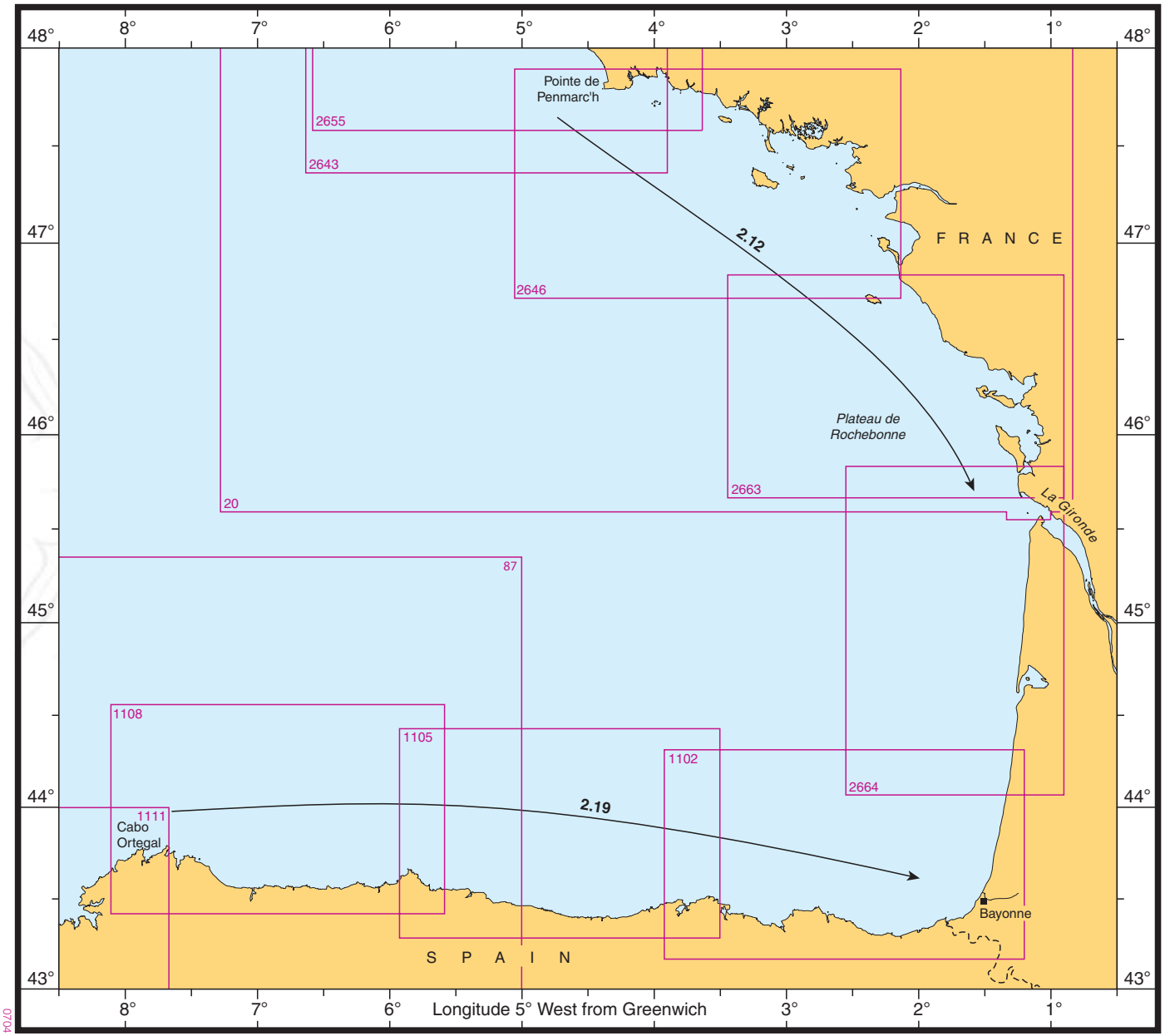


MILLIMETRES TO INCHES



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CHAPTER 2

BAY OF BISCAY THROUGH ROUTES

GENERAL INFORMATION

Charts 1104, 4103

Synopsis

2.1

1 **Ocean routes** are described in *Ocean Passages for the World.* The purpose of this chapter is to provide the additional information required by ocean-going vessels when on passage through the area or sailing directly to the major ports towards the head of Bay of Biscay. It is divided into three sections:

2 W approaches to Bay of Biscay (2.7).

Pointe de Penmarc'h (47°48′N, 4°22′W) to La Gironde approach (45°47′N, 1°28′W): the direct route including landfalls on the outlying islands off the French coast (2.11).

Cabo Ortegal (43°46′N, 7°53′W) to Bayonne approaches (43°33′N, 1°33′W); the through route along the N coast of Spain (2.19).

2.2

1 Details of coastal features, landmarks and lights have been omitted but cross-references to paragraphs in other chapters where these will be found are included.

For details of features in adjacent areas N of Pointe de Penmarc'h and SW of Cabo Ortegal mariners are referred to *Channel Pilot* and to *West Coasts of Spain and Portugal Pilot* respectively.

2 Electronic position fixing systems and radio navigational aids are described at 1.34.

Exercise areas

2.3

1 Naval vessels, including submarines, and aircraft may be encountered exercising in Bay of Biscay and its approaches especially in the areas adjacent to the naval bases at Brest (48°23′N, 4°29′W), Lorient (47°45′N, 3°21′W) and El Ferrol del Caudillo (43°28′N, 8°16′W). For further details see 1.12.

Fishing

2.4

1 Tuna fishing fleets and trawlers may be encountered offshore in Bay of Biscay and its approaches; see 1.9 for further details.

Fish havens (charted) are located close to the shore within Bay of Biscay and should be avoided, see 1.8.

Regulations

2.5

1 French regulations concerning vessels laden with hydrocarbons or noxious substances that suffer damage or defects within 50 miles of the French coast or propose to enter French territorial waters are given at 1.52.

Rescue

2.6

1 Information on search and rescue including details of rescue stations and services is given at 1.71

WESTERN APPROACHES TO BAY OF BISCAY

General information

Charts 20,1104, 4103

Description

2.7

1 The part of the area (1.1) covered by this volume that lies W of a line drawn SSW from Île d'Ouessant (48°28′N, 5°05′W) to Cabo Ortegal (43°46′N, 7°53′W) contains no known navigational dangers except within 7 miles of Cabo Ortegal. Routes pass through the area in oceanic depths except where the continental shelf extends into the NE and SE corners.

Hazards

2.8

1 **Traffic** through the area is concentrated on the route between the TSS (48°40′N, 5°30′W) off Île d'Ouessant and that (43°10′N, 9°40′W) off Cabo Finisterre.

Submarine exercise areas are described at 1.14. An especially good lookout for submarines should be kept in the general areas indicated on chart 1104.

2 **Poor visibility.** Onshore winds bring cloud which may develop into fog or thick mist on reaching the coast.

Natural conditions

2.9

1 **Currents:** described at 1.103.

Tidal streams. Within the 200 m depth contour from 75 miles WSW to 115 miles W of Pointe de Penmarc'h the tidal streams are rotary clockwise and are responsible for most of the flow. Closer to Pointe de Penmarc'h, about 35 miles SW and W of the point the tidal streams are more linear setting generally N or NW and S about 3 hours before and after HW Brest respectively. For further details see information on chart 20 and in *Admiralty Tidal Stream Atlas France West Coast.*

Passage directions

2.10

1 Approaching or passing the entrance to Bay of Biscay the possibility of an E set, especially during and after W gales, must be borne in mind and allowance made for the effect of tidal streams within the 200 m depth contour off the coast of Brittany.

2 **Caution.** Approaching the coast at either entrance point to Bay of Biscay, great care must be taken when making a landfall in uncertain weather or poor visibility; for further information see *Channel Pilot* or *West Coasts of Spain and Portugal Pilot* as appropriate.

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POINTE DE PENMARC'H TO LA GIRONDE APPROACH

General information

Charts 2646, 2663, 20

Description

2.11

1 **Ocean routes** leading directly to the major ports on the NE shore of Bay of Biscay make their landfall on one of the following:

Pointe de Penmarc'h (47°48′N, 4°22′W) (3.14).

Belle-Île (47°19′N, 3°10′W), a good landfall for vessels bound for Lorient, or approaching La Loire estuary from W.

2 Île d'Yeu (46°42′N, 2°20′W), the usual landfall for vessels approaching La Loire estuary from SW, or La Rochelle-Pallice or La Gironde estuary from NW.

BXA Landfall Light-buoy (45°37′N, 1°28′W) (8.41) if approaching La Gironde estuary from SW or W.

2.12

1 **Through route.** Plateau de Rochebonne (46°10′N, 2°26′W) (2.18), the only outlying danger, lies on the direct route from the vicinity of Pointe de Penmarc'h to BXA Landfall Light-buoy. As this dangerous shoal is steep-to on all sides and depths in its vicinity are irregular it is advisable to pass:

2 SW of Île d'Yeu close enough to fix the ship's position accurately, thence:

NE of Plateau de Rochebonne.

Topography

2.13

1 From Pointe de Penmarc'h to the entrance of La Gironde the coastline is generally low-lying but Pointe de Penmarc'h (3.14) is conspicuous due to the tall structures standing on it. The coast is fronted by numerous islands; the two farthest offshore, both radar conspicuous, being Belle-Île (5.8) and Île d'Yeu (7.10).

Hazards

2.14

1 **Submarine exercise areas:** described at 1.14. An especially good lookout for submarines should be kept in the vicinity of Lorient (47°45′N, 3°21′E).

2 **Fishing.** Coastal fishing vessels may be encountered throughout the area. A vast number of fishing vessels are based on the numerous fishing ports situated at frequent intervals along the whole stretch of coastline; concentrations occur in the area between Pointe de Penmarc'h and Lorient and in the vicinity of Île d'Yeu.

Traffic regulations

2.15

1 **Prohibited area.** An IMO adopted Area to be Avoided by vessels carrying hydrocarbons, radius 7 miles from position 46°10′N, 2°26′W as shown on the charts, encloses Plateau de Rochebonne (2.18).

Natural conditions

2.16

1 **Tidal streams** offshore are rotary clockwise and comparatively weak. For further information see *Admiralty Tidal Stream Atlas France West Coast,* and charts 20 or 2663 for details of the tidal stream over Plateau de Rochebonne.

2 **Currents** in the offing are generally weak and variable; a preponderance set NE in summer and SE at other seasons, see Diagram (1.103) for further details.

Flow is influenced very greatly by the recent and prevailing wind.

Principal marks

2.17

1 **Landmarks** situated on or near the landfalls listed are given below.

Pointe de Penmarc'h:

Plonéour-Lanvern church (47°54′N, 4°17′W) (3.13).

Eckmühl Lighthouse (47°48′N, 4°22′W) (3.13).

Belle-Île:

Goulphar Lighthouse (47°19′N, 3°14′W) (5.11).

2 Île d'Yeu:

Main Lighthouse (46°43′N, 2°23′W) (7.17).

Conspicuous water tower (1 mile ENE).

La Gironde estuary:

La Coubre Lighthouse (45°42′N, 1°14′W) (8.39).

Cordouan Lighthouse (45°35′N, 1°10′W) (8.39).

Major lights covering a part of the through route include:

3 Île de Sein Main Light (48°03′N, 4°52′W) described in *Channel Pilot.*

Eckmühl Light—as above.

Penfret Light (47°43′N, 3°57′W) (3.13).

Pen Men Light (47°39′N, 3°30′W) (4.10).

Pointe des Poulains Light (47°23′N, 3°15′W) (5.32).

Goulphar Light—as above.

4 Île du Pilier Light (47°03′N, 2°21′W) (6.29).

Île d'Yeu Main Light—as above.

Pointe des Corbeaux Light (46°41′N, 2°17′W) (7.17).

L'Armandèche Light (46°29′N, 1°48′W) (7.53).

Les Baleines Light (46°15′N, 1°34′W) (7.152).

Chassiron Light (46°03′N, 1°25′W) (7.152).

La Coubre Light—as above.

Cordouan Light—as above.

Passage directions

(continued from Channel Pilot)

2.18

1 **Initial position:** off Pointe de Penmarc'h (47°48′N, 4°22′W) (3.14).

The through route leads about 140 miles SE to approximate position 46°15′N, 1°50′W, about 10 miles W of Pointe des Baleines (7.153), passing:

SW of Belle-Île (47°19′N, 3°10′W) (5.7), thence:

SW of Île d'Yeu (46°42′N, 2°20′W) (7.9), thence:

2 NE of the Area to be Avoided (2.15) (enclosing Plateau de Rochebonne (46°10′N, 2°26′W). The shoal extending about 6 miles SE–NW and 1 mile wide is marked by four light-buoys, moored at its two extremities and on both sides: Rochebonne NE (starboard hand); Rochebonne SE (E cardinal); Rochebonne SW (port hand); Rochebonne NW (W cardinal).

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3 Thence the coastal route described at 7.147 leads about forty miles SSE to BXA Landfall Light-buoy (45°37′N, 1°28′W) (8.41).

(Directions are given for the coastal routes W and S of Belle-Île at 5.12; and W and SW of Île d'Yeu at 7.18. Directions for Pointe des Baleines to Pointe de la Coubre continue at 7.153)

CABO ORTEGAL TO BAYONNE APPROACH

General information

Charts 1102, 1105, 1108, 1104

Through routes

2.19

1 The direct route from the vicinity of Cabo Ortegal (43°46′N, 7°53′W) to BA Landfall Light-buoy (43°33′N, 1°33′W) passes close to several capes on the N coast of Spain where it coincides with the coastal route described in the last three chapters of this volume.

2 As there are no outlying dangers in the S part of Bay of Biscay all the other routes through the area either lead directly to a landfall on one of the aforementioned capes or otherwise join the coastal route in the vicinity of their destination.

Topography

2.20

1 La Côte des Landes, the coast between La Gironde estuary and Biarritz (43°30′N, 1°33′W) about 125 miles S, consists of sand dunes backed by an extensive plain covered in conifer trees.

The N coast of Spain is bold and rocky. Cordillera Cantábrica, a mountain range, runs parallel to the coast from 18 to 30 miles inland with spurs extending N that mostly terminate in headlands or steep slopes.

2.21

1 **Refuge.** Between Cabo Ortegal and La Gironde estuary there are few sheltered bays and harbours of refuge; except with local knowledge, only the following are recommended in stormy weather:

Ría del Barquero (43°45′N, 7°40′W) (11.175).
Ría de Vivero (43°42′N, 7°35′W) (11.161).
Gijón (43°34′N, 5°41′W) (10.160).
Santander (43°27′N, 3°48′W) (10.20).
Bilbao (43°21′N, 3°02′W) (9.174).
Pasajes (43°19′N, 1°55′W) (9.15).

Hazards

2.22

1 **Fishing.** Large fishing fleets are based on the numerous fishing ports situated along the N coast of Spain. During the anchovy season from March to May concentrations of fishing vessels may be encountered in coastal waters in the vicinity of Bilbao; tunny boats may be found in the same area from June to October.

2 **Marine exploitation:**

An offshore oil and gas field (9.132) lies N and E of Cabo Machichaco (43°27′N, 2°45′W).

Oil drilling rigs may be encountered off La Côte des Landes (8.191).

3 **Firing danger area.** French authorities advise that vessels should avoid the danger areas extending up to 45 miles from the coast between Pointe de la Négade (45°28′N, 1°09′W) and Capbreton (43°39′N 1°26′W), see 8.190 for further details.

4 **Heavy seas** are encountered during and sometimes in advance of NW gales especially in areas of shelving rocky bottom off the N coast of Spain.

Onshore winds bring low cloud which often covers the higher ground especially on the W part of the N coast of Spain. Many of the major lights are placed so high as frequently to be obscured in these conditions.

Natural conditions

2.23

1 **Tidal streams** are generally very weak except in the vicinity of the capes on the N coast of Spain; further information is given in the relevant place in this volume.

2 **Currents** offshore in the S half of Bay of Biscay depend chiefly on the recent direction and strength of the wind and seldom exceed 1 kn. In winter the currents are predominantly E-going; during the remainder of the year they are more variable in direction, the highest proportion setting generally S, see diagram (1.103).

3 The strongest currents experienced are those which set E along the N coast of Spain thence N along the S part of the French coast as a result of W or NW gales in winter. These currents increase in strength towards the head of the bay, see 1.104 for further details.

Principal marks

2.24

1 **Landmarks.** The following summits are useful landfall or distant marks:

Monte Garita de Herbeira (43°43′N, 7°57′W) described in *West Coasts of Spain and Portugal Pilot.*
Monte de Bares (43°47′N, 7°40′W) (11.158).
Monte Penedo do Galo (43°40′N, 7°34′W) (11.162).
Monte Mondigo (43°31′N, 7°08′W) (11.97).

2 Monte Pico Pienzo (43°26′N, 5°14′W) (10.129).
Naranjo de Bulnes (43°12′N, 4°49′W) (10.97).
Peña Cabarga (43°23′N, 3°47′W) (10.8).
Monte Cerredo (43°23′·5N, 3°16′·5W) (9.223).
Monte Jata (43°24′N, 2°50′W) (9.164).
Monte Itzarraitz (43°12′N, 2°17′W) (9.6).
Peñas de Aya (43°17′N, 1°47′W) (8.255).

2.25

1 **Major lights** providing coverage of the direct route from Cabo Ortegal to Bayonne include:

Punta de la Estaca de Bares Light (43°47′N, 7°41′W) (11.158).
Punta Roncadoira Light (43°44′N, 7°31′W) (11.139).
Cabo Busto Light (43°34′N, 6°28′W) (11.46).
Cabo Vidio Light (43°36′N, 6°15′W) (11.46).
Cabo Peñas Light (43°39′N, 5°51′W) (10.187).
Cabo de Torres Light (43°34′N, 5°42′W) (10.169).

2 Punta del Torco de Fuera Light (43°26′N, 4°02′W) (10.66).
Cabo Mayor Light (43°29′N, 3°47′W) (10.15).
Cabo Ajo Light (43°31′N, 3°35′W) (9.228).
Punta del Pescador Light (43°28′N, 3°26′W) (9.228).
Cabo Machichaco Light (43°27′N, 2°45′W) (9.134).

3 Igueldo or San Sebastián Light (43°19′N, 2°01′W) (9.51).
Cabo Higuer Light (43°24′N, 1°47′W) (8.255).

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Pointe Saint-Martin Light (43°30′N, 1°33′W) (8.255).
Cabo Machichaco (43°28′N, 2°45′W).

Passage directions

2.26

1 **Initial position:** off Cabo Ortegal (43°46′N, 7°53′W) (11.160).

The through route to BA Landfall Light-buoy (43°33′N, 1°33′W) (8.269) off Bayonne entrance leads generally E, passing:

N of Punta de la Estaca de Bares (43°47′N, 7°41′W) (11.159), thence:

N of Los Farallones (43°43′N, 7°26′W) (11.136), thence:

N of Cabo Peñas (43°39′N, 5°51′W) (10.183), thence:

2 N of Cabo Mayor (43°30′N, 3°47′W) (10.16), thence:

N of Cabo Ajo (43°31′N, 3°35′W) (9.231), thence:

N of Cabo Machichaco (43°28′N, 2°45′W) (9.135) and of Gaviota Production Platform (43°30′N, 2°41′W) (9.134), thence:

N of Cabo Higuer (43°24′N, 1°47′W) (9.8).

(Directions for routes W of Cabo Ortegal are given in West Coasts of Spain and Portugal Pilot)

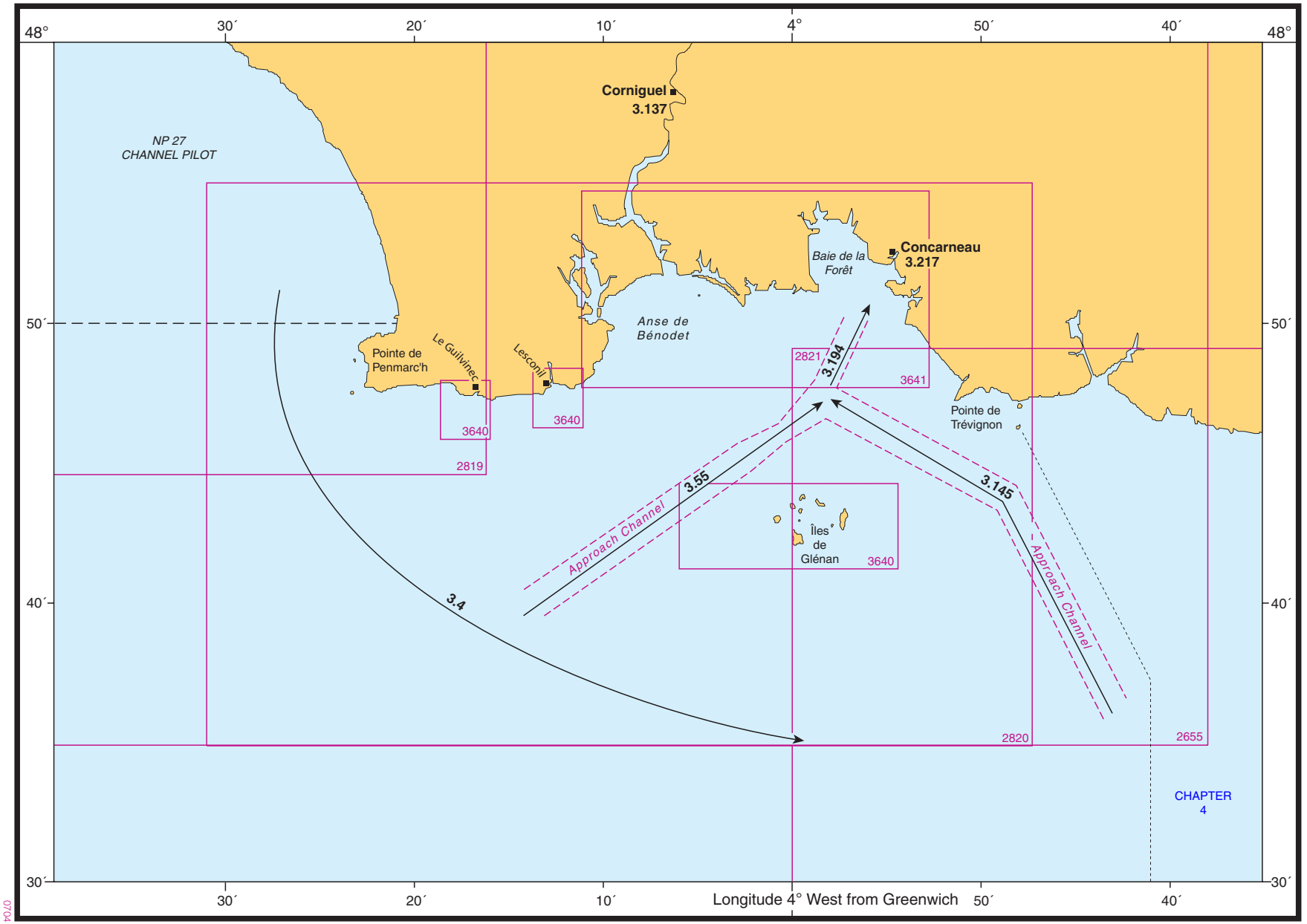
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Chapter 3 - Pointe de Penmarc'h to Pointe de Trévignon including Îles de Glénan



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CHAPTER 3

POINTE DE PENMARC'H TO POINTE DE TRÉVIGNON INCLUDING ÎLES DE GLÉNAN

GENERAL INFORMATION

Chart 2646

Scope of the chapter

3.1

1 The area covered by this chapter includes:

The coastal passage that rounds Pointe de Penmarc'h (47°47′·9N, 4°22′·4W) and then passes to seaward of Îles de Glénan (16 miles ESE).

The passage inshore of Îles de Glénan and those leading into Anse de Bénodet (47°50′N, 4°06′W) and Baie de la Forêt (6 miles ENE), the bays indenting the coast W of Pointe de Trévignon (47°46′·5N, 3°51′·2W).

3.2

1 The inshore passages contain a network of interconnecting channels, many suitable only for small vessels or small craft. For the sake of convenience and continuity of the directions, these channels and their destinations are grouped into two sections described in the following sequence:

2 Passages NW of Îles de Glénan (3.55).

Îles de Glénan to Baie de la Forêt (3.143).

Harbours and anchorages

3.3

1 There are numerous minor ports on the mainland, but only Corniguel (47°58′N, 4°06′W) (chart 2643) (3.137) on the river L'Odet and Concarneau (47°52′N, 3°55′W) (3.217) on Baie de la Forêt handle much cargo. The other ports, and Concarneau, are principally fishing ports, those in the vicinity of Pointe de Penmarc'h almost exclusively so, whereas those in Anse de Bénodet and Baie de la Forêt also cater for small craft, some with marinas.

2 Îles de Glénan are frequented only by small craft; the anchorages among the islands and their approaches are described at 3.163.

PASSAGE ROUND POINTE DE PENMARC'H AND SEAWARD OF ÎLES DE GLÉNAN

General information

Chart 2820

General description

3.4

1 The coastal passage rounds Pointe de Penmarc'h (47°47′·9N, 4°22′·4W) passing W and SW of Roches de Penmarc'h, the coastal reefs, and then leads generally ESE for about 20 miles passing SSW then S of the reefs extending 4 miles SW and SE of Île du Loc'h (47°42′N, 4°00′W), the S-most of the Îles de Glénan.

3.5

1 Passages between the coastal reefs lead into the following fishing ports on the mainland (positions given from Pointe de Penmarc'h):

Saint-Guénolé (1 mile N) (3.19).

Kérity (1 mile E) (3.43).

Le Guilvinec (3½ miles E) (3.32).

Topography

3.6

1 **Pointe de Penmarc'h** and its vicinity is low-lying and foul.

Îles de Glénan consist of nine small low islands and numerous islets.

Sea and swell

3.7

1 The area in the region of Pointe de Penmarc'h offers no shelter in strong winds from SE through W to NE; in these conditions the swell about 12 miles offshore may be preferable to the breaking seas closer inshore.

Traffic regulations

3.8

1 **Prohibited anchorage.** Anchoring, dredging and trawling are prohibited within the areas, shown on the charts, extending 11 miles W from Anse de la Torche (47°50′N, 4°21′W) owing to submarine cables.

3.9

1 **Approach channels.** Regulations concerning Concarneau Approach Channels, shown on the charts, which pass one W and one E of Îles de Glénan are given at 3.59 and 3.147 respectively.

Measured distances

3.10

1 **Penmarc'h-Glénan** Measured Distance, shown on the charts, lies 8 miles S of Pointe de Penmarc'h. It is managed by the French Navy who man the special observation posts at the two limits. Application for its use should be made to Préfet Maritime de la Deuxième Région at Brest or Commandant de la Marine at Lorient, giving at least 2 days notice. Lorient Pilots (4.119) are qualified to conduct vessels over the measured distance. Other details are:

2 W limit: line of bearing 020½° of Penmarc'h Coastguard Station (47°48′N, 4°22′W) (3.13).

E limit: the alignment 020½° of observation post (47°47′·6N, 4°17′·5W) situated about 1 cable E of Men Meur (3.37), and Men Du Beacon-tower (port hand) (47°47′·3N, 4°17′·6W).

Distance: 5971 m.

Running course: in the vicinity of the 100 m depth contour, on a heading of 110½° or 290½°.

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Coastguard *Disused Lighthouse* *Eckmühl Lighthouse*



Pointe de Penmarc'h from SE (3.4)

(Original dated 2000–02)

(Photograph – Jean Guichard)

Rescue

3.11

1 **Coastguard** station (1.75): Penmarc'h (47°48′N, 4°22′W) (3.13).

Lifeboat stations (1.77):

Saint Guénolé (47°49′N, 4°23′W) (3.19).

Le Guilvinec (47°48′N, 4°17′W), (3.32).

Tidal streams

3.12

1 Off Pointe de Penmarc'h and S of Îles de Glénan the tidal streams are rotary clockwise. When the tide is rising at Brest the tidal stream divides off Pointe de Penmarc'h, one branch setting NW along the shore of Baie d'Audierne, the other NE towards Anse de Bénodet; when it is falling at Brest the tidal streams meet off the same point. For more detailed information see *Admiralty Tidal Stream Atlas: France West Coast* and the charts.

2 South-west of Pointe de Penmarc'h, not more than 2 miles offshore, the tidal stream sets:

In-going: N changing to E, principal direction NE.

Out-going: SE changing to W, principal direction SW.

Maximum rate at springs: 1½ to 2 kn.

3 South of the foul ground between Pointe de Penmarc'h and Lesconil (47°48′N, 4°13′W), the tidal streams are normally weak but are much affected by the wind:

NE and E-going tidal streams may attain 2 kn with strong winds from seaward.

NW-going stream attains rates from 2½ to 3 kn with strong E and SE winds.

Principal marks

3.13

1 **Landmarks:**

Plonéour-Lanvern church (belfry) (47°54′N, 4°17′W).

Eckmühl Lighthouse (grey octagonal tower; 65 m in height) (47°47′·9N, 4°22′·3W) with a disused lighthouse and Penmarc'h Coastguard Station standing close SW; the group is conspicuous both visually and on radar.

Penfret Lighthouse (white square tower, red top; 24 m in height) (47°43′·3N, 3°57′·1W).



Penfret Lighthouse from NE (3.13)

Original dated 1994)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

2 **Major lights:**

Eckmühl Light—as above.

Penfret Light—as above.

Île aux Moutons Light (47°46′·5N, 4°01′·6′W) (3.61).

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Directions

(Directions for routes N of 47°50′N are given in Channel Pilot)

Rounding Pointe de Penmarc'h

3.14

1 **Initial position** 47°51′N, 4°28′W, about 5 miles NW of Pointe de Penmarc'h.

Route. The coastal route rounds Roches de Penmarc'h, steep-to reefs and islets lying up to 1¼ miles W and 2¼ miles S of the coast in the vicinity of Pointe de Penmarc'h. It leads SSE for about 6 miles, then ESE passing (positions given from Pointe de Penmarc'h):

2 WSW of Basse Gaouac'h Light-buoy (starboard hand) moored 3 cables NW of Basse Gaouac'h (1 mile WNW), a drying rock, and close W of a dangerous wreck (position doubtful), thence:

WSW of Men-Hir (1 mile W), a reef partly above water, marked by Men-Hir Light (white tower, black band; 21 m in height), thence:

3 WSW of Cap Caval Light-buoy (W cardinal) moored 6 cables WSW of Jument (1¼ miles SSE), a drying rock marked by a ruined beacon (black post), thence:

SSW of Spineg Light-buoy (S cardinal) moored 3 cables S of Basse Spineg (Spinec) (3½ miles SE), thence:

4 SSW of Men Korn (5¼ miles ESE), an underwater rock lying 4 cables SSW of Ar Guisty Beacon-tower (S cardinal; 6 m high).

The limits (135° and 315°) between the white sector and the green sector of Men Hir Light clear SW of Roches de Penmarc'h, which are covered by the green sector, except within 3 cables NW and 7 cables SE of the light where the 10 m depth contour extends up to 2 cables into the white sector.

3.15

1 **Clearing bearing.** The line of bearing 308° of Îlot Nonna (whitened summit 12 m high) (7 cables WSW of Eckmühl Light) open SE of Les Étocs (2¼ miles SE of the islet), a large group of above-water rocks up to 11 m high, clears about 1 cable SW of Basse Spineg (3.14) but passes NE of Spineg Light-buoy (S cardinal).

3.16

1 **Useful marks** (positions given from Pointe de Penmarc'h):

Tronoën (Tronoan) chapel (three belfries) (4 miles NNE).

Penmarc'h church (two belfries) (1¾ miles ENE).

Locarec Light (1½ miles ESE) (3.47).

Le Gulvinec church (tower) (3¾ miles E).

2 Le Gulvinec Rear Leading Light (4 miles E) (3.36).

Lost Moan Light (4 miles ESE) (3.40).

Tréffiagat church (spire 53 m in height) (4½ miles E)

Lesconil water tower (6 miles E).

Men ar Groas Light (6½ miles E) (3.69).

Passing Îles de Glénan

3.17

1 From the vicinity of position 47°40′N, 4°13′W, the offshore route past Îles de Glénan continues ESE, then E, for about 20 miles, passing (positions given from Penfret Light):

2 SSW of Basse Pérennès Light-buoy (W cardinal) marking Basse Pérennès (6 miles WSW), thence:

SSW of Jument de Glénan Light-buoy (S cardinal) moored 1 mile S of La Jument (4½ miles SW), an underwater rock, thence:

S of Laouennou Buoy (isolated danger) moored 5 cables ESE of Les Laouennou (3½ miles SSE), a shoal.

3.18

1 **Useful marks** (positions given from Penfret Light):

Fort Cigogne an old stone fort with a prominent tower (white, black top) (1¾ miles W), on Île Cigogne.

Factory chimney (21 m in height) (1¾ miles WSW) on Île du Loc'h.

(Directions are given for passage NW of Îles de Glénan at 3.62, for Concarneau E approaches at 3.151, for Chenal du Brilimec at 3.167, for coastal passage S of Île de Groix at 4.11, and for W approaches to Les Coureaux de Groix at 4.29)

Saint-Guénolé and approach

Chart 2820 (see 1.18)

General information

3.19

1 **Description.** Saint-Guénolé (47°49′N, 4°23′W) almost exclusively a fishing port, is approached through Chenal de Groumilli and entered through a channel cut through the reefs on the S side of the harbour.

Port Authority: Capitainerie, Saint-Guénolé, 29131 Penmarc'h. Located at the fish market (3.22).

Limiting conditions

3.20

1 **Controlling depths:** entrance channel 50 m wide dredged to 2·5 m, channel 30 m wide leading to fish market quay dredged to 2 m.

Deepest berths: alongside fish market quay (3.28).

Rough weather: .strong winds between SW and NW make entry difficult and on occasions, impossible.

Arrival information

3.21

1 **Port radio:** see *Admiralty Maritime Communictions,* for details.

Regulations:

Speed limit in the harbour: 3 kn.

Port radio must be guarded by vessels entering harbour.

Pleasure craft are accepted at any time provided they do not interfere with the normal activities of the port. Such craft will not be permitted to enter or depart when the coastal fishing fleet is returning to harbour between 1600 and 1830, except in case of emergency.

Harbour

3.22

1 **General layout**. The entrance, which was blasted through the rocks off the SW end of Île Kruguen (47°48′·8N, 4°22′·7W), is sheltered from W by a breakwater. The W part of the harbour, between the mole at the SW corner and the basin by the fish market 2 cables farther NNE, provides berths and facilities for fishing

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vessels. East of the N part of the fairway there are a few moorings and anchor berths for small craft.

Tidal streams attain a rate of 3 to 4 kn in the approach channel.

Directions

3.23

1 **Initial position** 47°49′N, 2°24′W, 2 cables NNE of Basse de Gaouac'h Light-buoy (starboard hand) (3.14).

Route. The approach and entrance channels are marked by a continuous succession of three pairs of leading lights. Note however that initially the first pair of leading lights are used as clearing marks for the reef on the SSW side of the entrance.

3.24

1 **Chenal de Groumilli** is entered by keeping close NNE of the alignment (123°) of Chenal de Groumilli Leading Lights (3.25) which clears very close NNE of the following dangers:

Roche Pellenic (rock drying 0·6 m) (47°48′·6N, 4°23′·6W).

Roche Groumilli (rock drying 3 m) (¾ cable SE of Roche Pellenic).

3.25

1 **Chenal de Groumilli Leading Lights:**

Front light (orange square on white tower black bands; 11 m in height) (47°48′·2N, 4°22′·6W).

Rear light (similar structure 14 m in height) (300 m ESE of front light).

2 The alignment (123°) of these lights then leads about 1 cable farther ESE to a position 1¼ cables W of Scoëdec Light-beacon (starboard hand; green tower 7 m in height) (47°48′·5N, 4°23′·1W), passing:

Close SSW of the SW side of Men ar Ganol (rock drying 0·7 m) (1¼ cables WNW of Scoëdec Light-beacon) marked by a light-buoy (port hand).

3.26

1 **Leading lights:**

Front light (platform on green and white metal column) (5 cables NE of Scoëdec Light-beacon).

Rear light (similar structure) (320 m NE of front light).

2 The alignment (055½°) of these lights leads 3 cables NE to the outer end of the entrance channel passing:

Close SE of Men ar Ganol (3.25), and:

Close NW of the drying reef marked by Scoëdec Light-beacon (starboard hand) (3.25).

3.27

1 **Leading lights:**

Front light (grey mast 13 m in height) (7 cables NNE of Scoëdec Light-beacon).

Rear light (mast, red and white bands; 10 m in height) (51 m NNE of front light).

2 The alignment (026½°) of these lights, which are difficult to distinguish by day, then leads through the entrance channel see 3.20 for depth, marked by lateral marks as follows:

Two light-buoys, then Nos 1 and 3 Light-beacons (towers) on the starboard side.

Two light-buoys, then Nos 2 and 4 Light-beacons (towers) on the port side.

Berths

3.28

1 Berths on W side of the harbour consist of the following, listed from S to N:

Berth (position)	*Length (m)*	*Depth alongside (m)*
Wharf (inner side of L-shaped mole)	200	2·5
Pontoon	—	—
Quays in the vicinity of the fish market	380	3

Port services

3.29

1 **Repairs:** shipyard for vessels with wooden hulls; workshop for engine repairs; careenage.

Supplies: fuel oil; fresh water; provisions.

Harbour regulations: pleasure craft are forbidden to berth on quays, pontoons or fishing vessels and must request a drying berth from the Capitainerie.

Small craft

Port Saint-Pierre

3.30

1 **General information.** Saint-Pierre anchorage (47°47′·8N, 4°22′·3W) dries 2·7 m, sand, at its centre and is used only by local fishing boats. It lies NE of the landing slip extending 4 cables SE from the base of the old lighthouse (3.13) on Pointe de Penmarc'h and is sheltered by a detached breakwater ¾ cable long lying parallel to and 4 cables SW of the slip.

Local knowledge is required to enter.

3.31

1 **Directions.** Initial position 47°47′N, 4°23′W, about 1 mile SSW of Eckmühl Light (3.13).

The approach channel whose inner end dries, leads NNE to the anchorage, passing (positions give from Eckmühl Light):

2 Both sides of a group of three unmarked rocks (E-most dries 1·1 m; N-most dries 2·8 m) (6 cables SSW), thence:

ESE of Grouiez Bihan (4½ cables SW) a drying ledge marked by a beacon (S cardinal) and:

WNW of Grouiez Braz (rock 0·7 m high) (4 cables SSW), thence:

3 Close ESE of the beacon (port hand) (2 cables SSW) marking the SE end (painted white) of the detached breakwater, and:

Close WNW of a rock (drying 3·8 m) lying 1 cable SE of the SE end of the detached breakwater thence:

Close ESE of the beacon (port hand) (1¼ cables SSW) marking the head of the landing slip.

Le Guilvinec and approaches

Charts 2820, 3640, plan of Le Guilvinec

General information

3.32

1 **Description.** Le Guilvinec (47°48′N, 4°17′W), an important fishing port, is approached from either the SW or S and entered through a marked channel.

Port Authority: Capitainerie du Port, 29115 Le Guilvinec. Located at the fish market (3.35).

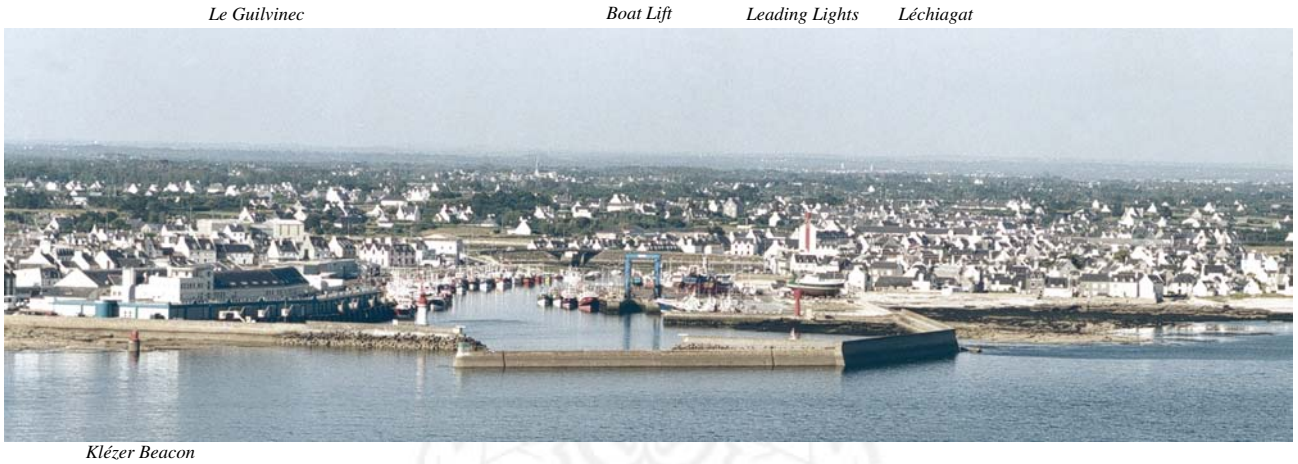
Limiting conditions

3.33

1 **Least charted depth:** 1·6 m, in the harbour approaches (3.38).

Deepest berths: as described at 3.41.

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Port du Guilvinec from SW (3.32)
(Original dated 1994)

(Photograph – SHOM)

Tidal levels. See information in *Admiralty Tide Tables*. Mean spring range about 4·2 m; mean neap range about 2·0 m.

2 **Strong winds** from SE render the SW approach dangerous during the last 2 hours of the out-going tidal stream, when the sea breaks over Basse aux Herbes (47° 46′·8N, 4° 18′·3W) and Pen Men Ham (2½ cables NE) (3.36). Strong winds from WSW and W cause a swell which makes entry difficult.

3 **Pleasure craft** are accepted only:
In an emergency, or:
If they do not interfere with the port's normal activities.

Arrival information

3.34

1 **Port radio:** see *Admiralty List of Radio Signals Volume 6(2)* for details.

Regulations:
Anchoring is prohibited in the area shown on chart
Speed limit in harbour: 3 kn.
Port radio must be guarded by all vessels entering harbour.
Pleasure craft are forbidden to enter or leave, except in the event of *force majeure,* when the coastal fishing fleet is returning to harbour between 1600 and 1830.

Harbour

3.35

1 **General layout**. The harbour is sheltered by two breakwaters:
Môle de Léchiagat extending SW, then WSW, then WNW from the old mole on the SE side of the harbour.
Môle du Guilvinec extending SSE, then SE, from the shore on the NW side.

The fish market, a large prominent building, is situated at the W corner of the harbour; the berths fronting it are reserved for fishing vessels unloading their catch.

Directions for south-western approach

3.36

1 **Initial position** 47°46′N, 4°20′W.

Leading lights:
Front (white pylon 6 m in height) (47°47′·5N, 4°17′·0W) on the spur of Môle de Léchiagat.
Middle (red square on white column, 11 m in height) (210 m NE of front mark) on Rocher Le Faoutès.
Rear (red square on white tower, red stripe; 25 m in height) (6 cables NE of front mark) visible 051½°–054½°.

2 The alignment (053°) of these lights leads 2 miles NE through the SW approach and into the entrance channel passing (positions given from front leading light):
NW of Névez Light-buoy (starboard hand) marking Basse Névez (2¾ miles SW), thence:
SE of the SE corner of Les Étocs (2½ miles WSW) (3.15) marked by Raguen Beacon-tower (S cardinal), and:

3 NW of the 5 m depth contour surrounding Basse Salliou (2½ miles SW), thence:
SE of the edge of Férigou (reef drying 4·9 m) (2 miles WSW), thence:
SE of Basse Davu (1½ miles SW).

4 **Caution.** The alignment (053°) then leads over two pinnacle rocks, Basse aux Herbes (1¼ miles SW) and Pen Men Ham (1 mile SW), which may be passed on either side, and SE of Ar Vadeo (1¼ miles WSW), a drying rock.

Basse aux Herbes and Ar Vadeo are covered by the red sector (285°–298°) of Locarec Light (2½ miles W of Le Guilvinec Front Leading Light) (3.47). Basse aux Herbes also lies on the alignment (292°) of:
Front mark: Locarec Light.
Rear mark: disused lighthouse (1½ miles WNW of front mark) (3.13) on Pointe de Penmarc'h.

Directions for southern approach

3.37

1 **Initial position** 47°45′·5N, 4°17′·0W, 1 mile WSW of Ar Guisty Beacon-tower (S cardinal) (3.14).

Route. The channel leads 1¾ miles N to the outer end of the harbour entrance channel. Although deeper and wider than the SW approach, it is unlit and the adjacent dangers are unmarked.

2 **Marks open:**
Front mark: Men Meur (white rock) (47°47′·6N, 4°17′·6W) (chart 3640).
Rear mark: Kersidal Beacon (white diamond-shaped topmark on pillar; 39 m in height) (1 mile N of front mark).

3 The line of bearing 350° of Kersidal Beacon open W of Men Meur leads N through the approach, passing (positions given from Men Meur):

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W of Les Fourches, a reef whose highest point (1¾ miles SSE) is 1·1 m high, thence:
W of Roche Allagadec (7½ cables SSE), thence:
Over a detached 3·7 m patch (5 cables S), thence:
Close W of Capélan Light-buoy (starboard hand) moored ½ cable W of Roche du Capélan (4 cables SSE).

Directions for entrance channel

3.38

1 **Initial position** 47°47′·2N, 4°17′·6W.

Leading lights. The alignment (053°) previously described at 3.36 leads NE for about 3 cables passing (positions given from front leading light):
SE of Men Du (4½ cables WSW), a shoal marked by a beacon-tower (port hand), thence:
NW of Capélan Light-buoy (starboard hand) (4 cables SW) (3.37), thence:

2 SE of the beacon-tower (port hand) (3 cables WSW) marking Rousse ar Men Du, a drying patch, thence:
Over a 1·6 m shoal patch (2 cables SW) enclosed by the 2 m depth contour, and:
NW of Le Groaik Beacon-tower (starboard hand) (2 cables SSW) marking the SW end of a drying reef.

3.39

1 The channel then leads N then E into harbour passing (positions given from the head of Môle de Léchiagat):
W of Môle de Léchiagat Head Light (white hut, green top; 3 m in height (47°47′·5N, 4°17′·1W), and:
E of an unmarked rock (drying 1 m) (1 cable W), thence:
S of Klézer Beacon-tower (port hand) (1 cable N) marking the S edge of the foreshore, thence:

2 S of the head of the outer spur of Môle du Guilvinec, marked by a light (red structure, 2 m in height) (1 cable NE), and:
N of the head of the inner spur of Môle de Léchiagat, marked by a light (green structure, 2 m in height) (1 cable E), where the channel is 40 m wide.

3.40

1 **Useful marks** (positions given from the head of Môle de Léchiagat):
Light (white tower, red top; 10 m in height), (¾ cable NE) on the head of Môle du Guilvinec.
Lost Moan Light (square topmark on white tower red top; 13 m in height) (5 cables SSE).

Basin and berths

3.41

1 **Quayage**. The NW side of the harbour is quayed except for the NE-most 200 m. On the SE side there is a quay about 200 m in length extending NE from the vicinity of the shiplift (3 cable NE of Rocher Le Faoutès Light-beacon); some berths at this quay are repair berths.

2 An area off the NW quay was dredged to depths of 5 m in the SW part and 3 m in the NE part in 1991 (uncharted). The head of the basin mostly dries and provides moorings for small craft, including six for visiting small craft.

Port services

3.42

1 **Repairs:** several shipyards construct steel and wooden fishing vessels; workshops for engine repairs; 225-tonne shiplift; gridiron.

Other facilities: custom house, at fish market; yacht club.

Supplies: fuel oil, fresh water, provisions.

Harbour regulations: berthing is controlled by the Capitainerie du Port (3.32); the SW-most berth, 50 m long, at the quay on the NW side of the harbour is reserved for vessels berthing in an emergency.

Small craft: Kérity and approaches

Chart 2820 (see 1.18)

General information

3.43

1 **Description.** Kérity (47°48′N, 4°21′W), a drying artificial harbour used by fishing vessels up to 50 grt lies 2½ miles W of Le Guilvinec (3.32).

The approaches lead, from the outer and the inner end of Le Guilvinec SW approach (3.36), to Poul-Bras waiting anchorage (1 mile SE of Kérity Harbour) (3.45), whence a drying channel leads to the E entrance of the harbour.

Limiting conditions

3.44

1 **Controlling depths:**
Chenal de Penarguer, the SSE approach, has charted depths of 3 m or more in the narrow fairway.
Eastern approach: least charted depth 1·8 m.
Entrance channel: reported (1983) to dry 0·5 m.

Deepest berth: reported (1983) to be alongside the molehead (3.52).

Arrival information

3.45

1 **Waiting anchorages** for vessels awaiting the tide to enter harbour:
Poul-Bras (47°47′·2N, 4°20′·0W); in the vicinity of the position shown on the French chart; depths from 3·5 to 4·4 m, bottom sand; sheltered in winds from S through W to NE.

2 W of Rocher Locarec (5 cables SE of the harbour entrance) (3.47); depths from 1·8 to 2·8 m.

Local knowledge is necessary for entry at night and desirable for Chenal de Pénarguer by day.

Harbour

3.46

1 **General layout**:
A pier 450 m long extends SSE then SSW from the shore 9 cables E of Eckmühl Light (3.13).
A mole 2 cables farther W extends 200 m SSE from the shore.
A detached breakwater lies 1¼ cables SSW of the pierhead and molehead.
An area 80 m wide dredged to chart datum extends, from a position 40 m SSW of the pierhead, WNW to the molehead.

2 **Tidal streams** in Poul-Bras waiting anchorage (3.45) begin at the following times.

Interval from HW Brest	*Direction*
–0200	WSW
+0605	E

The maximum E-going and WSW-going spring rates are 1 kn and 2 kn respectively.

Directions for Chenal de Penarguer and entrance channel

3.47

1 **Entering port** should be made at, or close to, HW.

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Initial position 47°46′·2N, 4°19′·6W, on the leading line for Le Guilvinec SW approach, 1½ cables NE of Névez Light-buoy (N cardinal) (3.36).

Approaching Poul-Bras anchorage. The line of bearing 338½° of Locarec Light (white tank on rock; 8 m in height) standing on Rocher Locarec (47°47′·4N, 4°20′·2W) (rock 10 m high) leads NNW through Chenal de Penarguer, which has a least width of ½ cable between 3 m depth contours on each side, to a position 2 cables SSE of the light, passing (positions given from the light):

2 ENE of a 2·8 m patch (1 mile SSE) lying nearly 1 cable ENE of Raguen Beacon-tower (3.36), and:
WSW of Meillouroz (1 mile SSE), a reef drying 2·2 m, marked at its NW corner by a beacon (starboard hand), thence:
WSW of Men ar Peuns (reef drying 4·3 m) (8 cables SSE) lying 1½ cables WSW of Men Haro, a whitened rock (4·6 m high), and:

3 ENE of a rock (4·4 m high) (8 cables SSE) on the E edge of Les Étocs (3.15), thence:
ENE of a rock awash at chart datum (6 cables SSE) lying close off the NE corner of Les Étocs, and:
WSW of Men Daniel (6 cables SSE), a reef that extends 1 cable W from its whitened summit (7 m high), thence:
WSW of a 0·2 m patch (4 cables SSE), and:
ENE of a reef (drying 1·9 m) (4 cables S) marked by Rat Beacon-tower (E cardinal).

3.48

1 **Leading marks:**
Front mark: white patch on Kérity pierhead (6 cables NW of Locarec Light) from which a light (green metal mast; 4 m in height) is exhibited.
Rear mark: Kérity church (spire) (3½ cables NW of front mark).

The alignment (316°) of these marks then leads 8 cables NW through the drying entrance channel see 3.44 for controlling depth, to the vicinity of the pierhead, passing:

2 SW of Rocher Locarec (3.47), thence:
Close NE of Menhir (rock drying 4·8 m) (1¼ cables WSW of Locarec Light) marked by Men Hir Light-beacon (pylon), thence:
Close NE of the rocky tidal flats extending NW from the vicinity of Men-Hir to a position ½ cable S of the pierhead.

Directions for the eastern approach

3.49

1 **Initial position** 47°47′·0N, 4°17′·5W, on the leading line for Le Guilvinec S approach, about 2 cables S of Capélan Light-buoy (starboard hand) (3.37).

Approaching Poul-Bras anchorage. The line of bearing 280° of Men Hir Light (47°47′·8N, 4°23′·9W) (3.14), open N of Îlot Nonna (4½ cables ESE) (3.15), and just open S of Locarec Light (47°47′·4N, 4°20′·2W) (3.47), or at night, the white sector (271°–285°) of Locarec Light, standing on Rocher Locarec leads 1½ miles W into the N part of the anchorage, passing (positions given from Locarec Light):

2 N of Ar Vadeo (1·1 miles ESE) (3.36), thence:
Over a depth of 1·8 m (7 cables E) (3.44), thence:
Close N of Men ar Bleis (4½ cables ESE), a 0·5 m patch, thence:
Close S of a rock (drying 4·4 m) (3½ cables E) on the S edge of the tidal flats.

3.50

1 The route then leads about 2 cables WSW, through Poul-Bras anchorage, to the outer end of Kérity entrance channel previously described at 3.48, passing:
SSE of Les Barillots, drying rocks extending 1 cables SE from Rocher Locarec (3.47).

Useful marks

3.51

1 The following beacon-towers (positions given from Locarec Light) mark the NW side of a narrow passage, for which local knowledge is essential, that leads NE into Kérity entrance channel and dries about 1 m at its inner end:
Runiec Beacon-tower (S cardinal; 7 m high) (8 cables WSW).
Firbichons Beacon-tower (S cardinal) (4½ cables W).

Berths

3.52

1 **Pierhead:** dries 1 m alongside.

Môle: ENE side quayed and contains two landing slips, the outermost reported (1983) to dry 0 m alongside.

Anchorage: lies between the outer parts of the pier and of the mole; charted depths drying from 0 to 2 m, bottom mud with patches of rock.

Port services

3.53

1 **Supplies:** fresh water; provisions.
Facilities: custom house.

PASSAGES NORTH-WEST OF ÎLES DE GLÉNAN

GENERAL INFORMATION

Chart 2820

Area covered

3.54

1 The area covered by this section comprises:
Approach Channel (3.62).
Lesconnil (3.65).
Anse de Bénodet (3.78).
Rivière de Pont-l'Abbé (3.92).
Loctudy (3.104).
Rivière de L'Odet (3.112).
Quimper (3.137).

WESTERN APPROACHES TO CONCARNEAU

General information

Charts 2820

Routes

3.55

1 **Concarneau western approach channel** leads NE to join the E approach channel (3.145) in position 47°47′N, 3°59′W, passing:
NW of the dangers surrounding Îles de Glénan (47°43′N, 4°00′W) (3.6), thence:
SE of the dangers adjacent to Île aux Moutons (47°47′N, 4°02′W), a small rocky island, and:

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NW of Les Pourceaux (1 mile SE of Île aux Moutons), a detached reef.

3.56

1 A side channel (3.73) between Île aux Moutons and Îles de Glénan passing S of Les Pourceaux is wider and deeper than the channel passing NW of that reef, but is unlit and less well marked.

Least charted depths

3.57

1 Charted approach channel: 7 m in the fairway SE of Île aux Moutons.

Channel S of Les Pourceaux: more than 10 m in the fairway.

Pilotage

3.58

1 Pilotage is available, but not normally provided for the passages between Île aux Moutons and Îles de Glénan: see 3.225 for further details.

Traffic regulations

3.59

1 **Approach channel.** Vessels exceeding 1600 grt carrying hydrocarbons or dangerous cargo are required to contact the port on VHF before entering the approach channel shown on the chart, whose centre line leads 12 miles NE from approximate position 47°40′ N, 4°13′ W and whose width is 1 mile except SE of Île aux Moutons where it narrows to 5 cables. Such vessels should also contact Beg-Meil Sémaphore (47°51′·3N, 3°58′·5W) (3.199). For further details see *Admiralty List of Radio Signals Volume 6(2).*

There is no designated waiting anchorage.

Tidal streams

3.60

1 Between Îles de Glénan and Île aux Moutons the tidal streams begin at the following times:

Interval from HW Brest	*Direction*
–0550	NE to E
+0010	SW to W

The maximum spring rates are 1½ kn NE to E-going and 1¾ kn SW to W-going.

The flow is influenced greatly by the wind.

Principal marks

3.61

1 **Landmarks** (positions given from Penfret Lighthouse):
Penfret Lighthouse (47°43′·3N, 3°57′·1W) (3.13).
Chimney (1¾ miles WSW) (3.18).
Fort Cigogne (1¾ miles W) (3.18).
Île aux Moutons Lighthouse (white tower and dwelling; 17 m in height) (4½ miles NW).

2 **Major lights**
Penfret Light—as above.
Île aux Moutons Light—as above.

Directions

(continued from 3.18)

Approach channel

3.62

1 **Initial position** 47°40′N, 4°13′W.

Route. Concarneau W approach channel leads 12 miles NE, passing (positions given from Île aux Moutons Light):
NW of Basse Pérennès Light-buoy (W cardinal) (6 miles SSW) (3.17), and:
SE of Karek-Greis Light-buoy (E cardinal) marking Karreg Kreiz (6½ miles W), an underwater rock, thence:

2 NW of Les Bluiniers (3½ miles SSW), a drying reef marked by Les Bluiniers Beacon-tower (W cardinal) (3.173), and also of Léonegued Taër and Men ar Tréas, two detached unmarked drying rocks lying respectively 3 cables NNE and 6 cables NE of the beacon-tower, and:

3 SE of Basse Montfort (3¼ miles WSW), thence:
SE of Basse Rouge (1½ miles SW), marked by Rouge de Glénan Light-buoy (W cardinal) moored 2 cables SW, thence:
SE of Le Couet (1¼ miles WSW), a drying rock, and the reefs lying between it and Île aux Moutons, and:

4 NW of the shoal extending nearly 1 mile W from Les Petits Pourceaux (rocks drying 2·9 m) (1 miles SSE), thence:
SE of Pen a Guernen (3 cables E), a group of rocks up to 7 m high, and the dangerous wreck close SE, and:

5 NW of depths of less than 5 m lying 4 cables NW and N of Les Grands Pourceaux (reef drying 1·5 m) (1 mile SE), marked by Grands Pourceaux Light-buoy (N cardinal) (8 cables SE), and of an unmarked depth of 6·1 m (8 cables ESE) lying on the SE edge of the charted channel limits.

3.63

1 **Clearing lines:**
The alignment (000½°) of Pointe de Combrit and La Pyramide Lights (6½ miles NNW of Île aux Moutons), described at 3.121, clears about 7 cables W of Basse Pérennès (3.62).
The limit (035°) of a white sector of Île aux Moutons Light (3.61) clears about 4 cables NW of Les Bluiniers and adjacent dangers (3.62), which are covered by a red sector.

3.64

1 **Useful marks:**
Pointe de Langoz Light (47°49′·9N, 4°09′·5W) (3.85).
Rochers Leuriou Beacon-tower (E cardinal) (47°45′·2N, 3°59′·9W) (3.74).
Beuzec Light and spire (47°53′·4N, 3°54′·0W) (3.231).
Disused lighthouse (tower 15 m in height) standing on Le Huic (rock 5 m high) (47°44′·0N, 4°00′·7W).

(Directions are given for Anse de Bénodet approaches at 3.86, for Chenal des Bluiniers at 3.173, and for Concarneau inner approach at 3.200)

Small craft: Lesconil and approach

Charts 2820, 3640, plan of Lesconil

General information

3.65

1 **Description.** Lesconil (47°48′N, 4°13′W), an artificial fishing port with some facilities for small craft, situated on the W side of Anse de Lesconil, is approached from SE.

Limiting conditions

3.66

1 **Controlling depths:** entrance channel and turning basin dredged to depths from 1·0 to 1·5 m.

Deepest berths: alongside quays (3.71).

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Tidal levels. See information in *Admiralty Tide Tables*. Mean spring range about 4·1 m; mean neap range about 2·0 m.

Maximum size of fishing vessel handled: 50 grt.

Regulations

3.67

1 Pleasure craft are forbidden to make any movements when the fishing fleet is returning to harbour between 1630 and 1830 except in the event of *force majeure.*

Vessels are prohibited from anchoring in Lesconil harbour approaches as shown on chart.

Harbour

3.68

1 **General layout**. The harbour is formed by breakwaters on its E and S sides. The entrance channel leads 1 cable WNW to the turning basin 77 m wide between the quays, used mainly by fishing vessels, on its NE and SW sides. The basin NW of the turning basin mostly dries. Small craft moor in the SW part of the harbour.

The harbour is exposed to S winds; with W winds a swell is felt in the harbour.

2 **Tidal streams** in the approaches between Les Fourches (3.37) and Pointe Saint-Oual, 3½ miles SW and 1½ miles ENE of the harbour entrance respectively, have a spring rate of 1½ kn and turn as follows:

Interval from HW Brest	*Direction*
–0610	E
–0005	W

Directions

3.69

1 **Initial position** 2½ miles SE of the harbour entrance.

By day the line of bearing 325° of Lesconil church spire (elevation 39 m) (47°48′N, 4°13′W) just open SW of Men ar Groas Light (white tower, green top; 11 m in height) (3 cables SE), and in alignment with a whitened rock (uncharted; close to the light), leads NW to a position 1 cable SE of the harbour entrance, passing (positions given from Men ar Groas Light):

2 SW of Karreg Pell (2½ miles SE), an unmarked below-water rock, thence:

NE of Karek-Greis Light-buoy (E cardinal) (2 miles SSE) (3.62) moored 1 cable SE of Karreg Kreiz (3.62), thence:

Close SW of a 2·6 m patch (1½ miles SE), and:

Close NE of a 3·5 m patch (1½ miles SSE), thence:

NE of Basse Devel (1½ miles SSE), thence:

NE of a dangerous wreck (9 cables SSE), thence:

3 Close SW of a 3 m patch (8 cables SE), thence:

SW of a 2·4 m patch (4½ cables SE), and:

NE of a rock (drying 0·2 m) (4½ cables SSE), thence:

NE of Men Kaes (Men-Caës) Beacon-tower (port hand; 5 m in height) (3 cables SSE) marking a rock drying 1 m.

4 **Clearing marks:**

Front: Reissant Beacon (S cardinal) (1½ miles SSW of Men ar Groas Light), marking a rock drying 3 m.

Rear: Eckmühl Lighthouse (6 miles farther W) (3.13).

The alignment (284°) of these marks clears close SSW of Karreg Kreiz (1¾ miles SSE of Men ar Groas Light).

5 **Useful marks** (positions given from Men ar Groas Light):

Beacon (about 12 m in height) (5½ cables WSW).

Water tower (7 cables NW).

Plobannalec church (spire) (1¾ miles NNW).

Enizan (7 cables SE), a whitened rock 5 m high.

3.70

1 **At night** the white sector (313°–333°) of Men ar Groas Light (3.69) leads to a position 1 cable SE of the harbour entrance. The sector limits clear:

Close ENE of Karreg Kreiz, Basse Devel and Men Kaes, described at 3.69, which are covered by the red sector, and:

SW of the drying edge of the foreshore that extends 2½ cables NW from Enizan and is covered by the green sector.

2 Shoal patches with depths from 2·4 to 3·5 m over them, described at 3.69, lie within the white sector.

Useful marks:

E Breakwater head Light (green tower 4 m in height) (1 cable SSE of Men ar Groas Light).

S Breakwater head Light (white pylon red top, 4 m in height) (about 50 m farther SSW).

Basins and berths

3.71

1 **Turning basin:**

Berth	*Length (m)*	*Depth (m)*
Quay on NE side	160	1 to 1·5
Quay on SW side	110	1 to 1·5

Inner basin situated NW of the quays; berths for craft that can take the ground; boat anchorage; landing slip.

Anchorage and moorings for small craft and boats in the S part of the harbour W of the entrance channel.

Port services

3.72

1 **Repairs** to engines only.

Other facilities: fish market on NE quay.

Supplies: fuel; fresh water; provisions.

Channel between Îles de Glénan and Les Pourceaux

Chart 2820

Description

3.73

1 The channel passing S of Les Pourceaux (47°45′N, 4°01′W) and N of Îles de Glénan is 6 cables wide between the 10 m depth contours on each side. It connects the W approach channel (3.55) to Concarneau with the E approach channel (3.145) and passes the entrances of several channels leading to anchorages in Îles de Glénan (3.163).

Directions

3.74

1 **Initial position** about 3 miles SW of Île aux Moutons (3.55).

The channel leads about 5 miles E, passing (positions given from Île aux Moutons):

N of Men an Tréas (2¾ miles SSW) (3.62) and the other reefs on the N edge of Îles de Glénan plateau that extends 3 miles E, and:

2 S of Les Petits Pourceaux (1¼ miles SSE) (3.62) and the shoal extending nearly 1 mile W from them, thence:

S of Rochers Leuriou (1¾ miles SE), marked by Rochers Leuriou Beacon-tower (E cardinal), and of the 6·1 m rocky patch lying 3 cables farther ESE, thence:

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3 N of the shoal extending 1 mile ENE from Les Pierres Noires (3 miles SE) (3.178), rocks that do not cover.

Useful marks:

Disused lighthouse on Le Huic (47°44′·0N, 4°00′·7W) (3.64).

La Pie Light-beacon (isolated danger) (7 cables E of Le Huic) (3.178).

(Directions are given for Concarneau E approaches at 3.151, and for Chenal de Brunec at 3.178)

Passage north-west of Île aux Moutons

Description

3.75

1 An unmarked passage, with a least width of about 3 cables between the 5 m depth contours on each side, leads generally NE passing NW of Île aux Moutons (47°47′N, 4°02′W) (3.55).

Directions

3.76

1 **Initial position** about 47°46′N, 4°05′W.

Leading marks

Front mark: Trévarec (47°46′·4N, 4°02′·6W), an above-water rock 3·8 m in height.

Rear mark: Île aux Moutons Lighthouse (7 cables E of front mark) (3.61).

2 The alignment (079°) of these marks leads about ¾ mile E to a position 1 mile W of Trévarec, passing (positions given from Trévarec):

Close S of a wreck with a safe clearance depth of 8 m (1¼ miles W).

3.77

1 Thence the line of bearing about 043° of Beuzec-Conq church (47°53′·4N, 3°54′·0W) (3.231) just open NE of Linuen Beacon-tower (S cardinal) (3½ miles SW) (3.200) leads 2 miles NE into the entrance of Passage de l'Est (3.90), passing:

SE of Basse du Joubert (9 cables W), and:

2 NW of a 0·8 m patch (5½ cables WSW), thence:

Close NW of an unmarked dangerous wreck (4½ cables WNW), and:

SE of a 3 m patch (7 cables WNW), thence:

SE of An Treuz-Vaz (1 mile NNW), a reef marked by Treuz-Vaz Beacon-tower (E cardinal; 4·5 m high).

(Directions continue for Passage de l'Est at 3.90, and for Concarneau inner approach at 3.200)

ANSE DE BÉNODET AND APPROACHES

General information

Charts 2820, 3641

Topography

3.78

1 **Anse de Bénodet** is entered between Pointe Saint-Oual (47°48′·5N, 4°10′·4W) and Pointe de Mousterlin (6 miles ENE).

Rivière de Pont-l'Abbé (3.92) flows into the W side of the bay. Loctudy Harbour (47°50′N, 4°10′W) (3.104) lies at its mouth and the river is navigable by small craft as far as Pont-l'Abbé (3 miles NW) (3.111).

2 **L'Odet** river (3.112) flows into the N side of the bay. Sainte-Marine and Bénodet harbours (47°52′N, 4°07′W) (3.131) lie close within the entrance. Coasters berth at Corniguel (3.137) (chart 2643) 6 miles up river.

3 The N shore of the bay between the entrance to Rivière de Pont-l'Abbé (3.92) and Pointe de Mousterlin (3.80) consists of a sandy beach backed by wooded dunes.

Tidal streams

3.79

1 In Anse de Bénodet and its approaches the tidal streams are rotary clockwise, comparatively weak and much influenced by the wind. For further details see the chart.

Description

3.80

1 **Anse de Bénodet approaches** are encumbered by:

An area of scattered rocky patches extending W and WNW from Île aux Moutons (47°47′N, 4°02′W) to the mainland.

Roches de Mousterlin, the coastal reefs extending nearly 2 miles S and W from Pointe de Mousterlin (47°50′·7N, 4°02′·4W).

3.81

1 **Principal passages** through the above dangers (leading in the general direction stated, positions given from Île aux Moutons), listed from W to E, and their limitations are:

Chenal de l'Ouest (N from 4½ miles W) (3.86); least charted depth 2·2 m; distant unlit leading marks.

Grand Chenal de Bénodet (N from 3½ miles W) (3.89); least charted depth 5·1 m; adjacent dangers either unmarked or marked by unlit buoys.

Passage de l'Est (NW from 1½ miles N) (3.90); the best marked, widest and deepest approach; least charted depth 6·1 m.

Pilotage

3.82

1 Anse de Benodet lies within the Inner Pilotage Area of the Odet. For further details see *Admiralty List of Radio Signals Volume 6(2)*.

Pilots boards in position 2½ miles NNE from île aux Moutons (3.55).

The pilot boat has standard French markings (1.31) and is equipped with VHF radio.

Local knowledge

3.83

1 Local knowledge is necessary for the use of Grand Chenal de Bénodet and at night for Chenal de l'Ouest.

Rescue

3.84

1 **Lifeboats** (1.77) stationed at:

Loctudy (47°50′N, 4°10′W) (3.104).

Bénodet (47°52′N, 4°06′W) (3.133).

Principal marks

3.85

1 **Landmarks:**

Île aux Moutons Lighthouse (47°46′·5N, 4°01′·6′W) (3.61).

Pointe de Langoz Lighthouse (white round tower, red top; 13 m in height) (47°49′·9N, 4°09′·5W).

Conspicuous water tower (90 m in height) (3¾ miles NW of Pointe de Langoz Light) at Pont-l'Abbé.

2 Combrit water tower (53 m in height) (3¼ miles N of Pointe de Langoz Light).

La Pyramide Lighthouse (47°52′·6N, 4°06′·7W) (3.121) at Bénodet.

Pointe de Combrit Lighthouse (6½ cables S of La Pyramide Light) (3.121).

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Bénodet water tower (54 m in height) (2 cables NE of La Pyramide Light).

3 **Major lights:**

Île aux Moutons Light—as above.

Pointe de Langoz Light—as above.

Directions

(continued from 3.64)

Chenal de l'Ouest

3.86

1 **Initial position** approximately 47°46′N, 4°08′W.

Leading marks

Front mark: Combrit church (spire) (47°53′·3N, 4°09′·4W).

Rear mark: high ground at Locronan (12½ miles N of front mark; uncharted).

2 The alignment (354°) of these marks, open E of Men Audierne Beacon (starboard hand) (3 miles S of front mark) (3.100), leads N through the channel to the entrance of Rivière de Pont-l'Abbé, passing (positions given from Men Audierne Beacon):

3 E of Karreg Pell (4¼ miles S) (3.69), and:

Over Basse le Berre (4¼ miles S), a shoal, thence:

W of Rostolou (3¾ miles S), a rocky patch marked at its E extremity by Rostolou Buoy (E cardinal), thence:

4 W of Roch Hélou Buoy (W cardinal) marking Roc'h Hélou (3¼ miles SSE), a drying reef, thence:

E of Boulanger Light-buoy (S cardinal) moored 1 cable SSE of Basse Boulanger (3 miles S), thence:

5 Close E of Basse Men Du (2½ miles S), thence:

W of Fayebleau (2¼ miles SSE), a shoal and:

E of the 2 m depth contour off the E side of the ledge marked by Karreg (Karek) Hir Beacon-tower (E cardinal) (2 miles S), thence:

6 Over a depth of 2·2 m (1¼ miles S) (3.81) and close E of the 2 m depth contour surrounding Roche Glinec (1½ miles S), an unmarked drying rock, and:

W of Basse Bilien (1¼ miles SSE), a rock awash marked by Bilien Light-buoy (E cardinal) moored 1½ cables farther ENE, thence:

E of the 2 m depth contour around Men Bret (1 mile S), a rock marked by Men Bret Beacon-tower (E cardinal).

3.87

1 **Useful marks:**

Les Bleds Beacon-tower (S cardinal) (47°47′·4N, 4°10′·6W).

Men Du Beacon-tower (E cardinal) (47°47′·9N, 4°09′·7W).

3.88

1 **Leading marks**

Front mark: Men Bret Beacon-tower (E cardinal) (47°49′N, 4°09′W) (3.86).

Middle mark: Pointe Saint-Oual (1¼ miles SW of front mark).

Rear mark: Rocher Enizan (2¾ miles SW of front mark) (3.69).

2 The alignment (224°), astern, of these marks then leads NE towards the entrance of L'Odet, passing (positions given from front mark):

Close NW of a depth of 2·1 m (1¼ miles NE), thence:

SE of Le Baril (1½ miles NE), a shallow patch.

Grand Chenal de Benodet

3.89

1 **Initial position** 47°46′N, 4°07′W.

Approaching Anse de Bénodet. Grande Chenal de Bénodet leads 3 miles N, passing:

W of Basse Montfort (47°45′·9N, 4°06′·4W), and:

E of Basse le Berre (1½ miles W of Basse Montfort), thence:

E of Rostolou Buoy (E cardinal) marking Rostolou (47°46′·8N, 4°07′·5W) (3.86), and:

2 W of Basse Hardy (5 cables E of Rostolou), an unmarked patch over which the sea breaks heavily when there is any swell, thence:

E of Roc'h Hélou (5 cables N of Rostolou) marked by Roch Hélou Buoy (W cardinal) (3.86), and:

Over a depth of 5·1 m (7 cables NE of Rostolou) (3.81), thence:

3 W of Bazenn Rouzez ar Veil (1 mile NE of Rostolou), an unmarked shoal patch, thence:

W of Basse Malvic Buoy (W cardinal) moored 1 cable NW of Basse Malvic (47°48′·5N, 4°06′·4W), and:

E of Chenal de Bénodet Buoy (E cardinal) moored 1½ cables SE of Basse du Chenal (5 cables NW of Basse Malvic).

4 **Caution.** Although the alignment (000½°) of Pointe de Combrit Light (47°51′·9N, 4°06′·7W) and La Pyramide Light (6½ cables N) described at 3.121 indicates the channel, the transit is not sufficiently sensitive for use as a leading line between the various unmarked dangers described above.

Chart 3641

Passage de l'Est

3.90

1 **Initial position** 47°48′N, 4°01′W.

Approaching Anse de Bénodet. A white sector (284°–295°) of Pointe de Langoz Light (47°49′·9N, 4°09′·5W) (3.85) leads WNW through Passage de l'Est, passing (positions given from the light):

2 NNE of Île aux Moutons (6¼ miles ESE), thence:

NNE of Les Poulains (4¾ miles ESE), drying rocks marked by Les Poulains Beacon-tower (N cardinal), and:

SSW of La Voleuse Light-buoy (S cardinal) marking the SW extremity of Roches de Mousterlin (5 miles E) and moored 9 cables SE of La Voleuse (4¼ miles E), a drying rock, thence:

3 NNE of Men Déhou (3¾ miles ESE), a drying reef marked by Men Déhou Beacon-tower (E cardinal; 4 m high), thence:

NNE of Basse Cluyou (3¼ miles ESE), an unmarked underwater rock, thence:

NNE of Basse Malvic (2½ miles SE), marked by Basse Malvic Buoy (W cardinal) (3.89), thence:

NNE of Basse du Chenal (2 miles SE), marked by Chenal de Bénodet Buoy (E cardinal) (3.89).

4 **Shoals within sector** (positions given from Men Déhou Beacon-tower):

Treuzen (6 cables NE), a shallow patch at the S end of an extensive shoal.

A detached 6·1 m patch (3½ cables NNE) (3.81).

3.91

1 **Useful marks** (positions given from La Vache Beacon-tower):

La Vache Beacon-tower (starboard hand) (47°49′·6N, 4°02′·5W) marking drying rocks.

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Beacon-tower (E cardinal) (7 cables E) marking Men Vraz, drying reefs.
Treuz-Vaz Beacon-tower (E cardinal) (2½ miles SSW) (3.76).
Le Bœuf Beacon-tower (port hand) (5 cables NNW) marking a drying reef.

(Directions continue for Rivière de Pont-l'Abbé at 3.100, and for L'Odet at 3.120)

Rivière de Pont-l'Abbé

Charts 3641 (see 1.18)

Description

3.92

1 **Rivière de Pont-l'Abbé** is approached from Anse de Bénodet over a sand-bar and entered between Port de Loctudy (47°50′·2N, 4°10′·2W) (3.104) and the S point of Île Tudy (2 cables N), a peninsula. Within the entrance the river broadens and leads N for 5 cables providing several anchorages (3.107, 3.110). Thence the channel narrows and leads 2 miles NW to the quays at Pont-l'Abbé (3.111) the head of navigation in the river.

Controlling depths

3.93

1 **Entrance:** 1·2 m over the sand bar.
Upper reaches: channel dries from 1·0 to 1·8 m at Pont-l'Abbé.

Outer anchorages

3.94

1 Waiting anchorages: as for L'Odet, see 3.129 for details.

Pilotage

3.95

1 See 3.82 for details of pilotage.
Local knowledge is necessary for the upper reaches of Rivière de Pont-l'Abbé, W of the W limit (4°11′·2W) of chart 3641.

Traffic regulations

3.96

1 Yachts are not allowed to enter or depart under sail between 1630 and 1830, the time when the fishing fleet returns to harbour.
Anchoring is prohibited in the area shown on the chart.

Rescue

3.97

1 **Lifeboat** (1.77) stationed at Loctudy (3.104).

Natural conditions

3.98

1 **Tidal streams** seaward of the river mouth set as follows:

Interval from HW Brest	*Remarks*
–0605	W-going stream begins
–0005	E-going stream begins.

The maximum rate is 1½ kn, increasing to 3 kn in the entrance channel then decreasing farther up river.

2 **Breakers** occur in the entrance over Karreg (Karek) Croisic (3.101) during E winds.

Principal marks

3.99

1 **Landmarks:**
Pointe de Langoz Light (47°49′·9N, 4°09′·5W) (3.85).
Les Perdrix Beacon-tower (5 cables NW) (3.101).
Major light:
Pointe de Langoz Light—as above.

Directions

(continued from 3.91)

3.100

1 **Initial position** 47°50′·2N, 4°07′·0W.
From Anse de Bénodet the route leads W for 1½ miles, passing (positions given from Men Audierne Beacon (47°50′·4N, 4°09′·0W)):
S of Le Baril (1 mile ENE), a shoal patch, and:
N of Bilien Light-buoy (E cardinal) (3.86) marking Basse Bilien (1½ miles SE), thence:

2 S of Men Audierne Beacon (starboard hand) marking a dangerous rock, thence:
N of Karreg Saoz (4 cables SW), a drying ledge marked by Karek-Saoz Light-beacon (port hand; tower 10 m in height).

Entrance

3.101

1 The line of bearing 273° of Château Loubrière (47°50′·3N, 4°11′·0W) then leads 4½ cables W through the entrance channel and into Loctudy anchorage, passing positions given from Les Perdrix Beacon-tower (47°50′·3N, 4°09′·9W)):

2 N of Karreg (Karek) Croisic (3 cables ESE), a rocky patch marked by a light-buoy (port hand), thence:
S of Roches des Perdrix (1½ cables ENE), marked by No1 Light-buoy (starboard hand), Les Perdrix Beacon-tower (black and white chequered tower, 8 m in height, triangular topmark) and No3 Light-buoy (starboard hand), thence:
N of the foreshore fronting Loctudy, thence:

3 Close S of the foreshore S of Île Tudy, which extends 1 cable SE of Le Blas Light-beacon (starboard hand; truncated column 11 m in height) (2 cables W of Les Perdrix Beacon-tower), and:
Less than ½ cable N of Loctudy riverside quay.

Rivière de Pont-l'Abbé

3.102

1 The channel then leads NNW through the anchorages for 5 cables, passing (positions given from Le Blas Light-beacon):

2 WSW of Le Blas Light-beacon (starboard hand) (3.101), and:
Either side of a drying reef (extending 1½ cables NW from a position ½ cable W), thence:
WSW of Île Tudy jetty head (2 cables N), thence:
Clear of a stranded wreck, position approximate (2¾ cables NNW), and:
ENE of the foreshore of Île Garo (2½ cables NW), thence:
ENE of No 2 Beacon (port hand) (5 cables NNW).

3.103

1 A narrow channel marked by beacons (lateral) then leads 2 miles NW to Pont-l'Abbé (3.111). After the first mile the river narrows and the channel dries. See 3.93 for controlling depth.

Loctudy

3.104

1 **Description.** Loctudy (47°50′N, 4°10′W) is a moderate sized holiday resort. The fishing port and marina lie on the S side of Rivière de Pont-l'Abbé entrance. There is a large anchorage for small craft within the river entrance.

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Port de Loctudy from E (3.104)

(Photograph – SHOM) *(Original dated 1997)*

Traffic. Coastal and aggregate vessels transit the port whilst bound for Quimper (3.137).I

Port Authority: Capitainerie, 29125 Loctudy. Located at the fish market on the E side of SE basin.

3.105

1 **Controlling depth** in the river entrance: given at 3.93.

Deepest berths: on N side of quay (3.108).

Tidal levels. See information in *Admiralty Tide Tables*. Mean spring range about 4·2 m; mean neap range about 2·0 m.

3.106

1 **Waiting anchorage:** in Anse de Bénodet, see 3.129 for details.

Pilotage: described at 3.82.

Regulations:

Speed limit in the port: 3 kn. See also 3.102.

Anchoring is prohibited in the area shown on the chart.

2 **Harbour layout.** Port de Loctudy consists of a broad quay on the S side of the river entrance and two basins entered W of the quay via a channel dredged to 3 m. These areas comprise the fishing port and there is a marina for pleasure craft NW of the basins.

3.107

1 **Moorings.**Numerous small craft moorings, incluing several with white buoys for visiting small craft, are laid up river from the vicinity of the entrance to the basins.

3.108

1 **Fishing port**:

Quai Nord on S bank of the river: length 200 m, depth alongside 5 m.

SE basin: called Bassin de la Criée; quayed on all sides.

NW basin: Wet dock; quayed on SW side only.

2 **Marina.** A channel marked on its N side by buoys (starboard hand) leads into the marina which has depths of between 1·0 and 1·5 m. There are 722 alongside berths (116 reserved for visitors) at fourteen pontoons.

3.109

1 **Repairs:** boatyard; workshops for engine repairs.

Other facilities: yacht club at Plage de Langoz (1 km SE).

Supplies: fuel oil; fresh water; provisions.

Communications: passenger ferry to Île Tudy (3 cables N), in July and August calls on request at small craft in the anchorages; ferry service to Îles de Glénan (3.187).

Île Tudy

3.110

1 **General information.** Île Tudy (47°50′·5N, 4°10′·0W), a holiday resort, provides facilities for small craft.

Directions, for Rivière de Pont-l'Abbé, given at 3.102.

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Anchorages:

In the channel E of Île Garo, in the position shown on the French chart; moorings for fishing vessels.

In the channel W of Île Tudy, in the position shown on the French chart; moorings for small craft, some for visitors.

2 **Berths:**

Jetty extending about 70 m W from the shore at Île Tudy.

Supplies: fresh water from tap at root of jetty; provisions.

Chart 2820 (see 1.18)

Pont-l'Abbé

3.111

1 **General information.** Pont-l'Abbé (47°52′N, 4°13′W), a drying river port, is used only by sand barges and pleasure craft.

Limiting conditions. Maximum draught: 3·3 m at springs, 2·0 m at neaps.

2 **Berths:**

Quays on S bank, total length about 750 m, dry from 1·4 to 1·8 m alongside.

Quay on N bank, about 250 m long, dries 2·5 m alongside.

Repairs: shipyard builds steel vessels; boatyard builds yachts and repairs engines.

Supplies: provisions.

L'ODET RIVER AND APPROACHES

General information

Charts 3641, 2820

Description

3.112

1 **L'Odet** river, also called Rivière de Quimper, is approached from Anse de Bénodet; Anse du Trez (47°52′N, 4°06′W), the estuary, is entered between Pointe de Combrit and Pointe de Bénodet. Sainte-Marine (3.131) and Bénodet (3.133) stand on the W and E banks, respectively, of the river mouth. The river is spanned by Pont de Cornouaille (3.126) 5 cables farther upstream; there are moorings for small vessels immediately above the bridge.

2 The river is navigable by coasters as far as the port of Corniguel (3.137), 8 miles from the entrance, and by boats without masts 1½ miles farther to the city of Quimper (3.142).

The river is an important yachting centre.

Depths

3.113

1 **Least charted depths** in the fairway:

Anse du Trez entrance: 4·1 m.

L'Odet entrance: 4·0 m.

4½ cables up river from Pont de Cornouaille: 2·7 m.

2 **Controlling depths** in the upper reaches:

2 m as far as the entrance to Baie de Kérogan (6 miles upstream):

0·5 m thence to the port of Corniguel:

Reported (1980) to dry 1·5 m thence to Quimper.

3 **Tidal levels.** See information in *Admiralty Tide Tables*.

At Bénodet: mean spring range about 4·3 m; mean neap range about 2·0 m.

At Corniguel: mean spring range about 4·6 m; mean neap range about 2·2 m.

Vertical clearances

3.114

1 Pont de Cornouaille (3.126): vertical clearance 28 m.

Pont de Poulguinan (1 mile above Corniguel) (3.128): vertical clearance 5·8 m.

Pilotage

3.115

1 Pilots boards in position (charted) 2½ miles NNE from île aux Moutons (3.55).

See 3.82 for further information on pilotage.

Local knowledge

3.116

1 Local knowledge is required to proceed up river beyond the N limit (47°54′N) of chart 3641.

Traffic regulations

3.117

1 **Prohibited anchorage:** in the fairway between Pointe du Coq (5½ cables N of Pointe de Combrit) and Pont de Cornouaille (9 cables farther NNW) (3.126) within the area shown on chart 3641.

Speed limit between Pointe du Coq and Pont de Cornouaille: 3 kn.

Vessels exempt from pilotage intending to proceed beyond Pont de Cornouaille should inform the pilot authority in advance in order to minimize incidents or collisions.

Tidal streams

3.118

1 **Off Pointe du Coq** (47°52′·3N, 4°06′·6W) the tidal streams, spring rate 3 kn, set:

Interval from HW Brest	*Remarks*
–0520	In-going stream begins
+0005	Out-going stream begins.

Off Bénodet slips (3 cables NW), the rates are the same but the in-going tidal stream begins 30 minutes later.

When the river is in spate the out-going flow increases in strength and duration. The wind also has a considerable effect upon the flow.

Principal marks

3.119

1 **Landmarks** (positions given from the first named):

La Pyramide Lighthouse (47°52′·6N, 4°06′·7W) (3.121).

Bénodet water tower (2 cables NE).

Pointe de Combrit Lighthouse (6½ cables S) (3.121).

Major light:

Pointe du Coq Light (3.123)

Directions

(continued from 3.91)

Chart 3641

Approaches

3.120

1 **Routes.** Anse du Trez (47°52′N, 4°06′W) (3.112) may be approached from SSE or S. The S approach is deeper but tortuous and less well marked.

Caution. Entry should not be attempted at night unless the buoys and anchored craft can be seen clearly.

Southern approach

3.121

1 **Initial position** 47°49′·3N, 4°06′·7W.

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Leading lights:

Front: Pointe de Combrit Lighthouse (white square tower, grey corners; 17 m in height) (47°51′·9N, 4°06′·7W).

Rear: La Pyramide Lighthouse (white tower, green top; 39 m in height) (6 cables N of front light), also called Bénodet Lighthouse.

2 The alignment (000½°) of these lights leads across the W side of the deeper part of Anse de Bénodet to a position 9 cables S of the front light, passing (positions given from front light):

Over a charted depth of 5·1 m (1¾ miles S), thence:

E of a charted depth of 3·7 m (1½ miles S).

3.122

1 **Leading marks.** By day the alignment (224°), astern, of the leading marks previously described at 3.88 then leads 5 cables NE to the leading line (345½°) for the SSE approach (3.123), passing:

NW of the shallowest part of Basse de Bénodet (8½ cables SSE of Pointe de Combrit) (3.123).

South-south-eastern approach, Anse du Trez

3.123

1 **Initial position** 47°49′·0N, 4°05′·4W.

Bénodet Leading Lights:

Front: Pointe du Coq Lighthouse (white round tower, green stripe; 13 m in height) (47°52′·4N, 4°06′·6W).

Rear: La Pyramide Lighthouse (348 m NNW of front light) (3.121).

The alignment (345½°) of these lights leads across Anse de Bénodet and into Anse du Trez, passing (positions given from front light):

2 WSW of Basse Anavalen (2¾ miles SSE), an unmarked drying reef, thence:

WSW of Le Taro (drying rock) (2¼ miles SSE) marked by Le Taro Beacon-tower (W cardinal; 4 m in height), thence:

Close WSW of a depth of 4·2 m (1¼ miles SSE) on Basse de Bénodet, thence:

3 WSW of Les Verrés (reef drying 4 m) (8½ cables SSE) marked by Les Verrés Beacon-tower (starboard hand), thence:

Close ENE of La Rousse Buoy (port hand) moored 1 cable SE of La Rousse, a drying reef marked by La Rousse Beacon (port hand) (7 cables S), thence:

4 Close ENE of La Potée Buoy (port hand) moored close E of a rock (drying 0·3 m) (5½ cables S), and:

Close WSW of Le Four (rock drying 1·8 m) (5½ cables SSE) marked by Le Four Beacon-tower (starboard hand), thence:

Over a bar (5 1 cables SSE), see 3.113 for depth.

5 **Caution.** The alignment (345½°) then leads along the W shore of Anse du Trez passing over a depth of 4·1 m (3½ cables SSE); the deepest water lies about ½ cable ENE of the alignment.

Pointe du Coq to Port de Penfoul

3.124

1 **Entering L'Odet.** From a position 1¼ cables SSE of Pointe du Coq Lighthouse (3.123) the channel leads NW passing midway between (positions given from the lighthouse):

Le Coq Beacon-tower (starboard hand) (1 cable WSW), and:

Pointe du Toulgoët Light-beacon (red mast; 4 m in height) (1 cable W).

3.125

1 **L'Odet fairway** then leads 8 cables NW, NNW then NNE between small craft anchorages shown on the chart to the vicinity of Port de Penfoul (3.133).

Cautions:

A shallow patch (1½ cables SW of La Pyramide Light) (3.113) lies in the middle of the fairway.

Although the channel is marked by buoys (lateral) they may be hidden by small craft at anchor.

Pont de Cornouaille

3.126

1 The channel beneath Pont de Cornouaille (7 cables NNW of La Pyramide Light), an arch bridge, see 3.114 for vertical clearance, leads NW between the following lighted marks painted on both the downstream and. upstream sides of the central span:

NE side: green triangle in white square.

SW side: red square, white border.

2 **Caution.** Abandoned submarine cables are laid across the river in the area, extending both sides of the bridge, as shown on the chart.

A shallow patch (3.113) lies in mid-channel 4½ cables NW of the bridge off the entrance to Anse de Kérandraon.

French chart 6679

Upper reaches

3.127

1 **From Pont de Cornouaille** to Baie de Kérogan entrance (5 miles upstream) the channel, see 3.113 for depth, lies in midstream.

At Pointe de Kersabiec (47°55′·6N, 4°08′·2W) the river turns sharply E and the channel leads N of No 1 Beacon (starboard hand) marking a rock lying about ½ cable N of the point. Vessels nearing this and subsequent bends in the river must make the sound signals prescribed by Rule 34(d) of *International Regulations for Preventing Collisions at Sea, 1972*.

2 **Thence to Corniguel** (47°58′·3N, 4°06′·1W) (3.137) the channel is marked on both sides by beacons (lateral). In Baie de Kérogan, between the quay at Corniguel and a position 1 mile S, the charted depths vary between 10·5 and 1·5 m (3.113).

3.128

1 **Approaching Quimper** (3.137) the river is spanned by Pont de Poulguinan (1 mile upstream from Corniguel), a low bridge (3.114). At Quimper the channel dries (3.113).

Anchorages and harbours

Chart 3641

Anse de Bénodet

3.129

1 **Waiting anchorages,** in the positions shown on the chart, are established for vessels awaiting the pilot or suitable conditions to enter either Rivière de Pont-l'Abbé (3.92) or L'Odet:

In position 8 cables WSW of Le Taro Beacon-tower (W cardinal) (47°50′·6N, 4°04′·7W) on the alignment (345½°) of Bénodet Leading Lights (3.123), depth 11 m, or:

2 From 1 mile to 5 cables S of Pointe de Combrit (47°52′N, 4°07′W), on the alignment (000½°) of Pointe de Combrit and La Pyramide Lights (3.121), depth 6 m.

Vessels awaiting a berth at Loctudy (3.104) anchor in position 1 mile W of Le Taro Beacon-tower (W cardinal).

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Sainte-Marine and Anse de Penfoul Marinas from SE (3.131)

(Original dated prior to 2001)

(Photograph – SHOM)

These anchorages are untenable during a SW gale when anchorage may be obtained in the lee of Île de Penfret, see 3.162 for details.

Anse du Trez

3.130

1 **Anchorages:**

In the position (2 cables N of Le Four Beacon-tower) shown on the chart; depth 8 m, sand and mud; swinging room 150 m with a depth of 5 m.

For small craft, in fair weather, in the NE part of the bay; good holding except in the vicinity of Pointe du Coq where it is foul with weed.

Facilities: Yacht Club de l'Odet at Fort du Coq, with landing slip (close E of Pointe du Coq Lighthouse).

Sainte-Marine

3.131

1 **General information.** Sainte-Marine en Combrit harbour includes all the facilities on the W side of the fairway between Pointe de Toulgoët (47°52′·3N, 4°06′·8W) and the N entrance point of Anse de Ros-ar-Ver the small bay 1¼ miles upstream.

Port Authority. Bureau du Port, Sainte-Marine en Combrit, 29120 Pont-l'Abbé. Located close to the ferry landing (l¼ cables NW of Pointe de Toulgoët).

Port radio: marina VHF channel (1.41).

3.132

1 **Anchorage and marina**

Ros-ar-Vez anchorage, farther upstream, has 80 m swinging room with a depth of 4·7 m.

Sainte-Marine marina (uncharted), 490 berths at pontoons off Château de Kerberennic, lies between Pointe de Toulgoët and Pont de Cornouaille.; There are numerous small craft mooring buoys within the area.

2 **Repairs** to small craft hulls and engines.

Other facilities: 20-tonne mobile crane; yacht club; limited launch service.

Supplies: fuel oil for fishing vessels only; fresh water.

Communications: passenger ferry to Bénodet (3.135).

Bénodet

3.133

1 **General information.** Bénodet harbour, on the E side of the fairway, extends from Pointe du Coq (47°52′·3N, 4°06′·6W) to Pont de Cornouaille (9 cables NNW), and includes Port de Penfoul a marina (6 cables N of the point).

Port Authority: Bureau du Port, 29118 Bénodet. Located at Penfoul Marina (47°53′N, 4°07′W).

Port radio: marina VHF channel (1.41).

3.134

1 **Anchorages** for small craft up to 14 m in length, listed from S to N, limits shown on the chart, are established as follows (positions given from Pointe du Coq Lighthouse):

Zone	*S and N limits*
	Pointe du Coq Lighthouse (3.123)
D	
	Cale de l'Ancien Bac (2½ cables NNW)
C	
	Cale de L'Église (3 cables NNW)
B	
	Pointe de Kergait (5 cables NNW)
A	
	Pointe de Beg Vir (7½ cables NNW)

2 Zones: C is allocated to fishing vessels; D, B and A, administered by Penfoul Marina, contain 255 berths at moorings and a detached pontoon. Sainte-Marine yacht harbour (3.132) occupies zone E.

Marina, Anse de Penfoul marina (47°52′·9N, 4°06′·8W), 629 berths, at pontoons off Port de Penfoul.

3 **Berths.** The longest berth is Quai de Commandant L'Herminier, which is 188 m in length, and is situated 4 cables NNW of Pointe du Coq Light (3.123). The deepest berth is Quai de Penfoul, 2 cables farther NNW, which has alongside depths of 1 m. Close N of Quai de Penfoul is a marina which has 145 berths.

3.135

1 **Repairs** of all kinds to small craft; careening slip.

Other facilities: custom house; medical clinic; yacht club (3.130).

Supplies: fuel oil from pontoon at Penfoul Marina; fresh water at quays and pontoons; provisions.

Communications: ferry services to Sainte-Marine (3.132), Quimper (3.141) and Îles de Glénan (3.187).

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French chart 6679

Upper reaches

3.136

1 **Anchorages** for small craft, clear of the fairway and out of the tidal stream, are located at the following places:

Anse de Combrit; on W bank, entered 1¼ miles upstream from Pont de Cornouaille; there are reported to be depths of 5 m in the entrance.

Porz Meilou (47°56′·0N, 4°06′·7W); off the quay on the E bank which has been reported (1984) to dry 1½ m, foul bottom.

2 Anse de Saint-Cadou; on E bank, entered 6 cables N of Porz Meilou; care is necessary to avoid a rock on the S side of the inlet where it widens; reported depths of 2 m in a pool and 1 m over a large area.

Les Trois Tourtres (47°56′·9N, 4°06′·8W); in bay on W bank; sheltered from W winds.

Quimper

French chart 6679

General information

3.137

1 **Quimper** (47°59′·5N, 4°06′·5W), a cathedral city with a population of 63 200 (2002) is the provincial capital of Finistère and a centre for tourism and light industry.

2 **Port du Corniguel** (47°58′·3N, 4°06′·1W) on the W bank 1½ miles downstream from the city is used by coasters and aggregate barges able to take the ground.

Port Authority: Conseil Général du Finistère, Direction des Activités Maritimes et des Transports, 50 Rue Jean Jaures, F–29196 Quimper Cedex

Limiting conditions

3.138

1 **Controlling depths:** given at 3.113.

Deepest berth: dredged (1989) to drying 0·0 m.

Maximum size of vessel handled:

Tides	*Length (m)*	*Beam (m)*	*Draught (m)*
Springs	78	12	4.95
Neaps	72	12	3·4

2 **Tidal levels:** given at 3.113.

Density of water: reported to be 1·010 g/cm^3.

Arrival information

3.139

1 **Notice of ETA:** 24 hours to Bureau du Port.

Pilotage: see 3.82 for details.

Tugs: none.

Local knowledge: see 3.116 for requirement.

Berths

3.140

1 **Quay** 346 m long, of which 120 m is reserved for sand barges; see 3.138 for depth alongside.

Port services

3.141

1 **Repair** facilities of an unspecified nature reported (1985) to be available.

Other facilities: medical services. custom house.

Supplies: fuel oil supplied by road; fresh water and electricity on the quay; provisions.

Communications: ferry services from Quimper to Bénodet (3.135) and Îles de Glénan (3.187).

Small craft

3.142

1 **Berths** at Quimper, for small craft able to pass beneath Pont de Poulguinan (3.114), the low bridge:

Quai Neuf (W bank): length 740 m; dries alongside from 1·3 to 2·4 m, hard bottom; used by ferryboats (3.141).

Cale de Locmaria (E bank) and Cale du Cap Horn (W bank), landings.

Repairs of all kinds carried out.

Supplies: fresh water; provisions.

ÎLES DE GLÉNAN TO BAIE DE LA FORÊT

GENERAL INFORMATION

Chart 2820

Description

3.143

1 Îles de Glénan (47°43′N, 4°00′W) (3.6) and their surrounding reefs separate Concarneau W approaches, previously described at 3.55, from Concarneau E approaches (3.145). These approaches unite N of the islands to form Concarneau inner approach (3.194) which leads about 4 miles NNE to Grande Rade (47°50′N, 3°57′W) the roadstead outside the entrances to Baie de la Forêt (47° 52′ N, 3° 58′ W) (3.203), Baie de Pouldohan (47°51′N, 3°54′W) (3.214) and the port of Concarneau (47°52′N, 3°55′W) (3.217).

Small craft

3.144

1 The area is a popular cruising ground for small craft. In addition to numerous anchorages in Îles de Glénan (3.165), there are marinas at Concarneau (3.246) and Port-la-Forêt (47°54′N, 3°58′W) (3.212).

CONCARNEAU EASTERN APPROACHES INCLUDING ÎLES DE GLÉNAN

General information

Chart 2820, 2821

Description of waterway

3.145

1 The channel between Île de Penfret (47°43′N, 3°57′W) (3.161), the NE-most of Îles de Glénan, and the mainland NE is 4 miles wide. Its entrance is obstructed by Plateau de la Basse Jaune (4 miles E of Île de Penfret) an extensive area of rocky patches.

2 **Routes:**

Concarneau E approach channel, whose limits are shown on the chart, leads 15 miles NNW then WNW from position 47°37′N, 3°44′W to its junction (4 miles N of Île de Penfret) with Concarneau W approach channel, passing NE of Plateau de la Basse Jaune.

An alternative approach route (3.156) passes W of Plateau de la Basse Jaune.

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3 **Small craft passages** lead off to:
Anchorages in Îles de Glénan (3.165) from the SW side of the channel.
Trévignon harbour (3.188) from the NE side of the channel.

Pilotage

3.146

1 Îles de Glénan and the inner part of the E approaches lie within Concarneau Pilotage District. For further details see 3.225.

Traffic regulations

3.147

1 **Approach channel.** See 3.59 for details.

Rescue

3.148

1 **Lifeboat** (1.77): based at:
Trévignon (47°48′N, 3°51′W) (3.188).
Beg-Meil (47°52′N, 3°59′W) (3.207).

Tidal streams

3.149

1 Tidal stream information is shown on the chart. The flow is greatly influenced by the wind.

Principal marks

3.150

1 **Landmarks:**
Penfret Lighthouse (47°43′·3N, 3°57′·1W) (3.13).
Île aux Moutons Lighthouse (47°46′·5N, 4°01′·6′W) (3.61).
Conspicuous building (47°53′·0N, 3°55′·0W) (3.230) in Concarneau.
Beacon (3.153) standing on Île Verte (47°46′N, 3°48′W).

2 **Major lights:**
Penfret Light—as above.
Île aux Moutons Light—as above.
Pen-Men Light (47°38′·9N, 3°30′·5W) (4.10) on Île de Groix.

Directions

(continued from 3.18)

Eastern approach channel

3.151

1 **Initial position** 47°37′N, 3°44′W.

Outer section. The line of bearing 335½°, by day of Pointe de Trévignon (47°46′·5N, 3°51′·2W) on which Château de Trévignon stands, or at night of Trévignon Light (1½ cables N of the point) (3.190), leads 7½ miles NNW in the centre of the channel passing (positions given from Pointe de Trévignon):

2 WSW of a buoy (special) (9¼ miles SE), thence:
WSW of Basse Doun (6½ miles SE), a shoal with least depth 14·6 m, thence:
ENE of Jaune de Glénan Light-buoy (E cardinal) moored 3 cables E of Basse Jaune (5 miles S), a drying shoal.

3.152

1 **Inner section.** The line of bearing 298½° of Pont-l'Abbé water tower (47°52′·7N, 4°13′·4W) (3.85) then leads 7½ miles WNW in the channel to its junction with the channels for the W approach and inner approach to Concarneau, passing (positions given from Pointe de Trévignon):

2 NNE of Plateau de la Basse Jaune (5 miles S), and:
SSW of Men an Tréas Buoy (S cardinal) moored 2 cables SW of Men an Tréas (2 miles SE), a drying rock surmounted by the base of a partly built beacon-tower, thence:
SSW of Corn-Vas Buoy (W cardinal) moored 2 cables SW of Corn-Vas (1¾ miles SSE), a shoal patch, thence:
SSW of a dangerous wreck, existence doubtful, (1½ miles SW), thence;

3 SSW of Korvenn Trévignon (1 mile WSW), an unmarked shoal, thence:
NNE of Les Grands Pourceaux (6½ miles WSW) (3.62).

3.153

1 **Clearing marks:**
Front mark: beacon (black, white stripe) (47°46′·4N, 3°48′·0W) standing on Île Verte.
Rear mark: black and white beacon (1¼ miles NNE of front mark) on the mainland coast.

The alignment (013¾°) shown on the chart of these marks, which were the limit marks of a former measured distance, passes:
5 cables E of the 10 m depth contour enclosing Basse Jaune (4 miles SSW of front mark) (3.151).

3.154

1 **Clearing bearings:**
The line of bearing 265° of Fort Cigogne tower (47°43′·1N, 3°59′·5W) (3.18), open N of the sandy beach on Île de Penfret (1½ miles E of the fort; uncharted), passes 2 cables N of the 20 m depth contour enclosing Plateau de la Basse Jaune (5 miles E of the fort) (3.145).
The 292° limit of a white sector of Île aux Moutons Main Light (47°46′N, 4°02′W) (3.61) passes about 5 cables NNE of Plateau de la Basse Jaune, which is covered by the red sector.

3.155

1 **Useful marks:**
Men Du Beacon-tower (isolated danger) (47°46′·4N, 3°50′·4W) (3.190).
Le Dragon Beacon-tower (W cardinal) (2½ miles farther NW) (3.200).
Rochers Leuriou Beacon-tower (E cardinal) (47°45′·2N, 3°59′·9W) (3.74).

Charts 2820, 3640, plan of Îles de Glénan

Alternative approach channel

3.156

1 **Initial position** 47°40′N, 3°50′W.

Approaching Île de Penfret. The visible sector (295°–315°) of Penfret Auxiliary Direction Light, exhibited from Penfret Lighthouse (47°43′·3N, 3°57′·1W) (3.13), leads about 4 miles NW into the channel between Île de Penfret and Plateau de la Basse Jaune (3 miles E of the light), passing (positions given from the light).

2 NE of Laouennou Buoy (isolated danger) (3.17) moored 5 cables ESE of Les Laouennou (3 miles SSE), a shoal, and;
SW of Corn-Loch Buoy (isolated danger) moored 2 cables SSW of Korn al Loc'h (3½ miles ESE), an underwater rock, thence:

3 NE of Le Pignon (rock drying 0·1 m) (2¾ miles SSE), also called Basse an Ero, marked by Basse an Ero Buoy (S cardinal) moored 3 cables SE, thence:
NE of a 4·8 m patch lying nearly 3 cables E of Men Skeï (1¼ miles SSE), an above-water rock.

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3.157

1 The channel then leads 3½ miles N to join the inner section (3.152) of Concarneau E approach channel passing:

E of the reef that surrounds Kastell Bargen, above water rocks, and extends nearly 5 cables E of the S point of Île de Penfret, and:

2 W of a 9·3 m patch (3¼ miles E of Penfret Light), near the NW corner of Plateau de la Basse Jaune, thence:

E of a dangerous wreck (1¼ miles NNE of Penfret Light).

The channel joins the E approach channel in the vicinity of a dangerous wreck (3.152).

3.158

1 **Clearing marks.** The alignment (333°) of the following marks clears about 2 cables ENE of the 10 m depth contours enclosing the shoal patches in the vicinity of Le Pignon (47°40′·7N, 3°55′·7W) (3.156):

Front mark: Men Skeï (1¾ miles NNW of Le Pignon).

Rear mark: Penfret Lighthouse (1¼ miles NNW of front mark) (3.13).

2 **Clearing line.** The line of bearing 316° of Île aux Moutons Light (47°46′·5N, 4°01′·6′W) (3.61) open NE of Penfret Light clears about 2 cables NE of the shoal patch (3.156) lying nearly 3 cables E of Men Skeï.

3.159

1 **Clearing marks:**

Front mark: beacon (white, black stripe and topmark) (47°42′·8N, 3°57′·9W) on Île Guéotec.

Rear mark: tower of Fort Cigogne (1 mile WNW of front mark) (3.18).

The alignment (283½°) of these marks passes about 5 cables SSW of Korn al Loc'h (4 miles E of front mark) (3.156).

2 **Clearing line.** The line of bearing 007° of the conspicuous spire of Trégunc church (elevation 79 m) (47°51′N, 3°51′W) showing above the surrounding trees, well open W of Pointe de Trévignon (4 miles S of the church) (3.151), clears close W of the shoal patch (3.157) near the NW corner of Plateau de la Basse Jaune.

3.160

1 **Useful mark:**

Disused signal station (47°42′·8N, 3°57′·3W) standing on the S point of Île de Penfret.

(Directions are given for approaches to Anse de Bénodet at 3.86, for Concarneau inner approach at 3.200, and for WNW approach to Les Coureaux de Groix at 4.30).

Île de Penfret

Chart 3640 plan of Îles de Glénan

General information

3.161

1 **Description.** Île de Penfret (47°43′N, 3°57′W), the principal island of the Îles de Glénan, contains the main base of the Centre Nautique des Glénan, a world famous sailing school which also has bases at Fort Cigogne (3.18) and on Île de Drénec and Île de Bananec, the adjacent islands W and N respectively of Île Cigogne.

Anchorage

3.162

1 Anchorage may be obtained N and E of Île de Penfret, E of the area containing abandoned submarine cables extending N from the W side of the island and clear of two wrecks (9 cables N and 1 mile NNE of Penfret Light) (chart 2820); bottom mud and madrepore, good holding; sheltered from SW and W. Small craft moorings off the island are described at 3.165.

Small craft anchorages in Îles de Glénan and approaches

General description

3.163

1 **Îles de Glénan** archipelago (3.6) contains a maze of small craft passages in which there are numerous anchorages much frequented by small craft in summer.

La Chambre (47°43′·3N, 3°59′·9W) (3.187), the pool S of Île de Saint-Nicolas, is the principal anchorage and the terminus for ferry services from several points on the mainland. It is also the focal point of the most used passages and is approached from:

2 N by Chenal de Brunec (3.178).
ENE by Chenal de Pen-a-Men (3.185).
SE by Chenal du Ruolh (3.181).
S by Chenal de Brilimec (3.167).
W by Chenal des Bluiniers (3.173).

Limiting conditions

3.164

1 **Least charted depths** in the approaches to La Chambre:
Chenal de Brunec: 1·0 m.
Chenal de Pen-a-Men: 0·1 m.
Chenal du Ruolh: 0·5 m.
Chenal de Brilimec: 0·5 m.
Chenal des Bluiniers: drying 0·5 m.

2 **Deepest berth** in La Chambre anchorage is given at 3.187.

Tidal levels at Île de Penfret (3.161): see information in *Admiralty Tide Tables*. Mean spring range about 4·2 m; mean neap range about 2·0 m.

Weather. Good weather is necessary unless local knowledge is available as all the anchorages are rather exposed, especially at HW, and many of the leading marks need to be seen at a distance of several miles.

Arrival information

3.165

1 **Port radio:** listening watch kept on VHF.

Outer anchorage (47°43′·1N, 3°57′·0W), on the E side of Île de Penfret (3.161) about 1 cable N of Kastell Razed (Castel Raët) an above-water rock; off a sandy bay; well sheltered from W.

Other anchorages, in or adjacent to the channels leading to La Chambre, whose approaches are comparatively deep, are located (geographic position of anchorage):

2 N of the W end of Île de Bananec (47°43′·6N, 3°59′·6W); adjacent to Chenal de Brunec (3.179); depth from 1 to 2 m, sand; exposed at HW to N and E winds.

Off Pors Niguier landing slip (47°43′·4N, 3°57′·4W) on the W side of the N point of Île de Penfret; in Chenal de Pen-a-Men (3.185).

3 N of Île de Brilimec (about 47°42′·6N, 3°58′·7W); in Chenal de Brilimec (3.168), where there are depths of more than 5 m.

N of the W part of Île de Drénec (47°43′·2N, 4°00′·5W); in Chenal des Bluiniers (3.175); charted depth 2 m.

4 Mooring buoys belonging to Centre Nautique des Glénan (3.161) are laid in all the above anchorages and may be available to visitors on request.

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Speed limit of 8 kn, between 15 June and 15 September each year, applies in the area of Îles de Glénan bounded by latitudes 47°42′N and 47°44′N, longitude 4°04′W, and the positions 47°44′·00N, 3°57′·20W; 47°42′·42N, 3°56′·00W and 47°42′·00N, 3°56′·00W.

Tidal streams

3.166

1 **Between Îles de Glénan** the tidal streams, spring rate about 2 kn, set in the direction of the channels and begin:

Interval from HW Brest	*Direction*
–0610	NW, NE or E
–0005	S, SW or W

Directions for Chenal de Brilimec

(continued from 3.18)

Charts 2820, 3640 plan of Îles de Glenan

3.167

1 **Initial position** 47°38′·5N, 4°00′·0W, about 1 mile ESE of Jument de Glénan Light-buoy (S cardinal) (3.17).

Approaching Les Méaban. The line of bearing 022° of Penfret Lighthouse (47°43′·3N, 3°57′·1W) (3.13) observed midway between Penfret disused signal station (5 cables SSW of Penfret Light) (3.160), and ESE edge of Les Méaban (reef, highest point 4·4 m) (3½ cables SW of signal station), leads 3¾ miles NNE, passing (positions given from Penfret Light):

2 ESE of the reefs extending SSW from Men Goë (2½ miles SW) (3.172) to La Jument (4½ miles SW), thence:
WNW of the drying reef extending 3 cables NW from Le Ruolh (2 miles S) (3.183), and:
ESE of Prunenou Braz (2 miles SW), a drying rock, thence:
ESE of Roche Guillon (1½ miles SW).

3 **Clearing bearing.** The line of bearing 016° of Penfret Light, just open WNW of Penfret disused signal station, clears 1 cable WNW of the drying reef extending NW from Le Ruolh.

Useful marks (positions given from Penfret disused signal station):
Beacon (4 cables W) (3.159) on Île Guéotec.
Chimney (1½ miles WSW) (3.18) on Île du Loc'h.

Chart 3640, plan of Îles de Glénan

3.168

1 **Leading marks:**
Front: NE edge of Fort Cigogne (47°43′·1N, 3°59′·5W) (3.18).
Rear: E gable end of large house (5½ cables NW of front mark) standing close N of fish tank on Île de Saint-Nicolas.

2 The alignment (311°) of these marks leads 8 cables NW from a position 1½ miles SE of the front mark, passing (positions given from front mark):
Close SW of a pinnacle rock (depth 2 m) (1½ miles SE), thence:
NE of the N point of Île de Brilimec (9 cables SE).

(Directions for passage NW of Guéotec are given at 3.172)

3.169

1 **Leading marks:**
Front mark: rock (1·4 m high) (47°43′·6N, 3°59′·4W) at the extremity of the ledge extending 1½ cables N from Île de Bananec.
Rear mark: Île aux Moutons Lighthouse (3¼ miles NNW of front mark) (chart 2820) (3.61).

2 The alignment (333½°) of these marks leads about 6 cables NNW to a position 4 cables SSE of the front mark, passing (positions given from front mark):
ENE of the drying reef with a rock 2·5 m high (1 mile SSE) at its SE end, thence:

3 WSW of the drying reef extending 2 cables WSW from Vieux Glénan (9 cables SE) (3.185), thence:
Over the least charted depth in the channel (6½ cables SSE) (3.164), thence:
WSW of a detached rock (drying 0·2 m) (6 cables SE), and:
ENE of the reef extending 2 cables SE from Île Cigogne (5 cables S).

4 The French chart indicates that slightly greater depths may be obtained by passing about 1 cable NE of La Bombe (7½ cables S), an above-water rock, and of the reef extending SE from Île Cigogne.

3.170

1 **To enter La Chambre.** The line of bearing 285° of the fish tank (47°43′·4N, 4°00′·1W) on Île de Saint-Nicolas then leads 4 cables WNW, from a position 1 cable SSW of Bananec Light-beacon (E cardinal) (6½ cables E of the fish tank) (3.171), to the entrance of La Chambre anchorage (3.187), passing:

2 SSW of the foreshore of Île de Bananec, thence:
Close NNE of a detached rock (2½ cables ESE of the fish tank) reported to dry 0·1 m.

3.171

1 **Clearing marks:**
Front mark: Bananec Light-beacon (E cardinal) marking the extremity of Pointe la Baleine (47°43′·3N, 3°59′·1W) a ledge extending 1¾ cables SE from Île de Bananec.
Rear mark: Penfret Lighthouse (1½ miles E of front mark) (3.13).

2 The alignment (090°) of these marks passes:
Over the S extremity of the foreshore S of Île de Bananec, and:
N of the drying rock (3.170) lying 2½ cables ESE of the fish tank.

3 **Clearing bearing.** The line of bearing 272° of Les Bluiniers Beacon-tower (W cardinal) (47°43′·4N, 4°03′·7W) (3.173), just open N of the rock 0·3 m high (3 cables WSW of the fish tank), passes over the N edge of the drying rock (3.170) lying 2½ cables ESE of the fish tank.

Directions for passage north-west of Île Guéotec

(continued from 3.168)

3.172

1 **Initial position** 47°42′·5N, 3°58′·5W.

Leading marks:
Front: two rocks (1·7 m and 1·4 m high), (47°42′·3N, 3°58′·8W) on the W foreshore of Île de Brilimec.
Rear: Men Göe (9 cables SW of front mark), the SE-most and slightly lower of two above-water rocks (1·7 m and 0·9 m high).

The alignment (218°), astern, of the rear mark seen between the two rocks of the front mark leads NE, passing (positions given from front mark):

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2 SE of a drying reef (6 cables NNE) which lies close SSE of Vieux Glénan, and:
Very close NW of a charted depth of 0·4 m rock (6 cables NE), thence:
3 NW of Île Guéotec (8 cables NE), an islet on which a beacon (3.159) stands and from which a drying reef extends 2 cables SW, and:
NW of the extremity of the reef (1¼ miles NE) extending 1 cable NW from the WNW side of Île de Penfret, thence:
NW of Pen-a-Men (1½ miles NW), an above water rock, lying close off the N point of Île de Penfret.

(Directions are given for the eastern approaches to Concarneau at 3.152)

Directions for Chenal des Bluiniers

(continued from 3.64)

3.173

1 **Initial position** about 1 mile W of the beacon-tower (W cardinal) marking Les Bluiniers (47°43′·4N, 4°03′·7W), drying rocks.

Leading marks:

Front mark: houses (47°43′·0N, 4°00′·5W) on the S coast of Île de Drénec.
Rear mark: Penfret disused signal station (2 miles E of front mark) (3.160).

2 The alignment (095½°) of these marks leads 1 mile E into the entrance of Chenal des Bluiniers, passing:
N of Basse du Chenal (pinnacle rock depth 3·5 m) (3 cables SW of Les Bluiniers Beacon-tower), thence:
S of Les Bluiniers.

3.174

1 **Chenal des Bluiniers** then leads 1½ miles E to a position 1 cable N of Broc'h Beacon-tower (N cardinal) (1½ miles E of Les Bluiniers Beacon-tower) marking a drying rock.

2 The N side of the channel is steep-to; the 10 m depth contour lies less than ½ cable S of a line joining Les Bluiniers Beacon-tower (W cardinal) (3.173) and the S edge of the following above-water rocks (positions given from the beacon-tower):
Pladen (6 cables E).
Carrec Christophe (1¼ miles E).
Castel Bihan (1½ miles E).

3 **Clearing marks** for the S side of the channel:
Front mark: Broc'h Beacon-tower (N cardinal) described above.
Rear mark: Penfret Lighthouse (2¾ miles E of front mark) (3.13).

4 The alignment (088°) of these marks passes:
Close N of a 1·8 m patch (3 cables S of Les Bluiniers Beacon-tower).
N of a rock (drying 1·5 m) (4 cables WSW of Broc'h Beacon-tower).

3.175

1 The line of bearing 100° of Penfret disused signal station (47°42′·8N, 3°57′·3W), open N of Fort Cigogne (1½ miles W) (3.18) by one width of the whole fort, then leads 5 cables E to the anchorage (3.165) in the channel N of the W part of Île de Drénec passing (positions given from the fort):

2 N of the rocky foreshore of the W part of Île de Drénec (7 cables W), and:
S of the drying reef with two above water rocks (1·6 m and 0·3 m high) (9 and 7 cables WNW) near its W and S edges, respectively, that extends 5 cables W from Île de Saint-Nicolas.

3.176

1 **Entering La Chambre** (3.187). The route then leads 3 cables ENE across a tidal flat, see 3.164 for least drying height, passing (positions given from the white beacon standing on the head of the jetty on the S side of Île de Saint-Nicolas):
SSE of a charted depth of drying 0·8 m (1 cable SW), thence:
NNW of the rock drying 0·7 m (1½ cables SE).

3.177

1 The charted approach routes joining Chenal des Bluiniers from S and NW in the vicinity of Broc'h Beacon-tower (N cardinal) (47°43′·2N, 4°01′·3W) (3.174) are taken from the French chart of Îles de Glénan. They require local knowledge as it is essential to identify correctly the precise rocks used as leading or clearing marks and their aspect varies markedly with the rise and fall of the tide.

Directions for Chenal de Brunec

(continued from 3.74)

3.178

1 **Initial position** 47°44′·2N, 3°59′·5W, 5 cables NE of Île de Brunec.

Leading marks:

Front mark: W wall of Fort Cigogne (47°43′·1N, 3°59′·5W) (3.18).
Rear mark: chimney (5 cables S of front mark) (3.18) on Île du Loc'h.

2 The alignment (181°) of these marks leads 4 cables S into Chenal de Brunec, passing (positions given from Île de Brunec):
E of La Pie (rock drying 2·4 m) (1½ cables E) marked by a light-beacon (isolated danger), and:
W of the W edge (3 cables E) of the drying reef with an above-water rock (0·1 m high) standing on it ¾ cable farther E.

3 **Caution.** Should the approach be made near the time of LW the chimney may dip behind Île Cigogne: in these circumstances the W end of the drying reef would be showing above water.

Useful marks:

Les Pierres Noires, four distinctive rocks, listed from WNW to ESE (positions given from La Pie): one 2·7 m high (3½ cables ENE); two close together 3·1 and 3·9 m high (4½ cables E); one 1·4 m high (6 cables E).

3.179

1 **Chenal de Brunec** then leads SE in least charted depths of 1·0 m, passing (positions given from La Pie):
NE of the entrance (2 cables SSE) of Île de Bananec anchorage (3.165), thence:
NE of an above water rock (2½ cables SE) (3.169), thence:
NE of Bananec Light-beacon (E cardinal) (6 cables SE) (3.171) which may be rounded at a distance of 1 cable.

3.180

1 **To enter La Chambre** (3.187). From a position 1 cable SSW of Bananec Light-beacon (E cardinal) (3.171), the directions given at 3.170 lead to La Chambre anchorage.

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Charts 2820, 3640, plan of Îles de Glénan

Directions for Chenal du Ruolh and approaches

(continued from 3.160)

3.181

1 **Alternative approaches.** Chenal du Ruolh passes between two reefs, Le Ruolh (47°41′·3N, 3°57′·4W) (3.183) and Laon Ejen Hir (5 cables NE), and may be approached either SW or N of Le Pignon (1¼ miles ESE of Le Ruolh) (3.156), a drying rock. The approach SW of Le Pignon is the better marked and its leading marks are easier to identify.

Caution. Chenal du Ruolh should not be approached until all the leading marks given in the relevant directions (3.182 to 3.184) have been positively identified.

3.182

1 **Approach south-west of Le Pignon.** Initial position 47° 40′·0N, 3° 54′·4W.

Leading marks:

Front mark: Le Ruolh (47°41′·3N, 3°57′·4W) (3.183).

Rear mark: farmhouse (2 miles WNW of front mark) standing 2½ cables SW of the factory chimney (3.18) on Île du Loc'h.

2 The alignment (302°) of the farmhouse just open SSW of the highest point of Le Ruolh leads 2 miles WNW to a position 6 cables ESE of Le Ruolh, passing (positions given from Le Ruolh):

3 NNE of Laouennou Buoy (isolated danger) (2½ miles SE) (3.17), thence:

Close SSW of Basse an Ero Buoy (S cardinal) (1 miles ESE) (3.156), thence:

SSW of Le Pignon (1¼ miles ESE) (3.156), thence:

SSW of a rock (depth 2·1 m) (1 mile ESE).

4 **Leading marks:**

Front mark; Laon Ejen Hir (5 cables NE of Le Ruolh), a group of four above-water rocks the SE-most 3·4 m high.

Rear mark: Penfret disused signal station (1 mile NNW of front mark) (3.160).

5 The alignment (346°) of the rear mark seen through a gap between the two innermost rocks of Laon Ejen Hir then leads 5 cables NNW to a position in Chenal du Ruolh (3.184) 2½ cables S of the SE-most of the four rocks, passing (positions given from the SE-most rock):

6 ENE of Le Lué (7 cables S), a drying reef, thence:

Close ENE of a 2·6 m patch (gravel) (3 cables S).

Caution. A 0·9 m patch (1¼ cables S) (3.184) lies farther NNW on the 346° alignment.

(Directions for Chenal du Ruolh continue at 3.184)

3.183

1 **Approach north of Le Pignon.** Initial position 47°41′·3N, 3°55′·4W, about 8 cables N of Basse an Ero Buoy (S cardinal) (3.156).

The line of bearing 270° of Le Ruolh (47°41′·3N, 3°57′·4W), an above-water rock, leads to a position 6 cables E of the rock, passing:

N of Ar C'hardennou Krenn (1 mile ESE of Le Ruolh), a shoal.

2 **Clearing line.** The line of bearing 278° of Folavoalth (47°41′·6N, 4°00′·6W), an above-water rock, open N of Le Ruolh passes about 1 cable N of Ar C'hardennou Krenn.

3.184

1 **Chenal du Ruolh.** The alignment (311°) of the NE edge of Fort Cigogne with the E gable end of the large house on Île de Saint-Nicolas, described at 3.168, then leads through Chenal du Ruolh to its junction 1¼ miles NW with Chenal de Brilimec, passing (positions given from Le Ruolh):

2 SE of a detached reef (drying 3 m) (6 cables ENE), thence:

NE of a 2·6 m patch (3½ cables ENE) (3.182), thence:

Close SW of the 0·9 m patch (4½ cables NE) at the extremity of the reef extending 1½ cables S from Laon Ejen Hir (3.182), and:

NE of a pinnacle rock (depth 0·8 m) (2 cables ENE).

3 **Caution.** To clear the extremity of the reef extending S from Laon Ejen Hir, no more than the E gable end of the large house on Île de Saint-Nicolas should be visible NE of the wall of Fort Cigogne.

(Directions for Chenal de Brilimec are given at 3.168)

Chart 3640, plan of Îles de Glénan

Directions for Chenal de Pen-a-Men

(continued from 3.160)

3.185

1 **Initial position** 47°43′·6N, 3°57′·5W, about 1½ cables WNW of Pen-a-Men (3.172).

Entering Chenal de Pen-a-Men. The line of bearing 200° of Guéotec Beacon (9 cables SSW of Pen-a-Men) (3.159) leads 3 cables SSW to a position 1 cable off the WNW extremity of the foreshore of Île de Penfret.

2 **Leading marks:**

Front mark: Vieux Glénan (flat sandy islet 1·6 m high) (47°43′·0N, 3°58′·4W).

Rear mark: Chimney (9 cables WSW of front mark) (3.18) on Île de Loc'h.

3 The alignment (239°) of the centre of Vieux Glénan with the rear mark then leads to a position 3 cables ENE of Vieux Glénan, passing:

SSE of Tête de Mort (4 cables NE of Vieux Glénan), a drying rock.

3.186

1 **Passing Vieux Glénan.** The line of bearing 267° of the N-most house (47°43′·1N, 4°00′·5W) on Île de Drénec, just open N of a pointed rock (uncharted; 6 cables E) on the N coast of Île Cigogne, is reported to lead to a position 1½ cables NNW of Vieux Glénan situated:

N of a depth of 0·1 m, and:

S of a patch that dries 0·1 m.

2 **Entering La Chambre.** The line of bearing 285° of the fish tank (47°43′·4N, 4°00′·1W) (3.170) on Île de Saint-Nicolas then leads 9 cables WNW to the entrance to La Chambre anchorage (3.187), passing (positions given from the fish tank):

3 NNE of a rocky patch (drying 0·2 m) (8 cables ESE), thence:

SSW of Bananec Light-beacon (E cardinal) (6½ cables E) (3.171).

Thence as described at 3.170.

La Chambre

3.187

1 **Anchorage** (47°43′·3N, 4°00′·0W) in the pool S of Île de Saint-Nicolas is moderately well sheltered from all directions. There are depths of 3·0 m and 2·5 m about ½ cable SE and ¾ cable ESE, respectively, of the beacon (S cardinal) on the head of the jetty. The deepest water is occupied by moorings but there was reported (1984) to be room to anchor outside them, bottom sand and weed.

2 **Prohibited anchorage:** in the channel used by ferries, leading W to the landing slips on the jetty and marked in summer by three pairs of buoys (lateral).

Speed limit in the buoyed channel: 2 kn.

Repairs: no facilities.

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Other facilities: underwater diving school.

Communications: ferry services in summer to Loctudy (3.109), Bénodet (3.135), Quimper (3.141), Concarneau (3.241), Beg-Meil (3.207) and La Forêt-Fouesnant (3.208).

Small craft: Trévignon and approaches

Chart 2820

General information

3.188

1 **Description.** Trévignon (47°47′·7N, 3°51′·2W), a small well sheltered artificial harbour on the N side of Pointe de Trévignon is used by fishing vessels and small craft. It is approached from S or from W through gaps in the coastal reefs and entered by a passage leading NNE from a position close W of Pointe de Trévignon.

Limiting conditions

3.189

1 **Depths** of more than 5 m are available in the approach and entrance channels as far as the vicinity of the breakwater head, but local knowledge is necessary to keep in the deepest water. There have been reported (1983) to be depths of 4 m in the NW part of the harbour.

Tidal levels: no data available; for Île de Penfret (6 miles SE) see 3.164.

Directions

(continued from 3.160)

3.190

1 **Southern approach.** Initial position 47°45′N, 3°53′W. A white sector (004°–051°) of Trévignon Light (white square tower, green top; 8 m in height) (47°47′·6N, 3°51′·2W) open WNW of Château de Trévignon (1½ cables S) which obscures the light in the sector 351°–004°, leads NNE to a position 1½ cables WSW of Pointe de Trévignon, passing (positions given from the light):

2 WNW of Corn-Vas Buoy (W cardinal) (2 miles SSE) (3.152), covered by a red sector, thence:

ESE of dangerous wreck, existence doubtful, (1½ miles SW) (3.152) lying in the white sector of Pointe de Trévignon Light, thence:

ESE of Korvenn Trévignon (1¼ miles SW) (3.152), a shoal covered by the green sector, and:

3 WNW of Men Du (1¼ miles SSE), a drying reef marked by Men Du Beacon-tower (isolated danger), thence:

ESE of the 2 m depth contour around the SE edge (5 cables SW) of a reef whose NW end is awash at chart datum.

3.191

1 **Entrance.** The channel then leads 3½ cables NNE to the vicinity of the breakwater head, passing:

WNW of Pointe de Trévignon; of the islet surmounted by Trévignon Light and of the breakwater, where the 5 m depth contour lies about 100 m offshore, and:

2 ESE of the 5 m depth contour around the unmarked reef that extends about 2 cables S and E from Vilvic (rock drying 4·2 m) (3 cables WNW of Trévignon Light).

Useful mark:

Trévignon Breakwater head Light (white column, green top; 4 m in height) (1 cable N of Trévignon Light).

3.192

1 **Western approach.** Initial position 47°47′·5N, 3°54′·0W. A white sector (085°–092°) of Trévignon Light (47° 47′·6N, 3° 51′·2W) (3.190) leads E to a position about 5 cables W of the light, passing (positions given from the light):

2 S of Le Dragon (1½ miles W), a drying rock marked by a beacon-tower (W cardinal) (3.200), covered by a red sector, thence:

N of the 5 m contour around the N end of Korvenn Trévignon (1¼ miles WSW) (3.152), covered by the green sector, thence:

3 Close S of the 5 m depth contour around Flaharn (1 mile W), an unmarked drying rock, thence:

Close N of a rock awash (7 cables W) lying at the NW end of an unmarked reef (3.190), thence:

S of an unmarked rock (drying 0·5 m) (5½ cables WNW).

4 **Caution.** The white sector (085°–092°) then leads across a shoal patch extending about 1 cable S from an unmarked rock (drying 0·8 m) (3 cables W) lying just N of the sector limit at the S end of the reef extending about 1 cable SSW from Vilvic rock (3.191) and covered by a red sector.

The channel about 1 cable wide between 5 m depth contours, leads ESE to a position l½ cables WSW of Pointe de Trévignon, whence the entrance channel previously described at 3.191 leads NNE.

Berths

3.193

1 **Moorings:** numerous for fishing vessels and small craft.

Quay (E side of harbour): about 30 m long; reported (1983) to have a depth of 0·5 m alongside; slip extending WNW from N end reported (1983) to have a depth of 1 m at its extremity.

CONCARNEAU INNER APPROACH AND BAIE DE LA FORÊT

General information

Charts 2820, 3641

Waterways

3.194

1 **Concarneau inner approach** is entered between Roches de Mousterlin (3.80), the reef extending 2 miles S from Pointe de Mousterlin (47°50′·7N, 4°02′·4W), and Korvenn Trévignon (3.152), the shoal lying 1 mile WSW of Pointe de Trévignon (8 miles ESE of Pointe de Mousterlin).

Baie de la Forêt (3.203), Concarneau entrance channel (3.231) and Baie de Pouldohan (3.214) lead off NNW, NNE and ENE respectively from Grande Rade (47°50′N, 3°57′W) the roads at the inner end of Concarneau approach.

Topography

3.195

1 The coast is generally low lying with sandy beaches in places backed by rising ground mostly wooded. Foul ground extends 1 to 2 miles offshore.

Pilotage

3.196

1 Concarneau Pilotage District (3.225) covers the inner approach, but the normal pilot boarding place is located at its inner end in the position shown on the charts.

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Local knowledge

3.197

1 Local knowledge is required to navigate medium sized vessels NE of a line drawn from Pointe de Trévignon (47°46′·5N, 3°51′·2W) to Beg-Meil (6 miles NW), especially at LW.

Traffic regulations

3.198

1 **Approach channel.** The approach channel, shown on the charts, that extends 5 cables each side of the alignment (028½°) of Concarneau Leading Lights (3.231) between positions 5 and 2½ miles SSW of the front leading light (47°52′N, 3°55′W) is a continuation of Concarneau W and E approach channels described, at 3.55 and 3.145 respectively. Details of the regulations are at 3.59.

Principal marks

3.199

1 **Landmarks:**

Beg-Meil Signal Station (47°51′·3N, 3°58′·5W) and conspicuous radio mast (60 m in height, red lights) (1 cable W).

Le Quinquis water tower (52 m in height) (47°52′·2N, 3°59′·7W).

Fouesnant water tower (92 m in height) (47°53′·6N, 4°01′·0W).

2 Le Poteau Vert water tower (92 m in height) (47°54′·0N, 3°54′·5W).

Conspicuous building in Concarneau (47°53′·0N, 3°55′·0W) (3.230).

Beuzec-Conq church (7 cables NE of the conspicuous building) (3.231).

Directions

(continued from 3.64 or 3.160)

3.200

1 **Initial position** approximately 47°47′N, 3°59′W.

Approaching Grande Rade (47°50′N, 3°57′W). The white sector (352°–048°) of Le Cochon Light-beacon (47°51′·5N, 3°55′·5W) (3.231) leads 4 miles NNE to the vicinity of the pilot boarding place, passing (positions given from Le Cochon):

2 ESE of Roches de Mousterlin (5 miles WSW) marked on their S side by La Voleuse Light-buoy (S cardinal) (3.90) and covered by the green sector, thence:

ESE of Men Vraz (4½ miles WSW), a drying reef marked by a beacon-tower (E cardinal) (3.91), and:

WNW of Korvenn Trévignon (5 miles SSE) (3.152), covered by the red sector, thence:

3 WNW of Le Dragon (4 miles SSE), a rock marked by a beacon-tower (W cardinal; 5 m high) lying at the SW end of Les Soldats, a drying reef, thence:

WNW of An Houarnou, an unmarked underwater pinnacle rock (2 miles SSE), and:

ESE of Chaussée de Beg-Meil a reef that dries in places, marked on its S side by Linuen Beacon-tower (S cardinal) (1¾ miles WSW) and by Linuen Light-buoy (E cardinal) (1½ miles WSW) moored off its ESE extremity.

4 **Rocks within white sector:**

Korvenn de la Jument (1¾ miles S).

A 3·4 m patch (1¼ miles S), near the sector limit.

3.201

1 **Clearing marks** for the E side of the outer part of the approach:

Front mark: white obelisk (6 m high) standing on Pointe de la Jument (47°50′N, 3°54′W).

Rear mark: Beuzec-Conq church (3¼ miles N of front mark) (3.231).

2 The alignment (000°) of these marks passes (positions given from front mark):

6 cables W of Korvenn Trévignon (3 miles SSE) (3.152).

4 cables W of Les Soldats (2¼ miles S) (3.200).

3 **Clearing marks** for the NW side of the outer part of the approach:

Front mark: Linuen Beacon-tower (S cardinal) (47°50′·7N, 3°57′·7W) (3.200).

Rear mark: Beuzec-Conq church (3½ miles NE of front mark) (3.231).

The alignment (042°) of these marks passes:

About 8 cables SE of Roches de Mousterlin (3 miles WSW of front mark) (3.80).

3.202

1 **Useful marks** (positions given from Le Cochon):

Le Scleuc Beacon (W cardinal; 3·5 m high) (3 miles SSE).

Roche Tudy Beacon-tower (starboard hand) (1¼ miles SSE) (3.215).

Petit Taro Beacon-tower (W cardinal; 3·5 m high) (4 cables SSE).

(Directions for Concarneau continue at 3.231)

Baie de la Forêt

General information

3.203

1 **Description.** Baie de la Forêt is entered from Grande Rade between the reefs extending nearly 1 mile SE from Beg-Meil (47°51′·4N, 3°58′·4W), and the reefs and shoals extending up to 1¼ miles SW from the seafront at Concarneau (2 miles ENE of Beg-Meil).

At the head of the bay (2 miles N of Beg-Meil) La Forêt-Fouesnant channel leads NNW to Port-la-Forêt (3.212), a marina, and to other small craft facilities.

Traffic Regulations

3.204

1 **Entrance channel**: A restricted zone lies in the drying area E of the entrance channel, inshore of a line between the buoy (starboard hand) ½ cable E of Cap-Coz breakwater and the headland 6½ cables farther ENE. Motor-powered craft are prohibited from the area between 1 April and 30 November each year.

Directions

3.205

1 **Initial position** 47°50′·2N, 3°56′·6W.

Entering Baie de la Forêt. The line of bearing 342° of La Forêt-Fouesnant church spire (47°54′·5N, 3°58′·7W), or at night the white sector (340°–346°) of Cap-Coz Light, leads 2½ miles NNW, passing (positions given from the conspicuous radio mast at Beg-Meil described at 3.199):

2 ENE of Linuen Light-buoy (E cardinal) (1 mile SE) (3.200), thence:

ENE of Laouen Pod (4½ cables E), the E extremity of the coastal reef, marked ½ cable SW by Laouen Pod Beacon-tower (E cardinal), and:

WSW of Basse Briérou Sud and Basse Briérou Nord (1 mile ENE), two shoals, thence:

3 ENE of a mussel bed (1.11) marked by buoys (1 mile N), and:

WSW of another mussel bed marked by buoys (1½ miles NE), thence:

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WSW of Le Scoré (1¾ miles NNE), a rocky plateau with depths of less than 2 m, marked by a beacon (S cardinal), and:

ENE of Basse Rouge (1½ miles N), a shoal.

(Directions for La Forêt-Fouesnant channel are given at 3.209)

Baie de la Forêt anchorage

3.206

1 Anchorage may be obtained on the line of bearing 345° of La Forêt-Fouesnant church (3.205), clear of the rocky patches shown on the chart, in depths decreasing from 13 m in the entrance to 3 m near the head of the bay, bottom sand and mud. The bay is sheltered from W through N to E, and S winds never produce a heavy sea.

Beg-Meil

3.207

1 **General information.** Beg-Meil Harbour (47°51′·7N, 3°58′·9W) is used by small craft and ferry boats.

Anchorage: off the harbour, bottom rocky in places, poor holding; numerous small craft moorings.

Berths:

Mole about 75 m long; berths on N side reported (1983) to dry from 0·7 m at outer end to 3 m at inner end.

2 Landing slip extends 25 m ENE from E end of mole; head, marked by light-beacon (red and white column, 4 m in height), dries 0·8 m.

Communications: ferry services in summer to Îles de Glénan (3.187).

Small craft: La Forêt-Fouesnant and approaches

General information

3.208

1 **Description.** La Forêt-Fouesnant village (47°54′·5N, 3°58′·7W) lies on the W side of Anse de la Forêt, a drying inlet whose entrance is closed at Stang al Lestrec (3.213) by a barrage with a lock. It is approached from the head of Baie de la Forêt by a dredged channel that passes Cap-Coz (1 mile SSE) (3.211) en route to Port-la-Forêt (5 cables SSE) (3.212), whence a drying channel leads to the lock.

2 **Controlling depth:** 0·8 m, as shown on the chart, in the entrance to the dredged channel to Port-la-Forêt.

Traffic regulations in the marked channel (reported 1985):

Speed limit 3 kn.

Anchoring prohibited except in an emergency.

Directions

(continued from 3.205)

3.209

1 **Initial position** 47°52′·7N, 3°57′·8W, about 3 cables WSW of the beacon (S cardinal) (3.205) marking Le Scoré.

Approaching Cap-Coz. By day the line of bearing 332° of La Forêt-Fouesnant water-tower (47°54′·7N, 3°59′·1W) (chart 2820) seen above the head of Cap-Coz breakwater (1·3 miles SSE); at night the line of bearing 334°of Kerléven Breakwater Light (green lantern on grey mast, white hut; 7 m in height) (47°53′·7N, 3°58′·3W) just open WSW of Cap-Coz Breakwater Light (red lantern on grey post, white hut; 3 m in height), lead 8 cables NNW to the entrance of La Forêt-Fouesnant Channel passing (positions given from Cap-Coz breakwater head):

2 WSW of Le Scoré (8 cables SSE) (3.205), thence:

ENE of Basse Rouge (8 cables S) (3.205), thence:

ENE of the beacon (port hand) marking Les Ormeaux (2 cables SSW), drying rocks, and:

Close WSW of a charted depth of 0·6 m (2 cables SE).

3.210

1 **La Forêt-Fouesnant channel** entrance (1 cable SE of Cap-Coz Breakwater head), see 3.208 for controlling depth, is marked by a pair of buoys (lateral).

Thence the channel dredged to 1·2 m (1977), marked by buoys and beacons (lateral) leads 6 cables NNW then N to the entrance of Port-la-Forêt (3.212), passing (positions given from Cap-Coz Breakwater head):

2 ENE of Cap-Coz Breakwater Light (3.209) and anchorage (½ cable NW) (3.211), thence:

WSW of Kerléven Breakwater Light (1 cables NNW) (3.209), thence:

ENE of the entrance (3 cables NW) to the drying channel marked by beacons (lateral), leading W into Anse de Penfoulic.

3 A beacon (S cardinal) (5 cables NW) marks a drying spit on the W side of the dredged channel where the drying channel to Anse de la Forêt, marked by beacons (lateral), leads off 1½ cables NW then 1½ cables NNE to the lock in the barrage.

Cap-Coz

3.211

1 **Anchorage** (47°53′·6N, 3°58′·3W). An area extending 1 cable NW of Cap-Coz breakwater, dredged to 2 m, provides space for about 30 small craft.

Berths. A quay extends 50 m W from a slip, marked by a beacon (port hand) at its head, that extends N from the root of the breakwater.

Facilities: yacht club.

Supplies: fresh water from quay.

Port-la-Forêt

3.212

1 **General information.** Port-la-Forêt (47°54′·0N, 3°58′·4W), also called La Forêt-Fouesnant Marina, is dredged to 2 m and can berth small craft up to 15 m in length. It is entered N of the breakwater head marked by a light (green lantern on grey mast, white hut; 4 m in height).

Port Authority: Capitainerie; keeps watch on Marina VHF channel (1.41).

2 **Anchorage** 1 cable WSW of the marina entrance is reserved for fishing vessels.

Berths: 950 at pontoons, 50 at buoys. About 100 are reserved for visitors.

Repairs of all kinds carried out; 25-tonne boat hoist; careening slip.

Other facilities: yacht club at Kerléven (1 km E); hospital at Concarneau (6 km SE) (3.239).

Supplies: fuel; fresh water; provisions.

Other small craft berths

3.213

1 **Stang al Lestrec:** jetty (47°54′·1N, 3°58′·7W) reported (1983) to dry 1·6 m on its S side, 2·2 m on its N side; suitable for small craft.

Anse de la Forêt. The area extending 5 cables N from the lock (1 cable NNE of Stang al Lestrec jetty) provides 150 berths for laying up small craft in winter.

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Port–la–Forêt Marina from SE (3.212)

(Photograph – SHOM) *(Original dated prior to 2001)*

Baie de Pouldohan

General information

3.214

1 **Description.** Baie de Pouldohan, a small bay, is entered from Grande Rade through a gap in the reefs lying between Pointe de la Jument (47°50′N, 3°54′W) and Pointe du Cabellou (1½ miles NNW). Port Brenn (3.216) is situated at the S end of the bay. Several drying inlets at the head of the bay provide sheltered berths for small craft.

Directions

3.215

1 **Initial position** 47°50′·4N, 3°55′·2W.

Entering Baie de Pouldohan. The visible sector (053°–065°) of Pouldohan Light (white square turret, green top and base; 6 m in height) (47°51′·0N, 3°53′·6W) leads 1¼ miles ENE to the head of the bay, passing (positions given from the light):

2 NNW of a 1·5 m patch (1 mile SW), thence:
Over a 2·3 m patch (9 cables WSW), thence:
NNW of Roche Tudy (rock drying 0·9 m) (7 cables SW) marked by a beacon-tower (starboard hand), thence:

3 SSE of the 2 m depth contour enclosing Karek Steir (rock drying 0·8 m) (6 cables WSW) marked by a beacon (port hand; 2m high), thence:
NNW of the beacon (starboard hand) (2 cables SW) marking the edge of the rocks fringing the S entrance point of the drying inlet at the head of the bay.

4 **Useful mark** (position given from Pouldohan Light):
Beacon (W cardinal) (¼ cable SW) marking the rocks fringing Beg Menez, the point surmounted by Pouldohan Light.

Small craft anchorages and berth

3.216

1 **Port Brenn** (47°50′·5N, 3°53′·9W), an inlet between ledges, is provided with moorings, berthing and careening slips for fishing boats and small craft.

Port de Pouldohan (47°50′·8N, 3°53′·4W), the S-most creek at the head of the bay, has numerous drying moorings for fishing boats and small craft.

Anse du Moulin-a-Mer. Quay on S bank of creek (3½ cables NE of Pouldohan Light) has been reported (1983) to dry 1·7 m. Repairs of all kinds at boatyard.

CONCARNEAU

General information

Chart 3641

Position

3.217

1 **Concarneau** (47°52′N, 3°55′W) lies on the SE corner of Baie de la Forêt at the mouth of Rivière du Moros. La Ville-Close, the old fortified town dating from the fourteenth century, occupies the islet separating the Avant-Port S from Arrière-Port N; the modern town lies W and N of the harbour.

Function

3.218

1 Concarneau is the second most important French fishing port and a popular yachting centre. The port is also used by small vessels and sand barges.

Population: about 18 600.

Approach and entry

3.219

1 The outer approaches passing W and E of Îles de Glénan are described at 3.55 and 3.145 respectively. The inner approach (3.194) leads NNE into the sinuous but well marked entrance channel through the coastal reefs.

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Port de Concarneau from SSW (3.217)

(Original dated 1997)

(Photograph – SHOM)

Traffic

3.220

1 In 2003 the port was used by 3 vessels totalling 2137 dwt.

Port Authority

3.221

1 Capitainerie du Port, Quai Est, PO Box 231, F–29182 Concarneau, Cedex.

Limiting conditions

3.222

1 **Controlling depths:**

Over the bar between Le Cochon and Basse du Chenal (8 cables SW of the harbour entrance) the passage is about 100 m wide with a depth of 5·5 m in the middle of the channel.

In Passage de Lanriec (3.234) between the outer and inner harbours, the channel is cleared of rocks to a depth of 4 m over a minimum width of 35 m.

2 **Deepest berths** are those in Bassin du Moros (3.237).

Tidal levels. See information in *Admiralty Tide Tables*. Mean spring range about 4·2 m; mean neap range about 2·0 m.

Density of water: reported to be 1·026 g/cm^3.

3 **Maximum length** of vessels permitted entry:

Type	*By day*	*At night*
Tankers	105 m	105 m
Other categories	115 m	110 m

Maximum beam: all vessels, day and night; 18 m.

Maximum draught: 5·7 m.

4 **Weather.** Strong winds from SE through W to NNW make the passage between Le Cochon and Basse du Chenal (3.231) difficult.

Arrival information

Port radio

3.223

1 Port radio keeps continuous watch. For further details see *Admiralty List of Radio Signals Volume 6(2)*.



Concarneau Harbour Entrance from SW (3.217)

(Original dated 1996)

(Photograph – Mr T S Plews, Yacht "Du Bleiz")

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Outer anchorages

3.224

1 Anchorage outside the entrance to the entry channel in Baie de la Forêt, is described at 3.206.

Anchorages with limited swinging room are situated in the entrance channel in Petite Rade and adjacent to the entrance channel in Anse de Kersos, see 3.235 and 3.236 respectively for further details.

Pilotage

3.225

1 **Pilotage is compulsory** for:

Vessels carrying hydrocarbons, gas or dangerous substances.

Vessels more than 50 m in length.

Availability: all hours.

Requests for Pilots should be made 18 hours in advance.

2 **Pilotage district.** Limits are (chart 2820):

E: the alignment (013¾°) of the beacons on Île Verte (47°46′·4N, 3°48′·0W) and the coast, described at 3.153.

S: the parallel 47°38′·8N.

W: the meridian 4°03′·9W.

3 **Boarding place:** in position 47°50′·8N, 3°56′·2W, as shown on the chart.

Pilot boat: described at 3.82.

Tugs

3.226

1 **Tugs,** equipped with VHF radio, will meet vessels in the vicinity of Le Cochon on request.

Regulations

3.227

1 **Speed.** Between Le Cochon and Men Fall the maximum permitted speed is 5 kn, and from Men Fall to the Arrière-Port it is 4 kn.

Time of arrival. Vessels over 100 m in length must arrive at least 1 hr before HW, and entry will not be allowed if the wind is great than force 4.

Merchant vessels must obtain permission to enter harbour from the Capitainerie du Port, which has to check that the berth is clear of fishing vessels before giving approval.

Harbour

General layout

3.228

1 **Concarneau Harbour** comprises the following three sections described in succession from seaward.

Port de la Croix (3.244), situated on the N side of the channel 3 cables W of the entrance to the port proper, mostly dries. It is used only by a few pleasure craft and as a boat landing by vessels in the anchorages.

Avant-Port, the outer harbour situated S of La Ville-Close, contains the marina (3.246) on its W side.

2 **Arrière-Port** (3.237), the commercial inner harbour entered E of La Ville-Close through Passage de Lanriec, consists of (listed clockwise from the entrance):

The principal basin lying N of La Ville-Close; used exclusively by fishing vessels; dredged to 3 m.

3 Bassin du Moros, a quayed basin dredged to 5 m; berths on the NW side used by commercial and fishing vessels, those on the SE side by vessels under repair.

Anse du Roudouic, the SE corner, contains repair and maintenance facilities.

Tidal streams

3.229

1 **Entrance channel:** the times at which the tidal streams begin are as follows:

Interval from HW Brest	*Direction*
−0150	SSW
+0540	NNE

Maximum rates at springs are 1 kn.

2 **In the harbour** the N-going stream attains a spring rate of 2 kn and the S-going 2½ kn.

Principal marks

3.230

1 **Landmarks** (positions given from the first named):

Conspicuous building (square tower 20 storeys high, 85 m in height, rising from a vast block of flats) (47°53′·0N, 3°55′·0W).

Beuzec-Conq church (7 cables NF) (3.231).

La Médée Light-beacon (9 cables S) (3.232).

Le Cochon Light-beacon (1½ miles SSW) (3.231).

2 **Major light:**

Beuzec Direction Light (7 cables NE) (3.231).

Directions

(continued from 3.202)

3.231

1 **Initial position:** Pilot boarding place (47°50′·7N, 3°56′·2W) (3.225).

Concarneau Leading Lights:

Front: La Croix Light (red and white tower; 12 m in height) (47°52′·2N, 3°55′·0W).

Rear: Beuzec Direction Light (2490 m NNE of front light) exhibited from Beuzec-Conq church (belfry 32 m in height).

2 The alignment (028½°) of these lights leads NNE into and through the outer section of the entrance channel to a position 3½ cables SSW of the front light, passing (positions given from front light):

3 Close ESE of the 5 m depth contour at the SE extremity (9 cables SSW) of Basse Lué Vras, a reef, marked by a buoy (port hand), thence:

Close WNW of Le Cochon (7½ cables SSW), a reef marked by Le Cochon Light-beacon (green tower; 11 m in height), and:

4 Over the bar described at 3.222, thence:

Close ESE of Basse du Chenal (7 cables SSW) marked by Basse du Chenal Light-buoy (port hand), and:

WNW of the 5 m depth contour in the vicinity of Men Fall (4½ cables SSW), a drying rock, marked close NW by Men-Fall Light-buoy (starboard hand).

5 **Caution.** La Croix Light has been reported (1987) to be difficult to see by day. The top of the disused lighthouse of Beuzec (elevation 48 m) (uncharted; 3½ cables SSW of Beuzec-Conq church) showing above the surrounding trees helps to indicate the alignment of Concarneau Leading Lights.

6 **Clearing bearing.** The 352° limit of the white sector of Le Cochon Light-beacon passes dangers covered by the red sector (positions given from the light) as follows:

1 cable W of Le Petit Taro (4 cables SSE), a drying rock marked by Petit Taro Beacon-tower (W cardinal) (3.202).

Close W of a rock awash (2 cables SSE) on a detached reef.

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3.232

1 **Approaching the entrance** of the Avant-Port, the line of bearing 069° of Lanriec Light (green rectangle on white gable, 8 m in height) (3 cables ESE of La Croix Light) then leads ENE to a position 1 cable WSW of the light, passing (positions given from Lanriec Light):

2 Over a depth of 4·2 m (2½ cables WSW), and:

NNW of the 2 m depth contour enclosing Kersos (2½ cables SW), a drying reef marked by a beacon-tower (starboard hand; 2·5 m high), thence:

SSE of the edge (1½ cables W) of Plateau de la Médée that extends l¼ cables SE from the shore on the W side of the entrance and 1 cable SSW from La Médée Light-beacon (port hand; round tower 16 m in height) (1 cable NW).

3.233

1 **Entering Avant-Port.** After passing the alignment (about 007° of La Médée Light-beacon (port hand) (3.232) with Passage de Lanriec Light-beacon (red round tower 5 m in height) (2 cables farther N) on the S point of La Ville-Close, and entering the white sector (354°–007°) of the latter light, the channel turns NNW, then NNE within the port, passing (positions given from La Médée Light-beacon):

2 Between La Médée Light-beacon (port hand) (3.232) and the foreshore ½ cable E, thence:

Close E of the head of Môle Pénéroff (¾ cable NNW), thence:

Close ESE of the wave-breaker pontoon extending NNE from the molehead, and:

WNW of No 1 Light-beacon (green turret, 5 m in height) (1 cable NNE) at the W extremity of the foreshore on the E side of the channel.

3.234

1 **Passage de Lanriec,** whose minimum depth and width are given at 3.222, is entered between Passage de Lanriec Beacon (3.233) and No 1 Beacon (3.233) (about 60 m SE).

The passage leads 2 cables NNE into Arrière-Port and is marked by three more light-beacons (towers; one starboard and two port hand).

Basins and berths

Anchor berths

3.235

1 **Petite Rade.** Anchorage, sheltered from winds between N and SE, may be obtained on or close W of the alignment (028½°) of Concarneau Leading Lights (3.231), at the N limit of Lanriec Light (3.232); depth 8 m sand and mud; charted swinging room about 200 m radius between the 5 m depth contours.

3.236

1 **Anse de Kersos.** Anchorage, sheltered from N through E to S, may be obtained mid-way between Kersos Beacon-tower (starboard hand) (3 cables SW of Lanriec Light) (3.232) and the foreshore NE; depth from 3 to 5 m, bottom sand and mud good holding; limited swinging room; numerous small craft moorings (3.245).

Arriere-Port

3.237

1 **Principal basin**: 840 m of berth with depths of 1 to 5 m, reserved for fishing vessels.

Bassin du Moros: 377 m of berth with depth of 5 m, used by tankers, sand barges, cargo and fishing vessels. Berth 220 m long on SE side used for repairs.

Anse du Roudouic: repair berth and shiplift.

Port services

Repairs

3.238

1 **Repairs** of all kinds at two shipyards.

Shiplift capacity 2000 tonnes with refitting area for two vessels maximum dimensions of each: length over all 95 m; keel length 76 m; beam 14 m; draught 5·5 m.

Patent slip: capacity 350 tonnes; length 43 m; width 8·4 m; depth 0·7 m below chart datum; with refitting area for 6 vessels.

Divers: available from private company.

Other facilities

3.239

1 **Deratting** exemption certificates can be issued.

Hospital at Porzou (47°52′N, 3°55′W) with helicopter landing area.

Oily waste reception facilities.

Supplies

3.240

1 Marine diesel; fresh water at all quays; provisions.

Communications

3.241

1 **Ferry** service in summer to Îles de Glénan (3.187).

Port working

3.242

1 Local public holiday: festival of *Les Filets Bleus,* last but one Sunday in August.

Small craft

General information

3.243

1 Concarneau is an attractive port of call with good facilities for visiting small craft: it becomes very crowded in the holiday season.

Anchorages and berths are described in sequence from seaward. Port de la Croix is suitable for a brief visit near HW; anchorage may be obtained in Anse de Kersos in settled weather; the marina in Avant-Port is the focal point of yachting activity. Pleasure craft are excluded from Arrière-Port.

Port de la Croix

3.244

1 **Môle de la Croix** (1 cable W of La Croix Light) has a depth of 0·4 m at its head. The rest of the little harbour, used only by pleasure craft, dries.

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Anse de Kersos

3.245

1 **Moorings:** 20 buoys are laid on both sides of a fairway marked by yellow buoys (uncharted).

Anchorage: approximately in position shown on the chart (6 cables SSE of La Croix Light), N of the mooring buoys; exposed to W and NW winds.

Avant-Port

3.246

1 **Marina** in W part of Avant-Port, provides 618 berths mostly at pontoons with 52 berths for visitors. The pontoon on the SE side acts as a wave-breaker; the SE side is used by ferryboats during the day. Deepest berths: 3·7 m (reported 1990).

Marina office: situated on Môle Péneroff (3.233).

Port services

3.247

1 **Repairs** of all kinds by several firms including sailmakers.

Other facilities: careening slip and berths at Quai Péneroff on W side of marina; yacht club at Place de la Croix on SW corner of marina; office of Centre Nautique des Glénan (3.161); custom house.

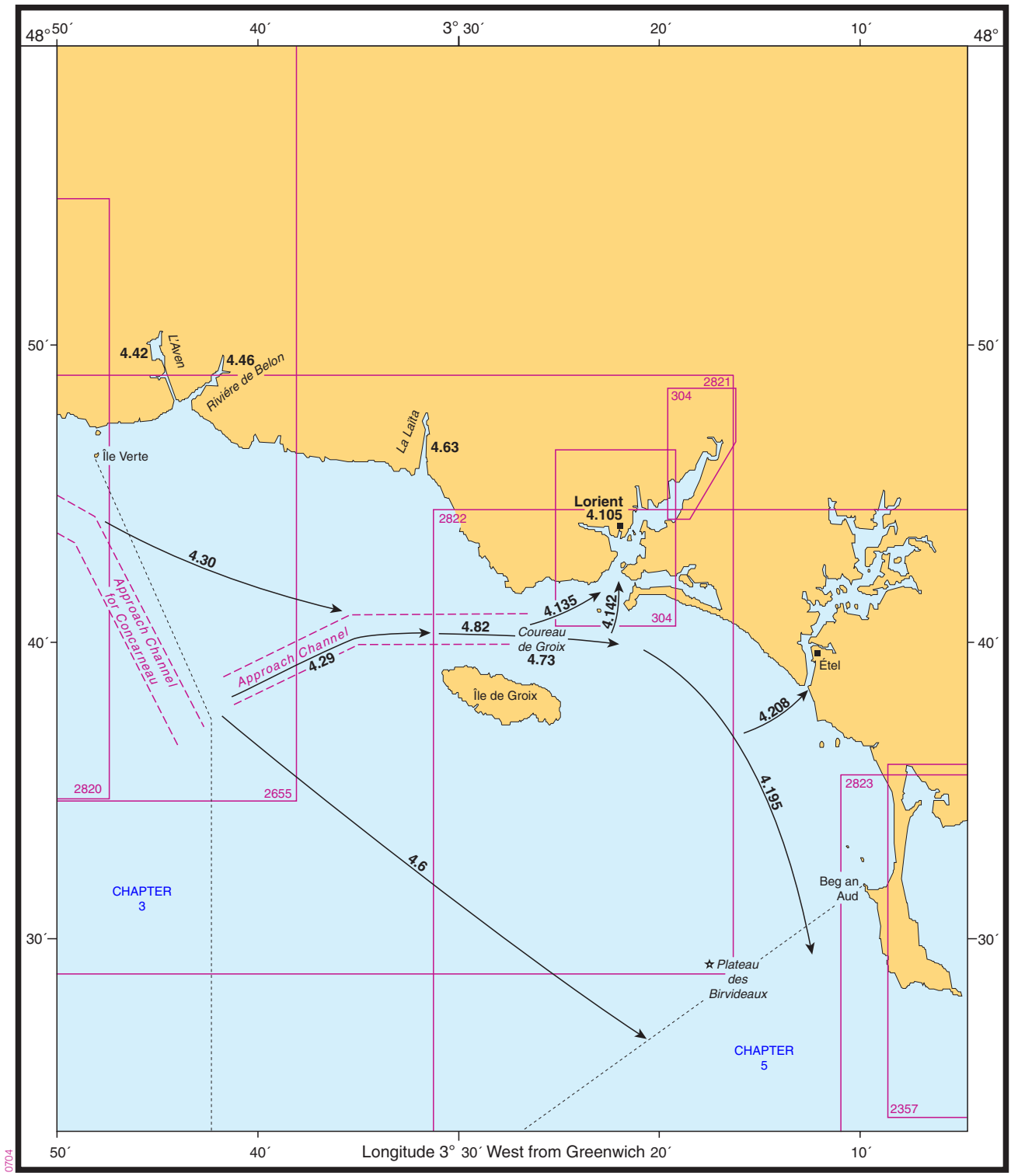
Supplies: fuel and water from service station at head of Môle Péneroff (3.233), berth dries at LW; provisions.

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NOTES

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Chapter 4 - Lorient and environs from Île Verte to Beg an Aud including Île de Groix



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CHAPTER 4

LORIENT AND ENVIRONS FROM ÎLE VERTE TO BEG AN AUD INCLUDING ÎLE DE GROIX

GENERAL INFORMATION

Chart 2821, 2822

Scope of the chapter

4.1

1 This chapter covers:

The coastal passage S of Île de Groix (47°38′N, 3°28′W).

The inshore passage from Île Verte (47°46′N, 3°48′W) to Beg an Aud (47°32′N, 3°10′W) passing through Les Coureaux de Groix, the channel N of Île de Groix.

Lorient (47°45′N, 3°21′W) (4.105), the only major harbour on this stretch of coast, and its approaches.

Topography

4.2

1 **Île de Groix,** a flat-topped island with a general elevation of about 40 m and except for its SE corner a coastline of steep cliffs, dominates the outer approaches to Lorient.

The mainland is moderately low-lying; a rocky coastline backed by small fields and woods at the W end of the area gradually changes to one of sandy beaches backed, E of Pointe de Gâvres (47°41′·2N, 3°21′·5W), by sand dunes.

Exercise areas

4.3

1 **Submarines** exercise frequently, both surfaced and dived, in the area covered by this chapter. See 1.15 for details of warning signals.

2 **Firing practices** are carried out by ships, aircraft and shore batteries in the area between the E entrance to Les Coureaux de Groix and the W entrance of Coureau de Belle-Île (chart 2353), to a distance of 12 miles from the shore between Pointe de Gâvres (47°41′·2N, 3°21′·5W) and Beg an Aud (12 miles SE). Firings are carried out by day and at night but not normally on Saturdays, Sundays and public holidays. Navigation is prohibited occasionally in certain parts of the area, see 4.197 for further details.

3 **Warning signals,** described below, are made from whichever of the following locations are adjacent to the firing practice area in use:

Beg Melen Coastguard Station (47°39′·2N, 3°30′·0W) (4.31).

Pointe des Chats Lighthouse (47°37′·3N, 3°25′·2W) (4.10).

4 Flagstaffs on the coast between Pointe de Gâvres and Beg an Aud.

Fort Saint-Julien (coastguard station) (47°29′·8N, 3°07′·5W) (5.149).

Signal	*Purpose*
Red flag	Shown from 1 hour before until conclusion of firings
Two red flags	Shown during the day preceding night firings.

5 By day the shore batteries fire two blank rounds 1 hour and again 30 minutes before live firings begin.

At night the range control tower (47°30′·8N, 3°08′·4W) (5.34) exhibits two red lights during firings. White flares are exhibited at intervals before and during firings and a green flare on completion.

Tidal streams

4.4

1 **Offshore** the tidal streams are rotary clockwise and seldom exceed ¾ kn. For further details see *Admiralty Tidal Stream Atlas: France West Coast* and information on the chart.

Inshore the tidal streams are generally weak, except in the narrow passages and the rivers as described in the appropriate place in the text.

Strong winds have a very great effect on the rate and direction of the tidal streams.

Small craft

4.5

1 There are numerous attractive small harbours and anchorages in the area covered by this chapter but apart from Port-Tudy (4.87) on the N coast of Île de Groix, a convenient port of call for those passing through the area, and Rade de Lorient (47°44′N, 3°21′W) (4.126), they or their approaches are somewhat exposed in bad weather.

ÎLE VERTE TO BEG AN AUD

GENERAL INFORMATION

Charts 2821, 2822

Description

4.6

1 The coastal route passing S of Île de Groix (47°38′N, 3°28′W) connects the coastal route S of Îles de Glénan and the E approaches to Concarneau, described in Chapter 3, with the approaches to Coureau de Belle-Île and the coastal route SW of Belle-Île described in Chapter 5.

The W half of the S coast of Île de Groix is comparatively steep-to and the 20 m depth contour passes less than 1 mile offshore, but off the E half of the island there are numerous shoals lying up to 4 miles SE of Pointe des Chats (47°37′·3N, 3°25′·3W), the low-lying SE point.

2 The S coast of Île de Groix is exposed to heavy seas and has no safe anchorage. Locmaria (8 cables WNW of Pointe des Chats) (4.14), used by small craft, is exposed to S.

Traffic regulations

4.7

1 **Approach channels,** shown on the chart, leading NNW towards Concarneau and ENE towards Lorient from the

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vicinity of position 47°37′N, 3°42′W are subject to national regulations: for further details see 3.59 and 4.24 respectively.

Dumping ground

4.8

1 **Explosives** are dumped within the area (47°37′N 3°31′W), SW of Île de Groix, shown on the chart.

Tidal streams

4.9

1 See:
- 4.4 for general remarks.
- The chart for details of the tidal stream in position 2 miles SE of Pointe des Chats.
- *Admiralty Tidal Stream Atlas: France West Coast* for general direction and rate elsewhere.

Principal marks

4.10

1 **Landmarks:**
- Pen Men Lighthouse (white square tower, black top; 28 m in height) (47°38′·9N, 3°30′·5W). A radio mast (red aircraft obstruction lights) stands 125 m NE.
- Crehal water tower (47°38′·0N, 3°27′·4W), a round tower surmounted by an inverted cone-shaped tank.
- Pointe des Chats Lighthouse (white square tower and dwelling; 15 m in height) (47°37′·3N, 3°25′·2W).

2 **Major lights:**
- Pen Men Light—as above.
- Pointe des Chats Light—as above.
- Pointe des Poulains Light (47°23′N, 3°15′W) (5.32).

Directions

(continued from 3.18)

4.11

1 **Initial position** 47°37′N, 3°42′W, approximately 8 miles WSW of Pen Men the NW point of Île de Groix.

The coastal route leads about 20 miles ESE, passing:
- SSW of Basse de Groix (2¼ miles W of Pen Men), a shoal on which strong winds from seaward usually produce a heavy sea, thence:
- SSW of the 9·1 m patch (3 miles SE of Pen Men) lying 6 cables SW of Pointe de l'Enfer, thence:

2 SSW of rock-strewn shoals with depths of 10 m or less over them, on which the sea breaks heavily in gales from seaward especially with a S or W-going tidal stream, that lie up to 2½ miles S and SSE of Pointe des Chats and include Basse des Chats (1¾ miles SSE of Pointe des Chats) marked 2 cables ESE by Les Chats Light-buoy (S cardinal), thence:

3 SSW of Basse Moullec (6 miles SSE of Pointe des Chats) on which the sea breaks when a swell is running, thence:
- SSW of Plateau des Birvideaux, an extensive shoal on which the sea breaks in bad weather, whose shallowest part is marked by Plateau des Birvideaux Light-beacon (isolated danger; octagonal masonry tower 36 m in height) (47°29′·2N, 3°17′·4W).

4.12

1 **Clearing bearing.** The line of bearing 312° of Pen Men Light (47°38′·9N, 3°30′·5W) (4.10), open SW of Pointe de l'Enfer (2½ miles SE), passes over the 10 m depth contour on the SW side of Basse Mineau (4¾ miles SE of the light) and clears SW of the other shoals in the vicinity.

4.13

1 **Useful marks:**

Penfret Light (47°43′·3N, 3°57′·1W) (3.13).

Saint-Nicolas Daymark (white, black stripe) (47°38′·1N, 3°29′·6W) and Kerigant Daymark (black topmark on white base) (1¼ miles ESE), formerly used as leading marks for a measured distance.

Port Maria Main Light (47°28′·8N, 3°07′·4W) (5.32).

(Directions are given for Les Coureaux de Groix WSW approach at 4.29; for coastal passage W and S of Belle-Île at 5.12; and for the approaches to Coureau de Belle-Île at 5.33)

Small craft: Locmaria

Chart 2821 (see 1.18)

General information

4.14

1 **Description.** Locmaria Harbour (47°37′·6N, 3°26′·2W) provides anchorage well sheltered from W through N to E, but open to S, for small craft and fishing boats. It is approached between reefs extending S from both sides of the bay in which it lies, and is entered W of Le Bézelec Beacon-tower (starboard hand) (6 cables W of Pointe des Chats) (4.16).

Harbour

4.15

1 **Layout.** Anchorage in the N part of the bay dries N of the mole extending W from the E shore. It is approached either side of a middle ground; the E channel dries 0·6 m; the W channel, least depth 0·5 m, affords anchorage in which most small craft can remain afloat.

2 **Tidal streams** in the approach to the bay are linear, maximum rate 1½ kn, and turn at the following times:

Interval from HW Brest	*Direction*
–0605	E-going
–0005	W-going

Directions

4.16

1 **Initial position** 47°36′N, 3°26′W, about 1½ miles S of the entrance.

From the initial position the route leads N to the entrance of the W channel in the S part of the bay, passing (positions given from Pointe des Chats Light (4.10)):

2 W of Les Chats (7 cables S), a drying reef, thence:
- E of the reef extending about 7 cables S from the W entrance point of the bay (8 cables W), and:
- W of a rock (drying 0·4 m) (6 cables W) lying 1 cable S of Le Bézelec Beacon-tower (starboard hand), thence:

3 W of the beacon (S cardinal) (7½ cables WNW) marking the S end of the middle ground, and:
- E of the beacon (port hand) (8 cables WNW) marking the edge of the foreshore of an islet, thence:
- W of a beacon (starboard hand), marking the middle ground.

4.17

1 **Western channel.** From a position W of the middle ground the channel leads NE towards the head of the mole.

Eastern channel. From a position close W of Le Bézelec Beacon-tower (starboard hand) (4.16) a drying channel (4.15) leads N towards the molehead.

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4.18

1 **Clearing bearing.** When approaching the initial position (4.16) from the W or SE, the line of bearing 299° of Pointe Saint-Nicolas (47°37′·8N, 3°29′·0W), open SSW of Pointe de l'Enfer (1 mile ESE), clears close SSW of (positions given from Pointe de l'Enfer):

Depth 2·4 m (1 mile ESE) at the extremity of the reef extending S from the W entrance point of Locmaria.

Les Chats (2 miles ESE) (4.16).

2 **Useful mark:**

Daymark (white masonry beacon) (47°37′·5N, 3°25′·9W) standing on the E shore of the mouth of the bay.

Anchorages

4.19

1 **Outer anchorage.** Several mooring buoys are laid W of the middle ground. Anchorage may be obtained, bottom sand good holding, at the intersection of:

Alignment (about 150°) of the S cardinal beacon (4.16) and Le Bézelec Beacon-tower (starboard hand) (4.16), and:

Line of bearing 060° of the molehead.

2 **Inner anchorage** in the vicinity of the mole has been reported (1986) to be entirely occupied by moorings. There are reported to be depths of 1 m off the molehead; farther N the bay dries.

Port services

4.20

1 **Other facilities:** landing slip on N side of mole dries 1·5 m alongside.

Supplies: fresh water from tap in car park; provisions from village shop.

APPROACHES TO LORIENT FROM ÎLE VERTE TO BEG AN AUD

GENERAL INFORMATION

Charts 2821,2822

Area Covered

4.21

1 The area covered by this section comprises:

île Verte (47°46′N, 3°48′W) (4.1)

île de Groix (47°38′N, 3°28′W) (4.2)

Les Coureau des Groix (47°40′N, 3°27′W) (4.73)

Lorient (47°45′N, 3°21′W) (4.105)

Beg an Aud (47°32′N, 3°10′W)

ÎLE VERTE TO LES COUREAUX DE GROIX

General information

Chart 2821

Topography

4.22

1 Between Pointe de Raguénez (47°47′·3N, 3°47′·9W) and Pointe de Courégan (47°42′·7N, 3°28′·5W), 15 miles ESE, the coastline consists of rocky cliffs interspersed, in the E part, with sandy beaches. It is indented by the entrance to the rivers L'Aven and Rivière de Belon (3 miles ENE of Pointe de Raguénez) (4.35), by Anse du Pouldu at the entrance to La Laïta river (8 miles farther ESE) (4.63), and in between by the inlets forming the little harbours of Brigneau, Merrien and Doëlan (4.59). These rivers and harbours are used only by small craft.

2 Île Verte and Île de Raguénez lie 1 mile and 3 cables S of Pointe de Raguénez. Thence to Pointe de Courégan the coast is bordered with reefs. Rocky patches with depths of less than 10 m over them lie up to 1½ miles offshore.

The white scars of some china clay workings 1¼ miles NNE of Pointe de Courégan are prominent.

Routes

4.23

1 The W entrance to Les Coureaux de Groix (4.73) between Pen Men (47°39′N, 3°31′W), the NW point of Île de Groix, and Pointe de Courégan (4 miles NNE) is approached from:

WSW from the coastal route S of Îles de Glénan (47°43′N, 3°59′W).

WNW from the channel between Îles de Glénan and the mainland NE.

Traffic regulations

4.24

1 **Approach channel.** Vessels exceeding 1600 grt laden with hydrocarbons or dangerous cargo are required to use the 1 mile wide approach channel, shown on the chart, that leads 5 miles ENE from position 47°38′·5N, 3°41′·5W, then 5 miles E into Les Coureaux de Groix. See 1.54 for details of the regulations which apply to all vessels entering or crossing the channel. The designated signal stations are Beg Melen (4.31) and Port-Louis (4.116). See *Admiralty List of Radio Signals Volume 6(2)* for further details. There is no designated waiting anchorage.

2 For details of a similar channel leading NNW from position 47°37′N, 3°44′W see 3.147.

Dumping ground

4.25

1 **Explosives** are dumped in the area (47°40′N, 3°32′W) NW of Île de Groix shown on the chart.

Rescue

4.26

1 **Coastguard station:** Beg Melen (47°39′·2N, 3°30′·0W) (4.31), see 1.75 for further details.

Lifeboat station (1.77): Doëlan (47°46′·5N, 3°36′·5W) (4.59).

Tidal streams

4.27

1 Inshore of a line drawn from Basse Jaune (47°42′·7N, 3°50′·4W) to the W end of Île de Groix (47°39′N, 3°31′W) the rate of the tidal streams is less than 1 kn at springs, except in the estuaries and the passage (4.32) between Île Verte and Île de Raguénez; the tidal streams are much influenced by the wind.

2 In position 47°42′N, 3°37′W, 5 miles NW of Île de Groix the tidal stream is rotary clockwise; see information on the chart.

3 Inshore between Men-Toul (47°46′·5N, 3°40′·7W) and Le Pouldu (6 miles E) the spring rate is ½ kn and the tidal stream sets:

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Interval from HW Brest	*Direction (begins)*
–0550	*E*
+0010	*W*

Inshore between Le Pouldu and Pointe de Talut (47°42′N, 3°27′W), 5 miles SE, the tidal stream sets continuously SE at a maximum rate of 1 kn.

Principal marks

4.28

1 **Landmarks:**
- Port Manec'h Lighthouse (47°48′·0N, 3°44′·3W) (4.37).
- Moëlan-sur-Mer church (slender spire) (47°48′·9N, 3°37′·7W) and water tower (1¼ cables NNE).
- Water towers at Keranquernat (75 m in height) (47°46′·5N, 3°32′·5W) and Kerbigot (73 m in height) (1 mile E).
- Pen Men Lighthouse (47°38′·9N, 3°30′·5W) (4.10).

2 **Major lights:**
- Penfret Light (47°43′·3N, 3°57′·1W) (3.13).
- Pen Men Light—as above.

Directions

West-south-western approach

(continued from 4.13)

4.29

1 **Initial position** 47°38′·5N, 3°41′·5W.

Lorient Approach Channel, shown on the chart, leads 5 miles ENE then 5 miles E through the W entrance of Les Coureaux de Groix (4.73), passing (positions given from Pen Men Light):
- NNW of Basse de Groix (2½ miles WNW) (4.11), thence:
- N of a shoal with a least charted depth of 12·9 m (1½ miles NW).

2 Vessels other than those required to navigate in the approach channel may pass between the dangers listed above and the W end of Île de Groix, where depths of 13 m or less lie up to 6 cables offshore and close within the 20 m depth contour.

West-north-western approach

(continued from 3.18)

4.30

1 **Initial position** 47°44′N, 3°48′W, approximately 2½ miles S of Île Verte.

The route leads 13 miles ESE to the W entrance of Les Coureaux de Groix, passing:
- SSW of Ar Gazeg (1½ miles E of Île Verte), a shoal on which the sea breaks only in a heavy swell, thence:

2 SSW of the coastal shoals between Men-Toul (47°46′·5N, 3°40′·7W) and Le Pouldu (6 miles E) where there are depths of less than 12 m up to 1¼ miles offshore, thence:
- SSW of Basse Garo and Grand Cochon (47°43′N, 3°31′W), the outermost steep-to dangers of an area of drying reefs marked by a buoy (S cardinal), and:

3 NNE of Basse de Groix (2½ miles WNW of Pen Men Light) and the shoal 1 mile farther ENE.

Clearing bearing. The 314° limit of a white sector of Doëlan Front Leading Light (47°46′·3N, 3°36′·5W) (4.60) clears close SW of the dangers in the vicinity of Grand Cochon which are covered by the green sector.

4.31

1 **Useful marks:**
- Île aux Moutons Auxiliary Direction Light (47°46′N, 4°02′W) (chart 2820) (3.61).
- Beacons (3.153) on Île Verte (47°46′·3N, 3°48′·0W) and the coast 1¼ miles NNE.
- Les Verrès Beacon-tower (isolated danger) (3½ miles E of Île Verte) (4.38).

2 Doëlan Leading Lights and beacon (47°46′·3N, 3°36′·5W) (4.60).
- Kerroc'h Light (47°42′·0N, 3°27′·7W) (4.81).
- Beg Melen Coastguard Station (white building; radio mast exhibiting red aircraft obstruction lights) (4 cables NE of Pen Men Light).

(Directions continue for Les Coureaux de Groix at 4.82)

Small craft passage between Île Verte and Île de Raguénez

General information

4.32

1 **Route.** From the vicinity of Pointe de Trévignon (47°47′N, 3°51′W) an inshore passage used by small craft leads 3 miles E passing between the reefs surrounding Île Verte (2½ miles ESE of Pointe de Trévignon) and Île de Raguénez (7 cables farther N).

Least charted depth, in the unmarked fairway between the islets: 5·9 m.

2 **Tidal streams** in the channel between Île Verte and Île de Raguénez begin at the following times:

Interval from HW Brest	*Direction*
–0550	E
+0010	W

The maximum E-going and W-going spring rates are 2 kn and 2½ kn respectively: neap rates are half those at springs.

Directions

(continued from 3.155)

4.33

1 **Initial position** 47°46′·7N, 3°51′·3W, about 8 cables S of Pointe de Trévignon.

The passage leads 3 miles E passing dangers with depths of less than 3 m over them as follows (positions given from the beacon on Île Verte (47°46′·3N, 3°48′·0W)):
- N of Men Du (1¾ miles W), a rock marked by a beacon-tower (isolated danger) (3.190), thence:
- N of Ar Garreg Vras (5 cables WNW), a rocky patch, and:

2 S of Le Taquet (9 cables NNW), a drying rock, thence:
- N of the extremity of the reef extending 3 cables NE from Île Verte, and:
- S of the beacon (S cardinal) (6 cables NNE) marking the extremity of the reef extending 2 cables SE from Île de Raguénez.

Raguénez anchorage

4.34

1 The small craft anchorage NE of Île de Raguénez, in the S half of the pool lying between Pointe de Raguénez (47°47′·3N, 3°47′·9W) and a drying rock (2 cables SE), is rather exposed and tenable only in summer. About 30 moorings for fishing vessels and small craft are laid annually from 1st June to 15th September by the Mairie de Névez.

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2 **Facilities:** Landing slip extending about 50 m SE from Pointe de Raguénez dries at LW.

Supplies: provisions only.

L'Aven and Belon rivers and approaches

Chart 2821 (see 1.18)

General information

4.35

1 L'Aven (4.42), also known as Rivière de Pont-Aven, and Rivière de Belon (4.46) meet at Pointe de Penquernéo (47°48′·2N, 3°43′·8W) and are entered between Beg-ar-Véchen (3 cables SW of Pointe de Penquernéo) and Pointe de Kerhermen (6 cables farther E).

The principal approach is from S passing W of Les Verrès (1¼ miles SSE of Pointe de Penquernéo) (4.38),. Small craft may also approach from SE passing NE of Les Verrès.

2 Both rivers are noted for their natural beauty: Rivière de Belon is also famous for its oysters. They are frequented by local fishing boats and, in summer, numerous small craft which prefer L'Aven as its bar is sheltered and rarely breaks, whereas that of Rivière de Belon is impassable in bad weather.

Port Manec'h (4.41) on the N side of Beg-ar-Véchen provides anchorage for vessels awaiting the tide or daylight to enter the rivers.

4.36

1 **Tidal streams** in the approaches are weak and do not exceed ½ kn.

4.37

1 **Landmarks**:

Port Manec'h Lighthouse (white and red tower, 10 m in height) (47°48′·0N, 3°44′·3W) on Beg-ar-Véchen.

Kerhermen Daymark (white, black stripe) (8 cables E).

Directions

4.38

1 **Southern approach.** Initial position approximately 47°45′N, 3°45′W.

A white sector (328°–050°) of Port Manec'h Light (47°48′·0N, 3°44′·3W) (4.37) leads 3 miles NNE to the vicinity of the entrance, passing (positions given from the light):

2 E of the reef extending 4 cables E of Île Verte (3 miles SW), which is covered by the unintensified white sector, thence:

W of Les Verrès (1¾ miles SE), drying rocks, marked by a beacon-tower (isolated danger), and Le Cochon (1¼ miles SE), an unmarked rock which dries 0·8 m, all covered by the red sector, and:

3 E of Les Cochons de Rospico (1¼ miles SW), a drying reef covered by the unintensified white sector, thence:

W of a 2·9 m patch (7 cables SE).

4 **Shoals** lying within the intensified white sector:

Ar Gazeg (2 miles SSW) (4.30).

Le Trépied (1¼ miles SSE), on which the sea seldom breaks.

4.39

1 **South-eastern approach.** Initial position 47°46′N, 3°40′W, 3 cables SW of Brigneau Landfall Buoy (safe water) (4.51).

A white sector (303°–311°) of Port Manec'h Light (47°48′·0N, 3°44′·3W) (4.37) leads 3 miles NW to the vicinity of the entrance, passing (positions given from the light):

2 SW of the rocky foreshore between Men-Toul (3 miles ESE) and Île Percée (1½ miles ESE), which is covered by the green sector, and:

NE of Les Verrès,(1¾ miles SE) (4.38), which is covered by a red sector, and:

Over a charted depth of 2·6 m (1¾ miles SE), thence:

Over a 2·9 m shoal patch (7 cables SE).

3 **Caution.** The SW extremity of Men-Toul, a drying reef (2¾ miles ESE of the light), lies on the 303° limit of the white sector.

4.40

1 **Entrance** to the rivers is 5 cables wide between the rocks extending less than 1 cable from Beg-ar-Véchen and the beacon (starboard hand) standing on the extremity of the reef extending ½ cable W from Pointe de Kerhermen.

Port Manec'h

4.41

1 **General information.** Port Manec'h Harbour (47°48′·1N, 3°44′·3W) lies 1 cable NW of Beg-ar-Véchen.

Anchorage in the pool between the harbour and the bar at the entrance to L'Aven river has been reported (1983) to shoal NW from a depth of 2·3 m off the mole. Moorings for fishing vessels and small craft, some for visitors, are laid in the pool.

2 **Berths:**

Môle, on SE side of small basin, extends 35 m NNW; reported (1983) to dry 1 m at its head, 2·5 m at its root.

Quay NW of small basin, extended NW by landing slip, overall length about 75 m; reported (1983) to dry 0·6 m alongside slip.

Repairs of all kinds to small craft by firm based near Port Manec'h.

Other facilities: yacht club.

Supplies: fresh water; provisions.

L'Aven

4.42

1 **Description.** L'Aven river leads generally N from its entrance in the vicinity of Port Manec'h, passing between the villages of Kerdruc and Rosbras (1¼ miles upriver) to Pont-Aven (3¾ miles upriver) (4.45) at the limit of navigation.

Controlling depths:

Drying 1 m as far as Rosbras.

Drying 1·9 m thence to Pont-Aven.

2 **Tidal streams:** times of commencement relative to HW Brest are:

Direction	*At entrance*	*At Rosbras*
In-going	–0615	–0520
Out-going	–0005	–0005

The maximum in-going and out-going rates are 2 kn and 3 kn respectively.

4.43

1 **Directions.** In the entrance a flat sand-bar that dries less than 1 m, whose position is reported to vary from time to time, extends E from the vicinity of Le Roc'h Beacon (port hand) (47°48′·3N, 3°44′·2W) that marks a drying reef. It has been reported (1985) that when the base of the beacon covers there is usually a depth of 1·8 m or more over the bar.

Thence the channel, which dries 1 m in places, but has a sandy bottom and is clear of rocks, leads NNW in

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midstream for l mile to the narrows between Kerdruc and Rosbras.

2 Beyond the narrows local knowledge is necessary as the channel shoals and becomes tortuous. It has been reported (1985) to be marked by buoys (lateral), but that the perches mark the limits of the oyster and mussel beds rather than the channel.

4.44

1 **Rosbras and Kerdruc.** The villages of Rosbras and Kerdruc (uncharted; 47°49′·2N, 3°44′·6W) on the E and W banks of L'Aven, respectively, lie opposite each other where the river narrows.

Anchorages. Numerous moorings are laid in two pools with depths of 2 m situated in:

Port l'Hermite, about 4 cables NNW of Le Roc'h Beacon (port hand).

Just below the narrows.

2 **Berths:**

Rosbras: quay 20 m long extended S by landing slip, dries 1·2 m alongside its W face.

Kerdruc: quay 30 m long whose E face dries 1·0 m bottom rock and sand; landing slip on S side of quay, from which a rocky ledge depth 1 m has been reported (1985) to extend 20 m E.

3 **Repairs:** mechanics available on call from Pont-Aven (4.45), Riec-sur-Belon (5 km NE) and Moëlan-sur-Mer (10 km E).

Supplies: fuel oil at Kerdruc; fresh water and provisions at both Rosbras and Kerdruc.

4.45

1 **Pont-Aven** berths (47°51′·4N, 3°44′·8W) are used by sand barges. The little town is famous for its school of painting founded by Paul Gaugin; a museum contains many of his works.

Berths: about 300 m of quayage on W bank dries alongside from 1·9 m at the S end to 2·9 m at the N end.

Repairs of all kinds to small craft.

Supplies: fresh water; provisions.

Rivière de Belon

4.46

1 **Description.** Rivière de Belon leads generally NE from its entrance off Pointe de Kerhermen (47°47′·9N, 3°43′·3W) to the anchorage (1¼ miles upriver) (4.48) between the villages of Belon and Lanriot (uncharted). Numerous oyster beds occupy the entire river except for the area where moorings are laid.

Local knowledge is necessary to keep in the deepest part of the channel.

2 **Tidal streams** in the river:

Interval from HW Brest	*Direction (begins)*
–0450	In-going
–0035	Out-going

The maximum in-going and out-going rates are 2 kn and 3 kn respectively.

4.47

1 **Directions.** From the river entrance an unmarked channel 40 m wide has been dredged (1987) to a depth of 0·6 m for a distance of 2 cables.

Thence the channel has been reported (1983) to lead to a position close N of the point on the SE side of the river situated 6 cables NNE of Pointe de Kerhermen, whence it keeps closer to the SE shore as far as the anchorage off Lanriot, passing:

2 SE of the extremity of the inner bar which extends nearly 2 cables SE from the NW shore 7 cables NNE of Pointe de Kerhermen.

4.48

1 **Belon and Lanriot.** The villages of Belon (47°48′·9N, 3°42′·2W) and Lanriot (1 cable S) (both uncharted) lie on opposite banks of Rivière de Belon.

Anchorage. A pool from 3 to 4 m deep, situated between the quays on opposite banks of the river, provides swinging room for several vessels 25 to 30 m in length and is sheltered from SW and W winds. It is advisable to veer about 25 m of cable owing to the strong tidal streams. There are numerous moorings for fishing boats and small craft farther upstream.

2 **Berths:**

Belon: quay 50 m long.

Lanriot: quay 65 m long with drying berths alongside, prolonged W by a landing slip 70 m long marked by two beacons (starboard hand) (uncharted).

3 **Repairs:** minor to wooden craft; mechanic on call from Moëlan-sur-Mer (6 km E); gridiron at Lanriot.

Supplies: fuel; fresh water; provisions.

Small craft harbours

General information

4.49

1 The three adjacent small harbours of Brigneau (47°47′N, 3°40′W) (4.50), Merrien (9 cables E) (4.54) and Doëlan (1¾ miles farther ESE) (4.59) are used only by fishing vessels and small craft: except for the outer part of Doëlan they all dry. Merrien provides no services, but it is the most sheltered of the three and can be entered when the other two harbours are inaccessible due to bad weather.

Brigneau

4.50

1 **Description.** Brigneau Harbour (47°47′N, 3°40′W), a drying inlet sheltered by a breakwater extending about 50 m ESE from the W entrance point is used only in summer by small craft and a few fishing boats.

Limiting conditions. With strong onshore winds the entrance is dangerous, and the harbour untenable due to the heavy swell which affects all the berths.

4.51

1 **Directions.** Initial position 47°46′·3N, 3°39′·6W, 3 cables ENE of Brigneau Landfall Buoy (safe water).

Leading marks:

Front mark: Brigneau Light-beacon (white column, red top; 7 m in height) (47°46′·9N, 3°40′·1W).

Rear mark: white metal framework panel (110 m NNW of front mark).

2 By day the alignment (331°) of these marks, which are difficult to distinguish at a distance and stand close E of a ruined factory, or at night the white sector (329°–339°) of Brigneau Light, lead NNW to the harbour entrance, passing (positions given from front mark):

3 WSW of Le Cochon (7 cables SE),(4.55) and covered by the green sector, thence:

ESE of the buoy (S cardinal) (4½ cables S) marking the SE extremity of Le Cochon de Beg-Morg, a rock drying 0·6 m which is covered by the red sector, thence:

4 Close WSW of Poull Krenn (2½ cables SE), a rock at the SW extremity of a drying ledge, marked by a beacon (starboard hand), thence:

Over a depth of 1·7 m (1 cable SSE).

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Useful mark:

Beacon (low white circular structure) (3½ cables E of Brigneau Light).

4.52

1 **Quay** on W side of harbour 2 cables N of breakwater; length about 150 m, reported (1983) to dry 1·7 m alongside; extended 30 m S by a landing slip that dries 0·7 m at its head.

Moorings: some for visitors.

4.53

1 **Repairs:** mechanics available on call from Moëlan-sur-Mer (5 km NE).

Other facilities: 6-tonne crane.

Supplies: fuel; fresh water; provisions.

Merrien

4.54

1 **Description.** Merrien Harbour (47°47′N, 3°39′W) occupies the lowest reach of Rivière de Merrien. It dries ½ to 1 m and is used by fishing boats and small craft able to take the ground.

The entrance is sheltered from W by the rocky flat extending S from the coast; the harbour is sheltered from the prevailing wind between SSW and NNW.

4.55

1 **Directions.** Initial position 47°45′·5N, 3°39′·0W, about 1¼ miles S of the entrance.

Leading marks:

Front mark: Merrien Light (white square tower, red top; 8 m in height) (47°47′·1N, 3°38′·9W).

Rear mark: gable at E end of grey stone farmhouse (farther N, uncharted).

2 By day the alignment (about 005°) of these marks, or at night the visible sector (004°–009°) of Merrien Light which is obscured on both sides by the entrance points of the river, lead to a position 1 cable S of the light, passing (positions given from the light):

W of Basse de Kersékol (1¼ miles S) on which the sea breaks in heavy weather, thence:

3 W of the beacon (starboard hand) (6 cables S) marking the drying reef extending about 1 cable WSW from Pointe de Kersécol, thence:

Close E of the SE extremity (5 cables S) of the Le Cochon, the rocky flat extending 3 cables S from the coast; the S edge is marked by a buoy (S cardinal) moored about 1 cable farther WSW, thence:

4 Close W of the beacon (starboard hand) (2½ cables S) standing on the extremity of the landing place on the E entrance point of the river.

From a position about 1 cable S of Merrien Light, the river leads NE to the anchorage. The deepest part of the channel is reported to lie closer to the NW bank as far as the landing place on that bank.

4.56

1 **Useful marks** (positions given from Merrien Light):

Beacon (5 cables WSW) (4.51); helps in locating the entrance which is difficult to distinguish from outside the visible sector of Merrien Light.

Beacon (starboard hand) (8 cables SSE) marking Roche Bali.

4.57

1 **Anchorage** (1 cable ESE of Merrien Light), bottom sand and weed; contains a pool where small craft are reported to remain afloat at neaps. Vessels moor fore and aft: some visitors moorings. Tidal stream is reported to be weak. There are mussel beds outside this area.

Quay (1½ cables ESE of Merrien Light) on SE bank; length 30 m, reported (1983) to dry 1·2 m alongside; prolonged 20 m NE by a landing slip.

4.58

1 **Repairs:** mechanics available on call from Moëlan-sur-Mer (4 km NNE).

Other facilities: landing (1 cable SE of Merrien Light) on NW shore; reported (1983) to dry 1·0 m alongside.

Supplies: fresh water at quay.

Doëlan

4.59

1 **Description.** Doëlan harbour (47°46′·5N, 3°36′·5W), partially sheltered by a breakwater, extends 6 cables NNE and has an average width of 70 m.

Limiting conditions. The entrance can be dangerous in strong SW winds. In unsettled weather the swell is felt in the harbour and there is a risk of bumping heavily on the hard bottom in some berths. The harbour dries from 0 m in the vicinity of the front leading light to 2 m at the head of the harbour.

4.60

1 **Directions.** Initial position about 5 cables SSW of the harbour entrance.

Leading lights and mark:

Front: Doëlan Front Leading Light (white tower, green band and top; 15 m in height) (47°46′·3N, 3°36′·4W).

Middle: Doëlan Rear Leading Light (white tower, red band and top; 14 m in height) (326 m NNE of front light).

Rear: Pencleu Daymark (white gable end, black stripe) (5 cables NNE of rear leading light).

2 The alignment (014°) of these lights and mark leads into the harbour, passing (positions given from front light):

E of Basse La Croix (4 cables SW) which dries 1·3 m, and is marked by a beacon (port hand), thence:

W of Le Four (2 cables S), a rock marked by a light-buoy (starboard hand), thence:

Close E of the head of Môle-Abri de la Grande-Vache (1 cable SSW), the breakwater.

4.61

1 **Moorings:** numerous; some near the entrance in depths from 2 to 4 m are provided with a heavy chain and stern rope; others, farther N, dry. There are 20 berths for visiting small craft.

2 **Alongside** berths generally dry except for La Petite Vache (½ cable SSW of front leading light) which has depths of 1·0 to 1·3 m alongside.

4.62

1 **Repairs** of all kinds to small craft.

Supplies: fuel oil from fishermen's co-operative depot.

Le Laïta estuary and approaches

General information

4.63

1 **La Laïta,** also known as Rivière de Quimperlé, is approached from Anse du Pouldu roads (47°45′N, 3°33′W) (4.70) and its estuary is entered through a shallow channel used only by small craft from 2 hours after LW.

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Le Pouldu, the small town lying 6 cables NW of the entrance gets its name from the roadstead. The name is also used for the small craft anchorages (4.72) in the river estuary.

2 **Bas-Pouldu en Guidel** Marina (47°46′·4N, 3°31′·6W) (4.71) lies on the E shore of the estuary 7 cables NNE of the entrance.

4.64

1 **Topography.** La Laïta entrance may be identified by the town of Le Pouldu and the headland on its W side. The E shore of the entrance is low and sandy.

4.65

1 **Vertical clearance** At Beg-Nenez (2 miles NNE of the entrance) a fixed road bridge with reported vertical clearance of only 4 m, spans the river.

2 **Tidal streams** in the entrance are very strong and may reach 6 kn at half tide.

Caution. Dangerous breakers form at the entrance with onshore winds or if there is any swell in the bay.

4.66

1 **Local knowledge** is essential as the bar and sand banks in the estuary are unstable. At HW there may be no indication where the channel, which changes position, lies.

4.67

1 **Landmarks:**

White round tower (47°45′·8N, 3°32′·2W) with house attached, standing on the headland on W side of entrance, as shown on the French chart.

Keranquernat water tower (4.28).

Kerbigot water tower (4.28).

Directions

4.68

1 **Initial position** 47°45′·4N, 3°32′·6W.

Leading marks:

Front mark: Kergoranton Beacon-tower (port hand) (47°45′·8N, 3°32′·1W).

Rear mark: Saint-Julien Beacon (port hand) (3 cables NE of front mark).

2 The alignment (about 035°) of these marks leads NE in the approach to a position about 1 cable SW of the front mark, passing:

NW of Yann Zu (1 cable SE of front mark). a group of unmarked rocks which dry 1·3 m.

4.69

1 The entrance channel follows the W shore of the estuary and in 1983 was reported to pass (positions given from Kerbigot water tower (4.28)):

E of Korgoranton Beacon-tower (port hand) (4.68) and of Men-Du Beacon (port hand) (1¼ miles SW), which mark the rocky foreshore of the headland on which the white round tower stands, thence:

In a curve close to the foreshore beneath the cliffs on the W bank, where there are rocky patches, and:

2 Around the extremity of the drying sand spit (1 mile SW) that extends WSW from the E shore to the vicinity of Men-Du Beacon (port hand), thence:

Clear of a wreck (9 cables SW), position doubtful, which dries, thence:

Close SE of Saint-Julien Beacon (port hand) which marks a ledge, thence:

W of the breakwater head (6 cables WSW) of the marina (4.71) marked by a beacon (starboard hand), thence if required:

To the quays at Quimperlé 5 miles farther upstream. The channel is reported to be poorly marked and difficult to navigate.

3 **Caution.** At times the current cuts a channel through the W end of the sand spit on a line between Men-Du and Saint-Julien Beacons, leaving a drying patch between it and the main channel following the W shore which may become quite narrow in these circumstances.

Anse du Pouldu

4.70

1 **Roadstead** (47°45′N, 3°33′W); sheltered from E but exposed to all other directions; bottom sand and mud good holding except in SE part of the bay where the bottom is sand and rock.

Bas-Pouldu en Guidel Marina

4.71

1 **General information.** The small marina (7 cables NNE of Korgoranton Beacon-tower) provides about 60 berths at two pontoons extending W from the E shore of the estuary and protected on the S side by a breakwater. Depth off the ends of the pontoons reported (1991) to be 1 m.

Port services: facilities reported (1983) to be limited and available only in summer.

Small craft anchorages

4.72

1 **Anchorages:** numerous moorings in the vicinity of the marina (4.71); sheltered anchorages in the pool near W bank upstream of the moorings and in several deeper pools upriver as far as the bridge (1½ miles N of the marina) (4.63).

Facilities: landing stage connected to W bank (about 6 cables NNE of Korgoranton Beacon-tower) depth alongside 3·5 to 4·0 m at MHW and 1·5 m at MLW.

Supplies: provisions at Le Pouldu (1 km W of landing stage).

LES COUREAUX DE GROIX

General information

Chart 2821

Description

4.73

1 **Les Coureaux de Groix** (47°40′N, 3°27′W), the channel between Île de Groix and the mainland N, has a navigable width of 2 miles. Its shores are rocky but the fairway is clear of dangers to vessels capable of entering Lorient harbour (4.113), whose approaches lead off from the NE end of the channel.

Port-Tudy (47°39′N, 3°27′W) (4.87), the only secure harbour on Île de Groix, is a favourite port of call for small craft on passage through the area.

Pilotage

4.74

1 Les Coureaux de Groix lies within the Lorient Pilotage District, but the normal boarding places are at the entrances to the channels leading to Lorient; see 4.119 for further details.

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Traffic regulations

4.75

1 **Approach channel:** see 4.24 for details.

Prohibited anchorage. Anchoring, trawling and dredging are prohibited within the areas, shown on the chart, surrounding Pointe du Talut (47°42′N, 3°27′W) and extending SSW to Île de Groix, due to submarine cables laid between the mainland and the island and to a sewer outfall extending SW from Pointe de Kerroc'h (5 cables NW of Pointe du Talut). The French Sailing Directions state that vessels anchoring in this area due to *force majeure* must slip their cable after attaching a marker buoy to it.

Groix-Kerroc'h Measured Distance

4.76

1 A measured distance which is used by small vessels consists of:

SE limit; the alignment (227°) of:

Front mark: Port-Mélite Beacon (white triangular topmark) (47°38′·5N, 3°25′·5W).

Rear mark: Petit Château Beacon (black triangular topmark) (3 cables SW of front mark).

2 NW limit. the alignment (228°) of:

Front mark: Port-Lay Beacon (white triangular topmark) (47°38′·8N, 3°27′·4W).

Rear mark: Menhir Beacon (similar topmark) (4½ cables SW of front mark).

Distance: 1878 m.

Running track; the alignment (322°) of:

3 Front mark: Kerroc'h Beacon (black diamond shaped topmark, white stripe) (47°42′·0N, 3°27′·5W) (uncharted) standing close S of Kerroc'h Light (4.81).

Rear mark: Pointe de Courégan Beacon (black and white) (9 cables NW of front mark).

Lorient Pilots (4.119) are qualified to take vessels over the measured distance.

Spoil ground

4.77

1 A spoil ground (47°40′N, 3°25′W), whose limits are shown on the chart, lies in the middle of Les Coureaux de Groix 2½ cables NW of the charted waiting anchorage (4.86).

Dumping ground

4.78

1 **Explosives** are dumped in the area (47°38′N, 3°23′W), E of île de Groix shown on the chart.

Rescue

4.79

1 **Lifeboat station** (1.77): Port-Tudy (47°39′N, 3°27′W) (4.87).

Coastguard station (1.75): Beg Melen (47°39′·2N, 3°30′·0W) (4.31).

Tidal streams

4.80

1 The tidal streams in the centre of Les Coureaux de Groix are weak and rotary clockwise; see information on the chart.

Strong winds have a very great effect on the rate and direction of the tidal streams; this may account for old reports of much stronger rates in Les Coureaux de Groix.

Principal marks

4.81

1 **Landmarks** on Île de Groix:

Pen Men Lighthouse (47°38′·9N, 3°30′·5W) (4.10).

Crehal water tower (47°38′·0N, 3°27′·4W) (4.10).

Port-Tudy breakwaters (8 cables NE of Crehal water tower).

2 On the mainland:

Kerroc'h Light (white truncated tower, red top; 8 m in height) (47°42′N, 3°28′W) with Kerroc'h Beacon (4.76) close S.

Larmor-Plage church spire (47°42′·4N, 3°22′·9W) (4.157) (Chart 304).

Spire (47°42′·5N, 3°21′·3W) of the NW-most of the two churches charted at Port-Louis.

3 **Major light:**

Pen Men Light-as above.

Directions

(continued from 4.31)

4.82

1 **Initial position** 47°41′N, 3°30′W.

Les Coureaux de Groix is entered between:

Pen Men (47°39′N, 3°31′W), the NW point of Île de Groix, which is fringed by reefs extending 1½ cables offshore in places, and:

Les Sœurs (3½ miles NNE of Pen Men), a group of drying rocks, lying on the edge of foul ground extending 6 cables S and SW from Pointe de Courégan.

2 **Clearing bearing.** A sector limit (096½°) of the white sector of Kerroc'h Light (47°42′N, 3°28′W) (4.81) clears close S of Les Sœurs which are covered by a red sector.

4.83

1 The deepest part of the channel through Les Coureaux de Groix leads 4 miles ESE then 2 miles E, passing (positions given from Port-Tudy N Breakwater head (47°39′N, 3°26′W)):

SSW of Pointe de Kerroc'h and Pointe du Talut (3 miles N) which has an elevation of 20 m and is surmounted by a ruined fort and a stone pillar, and:

2 NNE of Basse des Bretons, an area of foul ground with a least depth of 13·5 m over Basse du Grognon (2 miles NW), and a dangerous wreck, thence:

NNE of Speerbrecker Buoy (E cardinal) (5 cables NE) marking a wreck (2 cables farther W), thence:

NNE of Basse Mélite Buoy (N cardinal) (8 cables E) marking the N extremity of Basse Mélite, and:

3 SSW of Banc des Truies (2½ miles NE) marked at its W end by L.Banc des Truies Light-buoy (W cardinal), thence:

N of the shoal with depths of 10 m or less over it that extends 2 miles E from Île de Groix, and:

S of Basse de Gâvres (4¼ miles ENE).

4 **Clearing bearings.** At night a sector limit (302°) of the white sector of Kerroc'h Light (47°42′N, 3°28′W) (4.81), clears close SSW of Banc des Truies which is covered by a red sector of the light.

4.84

1 **Useful marks** on Île de Groix:

Beg Melen Coastguard Station (47°39′·2N, 3°30′·0W) (4.31) and radio mast (red lights).

Port-Tudy Môle Nord Head Light (47°38′·8N, 3°26′·7W) (4.91).

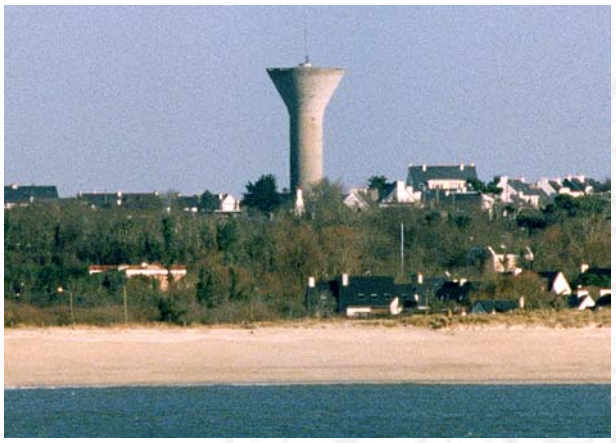
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Pointe de la Croix Light (white pedestal, red lantern; 4 m in height) (47°38′·1N, 3°24′·9W).

2 On the mainland:

Keradehuën radio tower (elevation 117 m; red aircraft obstruction lights) (47°43′·6N, 3°24′·2W).

Kervaugam water tower (8 cables ESE of the radio tower), which also exhibits red aircraft obstruction lights.



Water Tower at Kervaugam from SE (4.84)

(Original dated 1996)

Les Trois Pierres Light (47°41′·6N, 3°22′·4W) (4.134).

Porh-Gâvres chapel (bell-tower) (8 cables E of Les Trois Pierres Light) (chart 304).

(Directions continue for Les Coureaux de Groix to Coureau de Belle-Île at 4.203.

Directions for Lorient approaches are given at 4.135)

Waiting anchorages

4.85

1 Vessels may anchor anywhere in Les Coureaux de Groix outside the prohibited anchorage area (4.75) and clear of Basse des Bretons (4.82), the spoil ground (4.77) and the wrecks shown on the chart. The bottom of sand and shells provides good holding and the area is sheltered from S and SW winds.

4.86

1 Vessels awaiting favourable conditions or the pilot to enter Lorient anchor in the waiting area shown on the chart, depth about 15–20 m, bottom sand good holding; or, in bad weather, closer to Île de Groix SE of the alignment (218°) of the two lights at Port-Tudy (47°39′N, 3°27′W) (4.91).

Mariners are advised to keep clear of the obstruction (47°40′·0N, 3°25′·4E)

Port-Tudy

Chart 2821 (see 1.18)

General information

4.87

1 **Description.** Port-Tudy (47°39′N, 3°27′W), the principal harbour of Île de Groix, is used by ferries, fishing vessels and small craft.

Limiting conditions

4.88

1 **Deepest berths:** found in the Avant-Port and Bassin à Flot, see 4.93 and 4.95 for details.

Tidal levels. See information in *Admiralty Tide Tables*. Mean spring range about 4·2 m; mean neap range about 2·0 m.

Harbour

4.89

1 **General layout**. The entrance between Môle Nord, the breakwater, and the head of Môle Nord-Est faces ENE. The harbour is divided into three sections:

Avant-Port, the N part, contains: ferry berth on S side, at Môle Central; lifeboat station in the NW corner; mooring buoys for fishing vessels and small craft.

2 Bassin de l'Est, the SE part, provides: berths for fishing vessels at Môle Nord-Est; drying moorings for small craft in the S part.

Bassin à Flot, the wet dock in the SW corner, is a small craft harbour.

Directions

4.90

1 **North-western approach** is clear outside a distance of 2 cables from the shore except for a white mooring buoy (about 5 cables NW of the harbour entrance) belonging to the French Navy.

4.91

1 **North-eastern approach.**

Leading marks:

Front: Môle Nord Light (white tower, green top; 10 m in height) (47°38′·8N, 3°26′·7W).

Rear: Môle Nord-Est Light (white round tower, red top; 10 m in height) (about 110 m SW of front mark).

The alignment (218°) of these marks leads to the vicinity of the front mark, passing (positions given from front mark):



Approach to Port Tudy (4.87)

(Original dated 1996)

(Photograph – Mr T S Plews, Yacht "Du Bleiz")

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2 Close SE of Speerbrecker Buoy (E cardinal) (5 cables NE) (4.83), thence:
NW of the unmarked rock (depth 0·8 m) (3½ cables NE) at the N extremity of the coastal reef, thence:
NW of the rock (drying 4·4 m) (2 cables E) marked by a beacon (port hand), thence:
NW of an unmarked 1·4 m patch (1 cable E).

3 **Caution.** When approaching at night note that:
The buoys and beacon are unlit.
Môle Nord-Est Light in obscured by Môle Nord Light when they are in alignment.
Dangers SE of the alignment lie outside the 226° limit of the visible sector of Môle Est Light.

4.92

1 **Entrance.** Port-Tudy is entered by rounding the head of Môle Nord, then proceeding parallel to it, passing:
NW of an unmarked rock (drying 0·8 m) (½ cable SE of Môle Nord Light), thence:
Midway between the head of Môle Nord-Est and the S side of Môle Nord, where the entrance channel is 4 m deep but only 20 m wide between the rocks encroaching on the channel from their foundations.

Basins and berths

4.93

1 **Avant-Port** has depths to 2 to 3 m E of a line drawn from the head of the lifeboat slip to the elbow in Môle Central. Cale Guyot, the slip in the end of Môle Central, is reserved for the use of ferries. Single mooring buoys and trots are laid for the use of fishing vessels and small craft.
Anchoring is prohibited:
N of the moorings, in the approach to the lifeboat station slipway.
E of the moorings, to allow room for ferries to turn.
The basin is exposed to NE, the direction of the *Vent Solaire* (1.135).

4.94

1 **Bassin de l'Est.** Berths at quay on Môle Nord-Est, depth alongside 1 to 2·5 m, are reserved for fishing vessels. Berths at Cale Adossée, the slip on the S side of Môle Central, depth 1·5 to 2 m alongside, may be used for short periods by any type of craft. Trots on the S side of the channel to Bassin à Flot have been reported (1983) to dry 0 m.

4.95

1 **Bassin à Flot** provides berths for 200 small craft at pontoons. The entrance 7 m wide, sill 1 m above chart datum, is reported to be opened between 0600 and 2200 from about 2 hours before to 2 hours after HW. Water level is maintained at 3·5 m above chart datum at which level there has been reported (1983) to be at least 3 m of water at all berths.

Port services

4.96

1 **Repairs:** gridiron at root of Môle Nord-Est; marine engineers available.
Other facilities: custom house; yacht club; small crane.
Supplies: fuel at Môle Nord-Est; fresh water at pontoons in Bassin à Flot; provisions at Le Bourg (1 km SW).
Communications: frequent ferry service to Avant-Port de Commerce (4.179) at Lorient.

Small craft anchorages, boat harbour

Anse de Kerroc'h

4.97

1 **General information.** Anse de Kerroc'h anchorage (47°42′·2N, 3°27′·5W) is sheltered by a breakwater extending about ½ cable NNW from Pointe de Kerroc'h.
Directions. Initial position 47°42′N, 3°28′W, about 4 cables W of Kerroc'h Light (4.81). A passage leads N, passing (positions given from the light):

2 E of the rock (drying 6 m) (5 cables WNW) at the SE extremity of Les Sœurs (4.82), and:
W of Les Loups, a drying reef extending 2 cables NW from Pointe de Kerroc'h, marked by a beacon (W cardinal) (2½ cables NW) standing ¾ cable ESE of its NW extremity.

The passage then rounds the NW extremity of the drying reef and leads E into Anse de Kerroc'h.

3 **Clearing bearing.** It has been reported (1983) that the line of bearing 084° of the breakwater head, open S of Les Loups Beacon, clears S of Les Sœurs.
Anchorage. It has been reported (1974) that anchorage may be obtained midway between the breakwater head and a line of fishing boat moorings, depth 4 m, bottom sand, sheltered from SW.
Facilities: landing slip (1½ cables ENE of the breakwater).

Anse de Perello

4.98

1 **General information.** Anse de Perello (47°42′·0N, 3°26′·5W), a small bay with a shelving sandy bottom, is partly sheltered by drying reefs that extend nearly 1 cable SE from the point on its SW side and also from the head of the landing slip on its NE side.
Directions. Initial position 47°41′·5N, 3°26′·4W, 9 cables W of Grasu Beacon-tower (S cardinal) (4.100).

2 **Leading marks:**
Front mark: Quay (1 cable NE of point on SW side of Anse de Perello).
Rear mark: Large warehouse (½ cable N of front mark).

3 The alignment (353°) of these uncharted marks has been reported (1983) to lead into Anse de Perello, passing:
About 50 m E of a rock (drying 2·2 m) (1½ cables S of the quay) at the extremity of the reef extending SE from the point on the SW side of the bay.

Anse de Stole and Loméner

4.99

1 **General information.** Anse de Stole (47°42′·2N, 3°25′·5W), sheltered from NW to NE, is used by numerous small craft in summer and provides a convenient anchorage for small craft on passage through Les Coureaux de Groix. It is approached from S and entered between the head of a breakwater extending 1 cable SE from a point on the W side of the bay and a drying coastal reef that extends 1½ cables from the E shore of the bay. A prominent building (uncharted) stands 1 cables N of the root of the breakwater. The small holiday resort of Loméner lies on the NW shore of the bay.

4.100

1 **Directions.** Initial position 47°41′·5N, 3°25′·4W, 2 cables W of Grasu Beacon-tower (S cardinal) standing on the SW edge of a drying reef.

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Leading marks and direction light:
Front mark: Anse de Stole Direction Light (white tower, red top, 9 m in height) (47°42′·4N, 3°25′·5W).
Rear mark: Ploemeur church spire (2 miles N of front mark; uncharted).

2 By day the alignment (357¼°) of these marks and at night the white sector (355¼°–359¼°) of the direction light lead 5 cables N to the anchorage, passing:
E of Les Trois Pierres (4 cables W of Grasu Beacon-tower), an unmarked underwater reef covered by the red sector, thence:

3 E of the beacon (S cardinal) marking Basse des Royaux, a dangerous rock, which lies 1 cable S of the breakwater head, and:
W of the reef extending 2 cables SW of the E entrance point of Anse de Stole, covered by the green sector, thence:
E of Roliou Beacon (E cardinal) marking the edge of the rocky flat that extends nearly ½ cable S from the breakwater head.

4.101

1 **Anchorages.** Numerous moorings, administered by the Mairie at Ploemeur, are laid in charted depths of 3·4 m or less between the reefs on the E and W sides of Anse de Stole. Anchorage may be obtained S of the moorings, bottom sand and rock.

2 Moorings are also laid in the area between the breakwater and the reef on the W side of Anse de Stole whose SE extremity is marked by a beacon (special) (¾ cable NNE of the breakwater head). Depths decrease from 2 m off the breakwater head to drying 0 m off the inner spur formed by the old breakwater.

3 **Facilities:** two landing slips N of the old breakwater that dry alongside, the S-most 1 m; the N-most 2·2 m.
Supplies: fresh water; provisions.

Port-Lay

4.102

1 **General information.** Port-Lay (47°38′·8N, 3°27′·5W), 5 cables W of Port-Tudy, is a small drying boat harbour principally used by a large residential sailing school. It is sometimes untenable when a swell from the W is running outside. The entrance, 7 m wide, faces NE and the harbour is exposed to winds from that direction.

4.103

1 **Directions.** Initial position close E of the S-most of a pair of mooring buoys (2 cables N of Port-Lay) (4.90): the entrance may be approached directly.

Clearing marks:
Front mark: Port-Lay Breakwater head.
Rear mark: House (1 cable SW of front mark) standing at W corner of the harbour.

2 It has been reported (1983) that the alignment (215°) of the front mark with the left-hand edge of the house passes close NW of the following dangers (positions given from front mark):
Rock (depth 0·6 m) (1½ cables NE).
Rock (drying 0·5 m) (½ cable NE).

4.104

1 **Anchorage:** several mooring buoys belonging to the sailing school are laid off the harbour entrance.
Facilities: landing steps on the E side of the harbour close within the entrance reported (1983) to dry 1·5 m alongside.
Supplies: provisions at Le Bourg (1 km SE).

LORIENT AND APPROACHES

General information

Chart 304

Position and function

4.105

1 **Lorient** (47°45′N, 3°21′W), population about 59 300, was originally developed as the base of the French East India Company from which it takes its name. It was largely rebuilt after World War II and now combines the functions of:
Naval base.
Principal fishing port of Brittany.
Commercial port.
Major yachting centre.

Topography

4.106

1 Both shores of the approaches are low-lying and fringed with reefs. Larmor-Plage (47°42′ N, 3°23′ W), a popular summer resort, occupies the NW shore. Port-Louis (47°42′N, 3°21′W), a fortified seventeenth century town called Blavet until it was renamed by King Louis XIII, stands on the E side of the entrance to Rade de Lorient: it is separated S from Presqu'île de Gâvres by the narrow entrance to Baie de Locmalo.



Approach to Port-Lay (4.102)
(Original dated 1997)
(Photograph – Mr T S Plews, Yacht "Du Bleiz")

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Port limits

4.107

1 **Rade de Lorient.** Port limits are:

Outer: a line drawn from La Citadelle de Port-Louis (47°42′·6N, 3°21′·8W) (4.134) to Pointe de Kernével (4 cables NNW).

Inner: Limit of entry restricted area, shown on the chart, passing 1 cable S of Pointe de l'Espérance (47°44′·5N, 3°20′·6W) to the N entrance point of Avant-Port de Commerce (3 cables WNW).

4.108

1 **Port Militaire,** the naval base, comprises:

Arsenal Principal, the dockyard, that extends N from the inner limit of Rade de Lorient to the railway bridge (47°45′·4N, 3°21′·2W).

Base Sous-marine de Kéroman, the submarine base that extends 5½ cables NW from Pointe de Kéroman (47°43′·6N, 3°22′·0W). Its SW limit lies 1 cable offshore as shown on the chart.

Approach and entry

4.109

1 Passe de l'Ouest and Passe du Sud are alternative outer approach routes which lead ENE and N respectively from Les Coureaux de Groix to their junction NNE of Les Trois Pierres (47°41′·5N, 3°22′·5W): Passe de l'Ouest is the deeper channel, see 4.112 for controlling depths.

2 Thence Passage de la Citadelle leads NNE to the entrance to Rade de Lorient through the narrows WNW of La Citadele de Port-Louis (1¼ miles NNE of Les Trois Pierres), where a secondary channel for the use of small vessels has been dredged WNW of the dangers on that side of the main channel.

Traffic

4.110

1 In 2003 the port was used by 210 merchant vessels, totalling 3 731 450 dwt.

Port Authorities

4.111

1 **Naval:** Le Commandant de la Marine.

Commercial: Port du Lorient, 3 Boulevard de la Rade, F–56100 Lorient.

Limiting conditions

Controlling depths

4.112

1 **Fairway.** The controlling depth, in the channels dredged through Passe de l'Ouest (4.135) and Rade de Port-Louis (4.144), is 8·5 m.

Passe du Sud. The controlling depth, over the bar extending ENE from Les Trois Pierres (4.142), is 4·5 m.

Maximum length and draught

4.113

1 **Entry.** Maximum permitted dimensions for entry to Rade de Lorient:

Length: 250 m.

Draught: 12·5 m at mean spring tides, 11·3 m at mean neap tides, subject to a reduction of from 0·5 to 1·5 m to allow for swell in Passe de l'Ouest.

2 **Berths.** Maximum draught at MLWS at the deepest berths in the commercial port:

Quai de Kergroise (4.163) 10·0 m.

Appontement Pétrolier (4.150): 9·0 m.

Tidal levels

4.114

1 See information in *Admiralty Tide Tables*.

Port-Louis (47°42′N, 3°21′W): mean spring range about 4·2 m; mean neap range about 2·2 m.

Lorient (47°45′N, 3°21′W): mean spring range about 4·3 m; mean neap range about 2·2 m.

Visibility

4.115

1 When the visibility in the passes is less than 700 m it is inadvisable for vessels of about 100 m or more in length to enter or leave harbour.

Arrival information

Port radio

4.116

1 **Vigie de Port-Louis** (47°42′·7N, 3°21′·9W) (4.134), the signal station at La Citadelle de Port-Louis, operates the port radio station. For further details see *Admiralty List of Radio Signals Volume 6(2)*.

Notice of ETA

4.117

1 **Advising ETA.** ETA in Les Coureaux de Groix (4.73) must be reported 6 hours in advance to Lorient Pilot Office. Vessels arriving from ports between and including Bénodet (47°52′N, 4°07′W) (3.112) and Donges (47°18′N, 2°04′W) (6.146) should report their ETA on departure from those ports.

4.118

1 **Times of entry** and departure are dictated by the tidal streams in Passage de la Citadelle (47°42′·7N, 3°22′·0W) (4.139).

It is recommended that the average vessel passes through the narrows at HW slack which occurs 20 minutes before HW Port-Louis under normal conditions and from 30 to 45 minutes before HW Port-Louis when the rivers are in spate.

2 When the range of the tide is average or above average the pilot may advise waiting for slack water depending on the vessels power and manoeuvrability.

Small vessels may enter and depart at any time at neaps. When the range of the tide is more than average the preferred times are from 1½ hours before to 1½ hours after either HW or LW Port-Louis.

Pilotage

4.119

1 **Pilotage is compulsory** for merchant vessels.

Exempt pilotage:

All vessels less than 60 m length overall.

Certain vessels less than 150 gt, see *Admiralty List of Radio Signals Volume 6(2)* for details.

2 **Requests** for Pilots. In addition to sending the statutory ETA report (4.117), it is recommended that:

Vessels intending to arrive between 0100 and 0800 report their ETA to Lorient Pilot Office before 1800 the previous day.

3 Contact be established on VHF channel 16, 1 hour before arrival in Les Coureaux de Groix, with Pilote Lorient direct, otherwise with Vigie Port-Louis or Beg Melen Signal Stations. For further details see *Admiralty List of Radio Signals Volume 6(2)*.

4 **Availability.** Pilots are available at all times. the pilot-boat leaves harbour 1 hour before a vessel is expected. The pilot office at Kergroise (47°44′·0N, 3°21′·4W) keeps

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radio watch during working hours and from 1 hour before a vessel is expected at other times.

Boarding places, shown on chart 2821, are located:

For Passe de l'Ouest: in the middle of Les Coureaux de Groix (47°40′N, 3°26′W).

For Passe du Sud: at the E entrance to Les Coureaux de Groix (47°39′N, 3°21′W).

5 Boarding ladders should be positioned about 1 m above the waterline.

If the weather is too bad for boarding, vessels should proceed to the waiting anchorage (4.86).

Tugs

4.120

1 Several tugs, some commercial, others naval, are available and may be ordered through Ship's Agents. Tugs are used by larger vessels for berthing, unberthing and swinging.

Traffic regulations

4.121

1 Pilots provide details of the regulations that masters of vessels need to know before berthing; the following paragraphs give an abbreviated summary of the traffic regulations.

4.122

1 **Navigation in the Passes de Lorient.** The channels starting at A2 Light-buoy (port hand) (47°41′N, 3°25′W) (4.135) at the entrance to Passe de l'Ouest, and Bastresses Sud Light-buoy (starboard hand) (47°40′·8N, 3°22′·0W) (4.142) at the entrance to Passe du Sud, are deemed to be narrow channels or fairways within the meaning of Rule 9 of *International Regulations for Preventing Collisions at Sea, 1972*.

2 Local regulations include the following rules concerning navigation in these channels:

Permission to proceed shall be obtained from Vigie de Port-Louis Signal Station by any vessel more than 20 m length, which can safely navigate only within the narrow channel, before she enters the access channel.

3 Port traffic signals (4.129) prohibiting either entry or departure may be requested for the safe passage of vessels whose length or draught is more than 100 m or 6 m respectively or for vessels under tow if the overall length of the tug and tow is 90 m or more. Other vessels shall not pass these vessels between La Potée de Beurre Beacon (starboard hand) (47°42′·2N, 3°22′·0W) (4.139) and No 2 Light-buoy (port hand) (47°43′·0N, 3°21′·9W).

4 All vessels for whom port traffic signals have been requested shall exhibit the lights and shapes prescribed in *International Regulations for Preventing Collisions at Sea, 1972* Rule 27b, if engaged in towing, or Rule 28 if constrained by their draught. These vessels shall not enter the narrow channels unless they have the permission of Vigie de Port-Louis. Two such vessels may pass each other, if their dimensions and manoeuvrability permit, except between La Potée de Beurre Beacon and No 2 Light-buoy, when the vessel proceeding with the tidal stream has priority and the other reduces speed to avoid passing in the prescribed area. At slack water the vessel that is the more handicapped by her characteristics and the weather conditions has priority; the two vessels shall maintain VHF radio contact with each other and the signal station.

5 Vessels without VHF radio, vessels less than 20 m in length and sailing vessels shall not enter the narrow channels previously defined until they are certain that no traffic signal prohibiting them so doing is exhibited. If during their passage a traffic signal prohibiting entry or departure is requested by another vessel they shall: navigate along the channel limit, or outside it if their draught allows; manoeuvre in ample time to avoid impeding the vessel having right of way; draw to one side if instructed by the signal station.

6 Vessels less than 20 m in length and sailing vessels shall: keep to the starboard side of the narrow channel in accordance with Rule 9 of *International Regulations for Preventing Collisions of Sea, 1972,* and especially keep to the correct side of the alignment (016½°) of Passage de la Citadelle Leading Lights (4.139) when between A7 Light-buoy (starboard hand) (47°41′·7N, 3°22′·6W) (4.135) and No 1 Buoy (starboard hand) (47°42′·8N, 3°21′·8W) (4.139) whether or not a vessel having right of way is present; if equipped with VHF radio, keep constant watch on channel 16 and comply with the signal station's instructions.

7 The statutory lights shall be exhibited by every vessel (Rules 20b and 20c of *International Regulations for Preventing Collisions at Sea, 1972).*

8 Sound signals that conform with those prescribed in Rules 34, 35a and 35b of *International Regulations for Preventing Collisions at Sea, 1972* shall be used; in particular the warning signal is that prescribed for a vessel making way through the water (Rule 35a) and the signal 'I am stopped and making no way through the water' is that prescribed in Rule 35b.

4.123

1 **Speed limits:**

13 kn between A6 Light-buoy (port hand) (47°41′·5N, 3°23′·3W) (4.135) and La Petite Jument Light-beacon (port hand) (47°42′·6N, 3°22′·0W) (4.139).

2 10 kn between La Petite Jument Light-beacon (port hand) (4.139) and Port-Militaire (4.108). In this section vessels must not cause a wash especially when passing small craft berths at Kernével, Kergroise and Avant-Port de Commerce and vessels anchored in the roadsteads with lighters alongside.

4.124

1 **Prohibited anchorage.** Anchoring, fishing and waiting are prohibited in the approach channels within the area shown on the chart. Vessels may however use an anchor when turning round off the berths at Kergroise.

Securing to naval buoys, dolphins and service craft in the harbour and the approaches is forbidden.

Regulations concerning entry

4.125

1 **Port-Militaire.** Entry to L'Arsenal Principal (4.148) and La Base Sous-marine de Kéroman (4.148) is forbidden to all non-military ships and boats unless authorised by Le Major Général du Port de Lorient. Warships more than 130 m in length and authorised merchant vessels must

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obtain prior permission from Le Commandant de la Marine before entering Lorient at night.

2 **Vessels carrying hydrocarbons or dangerous cargo.** Vessels carrying more than 500 cubic metres of hydrocarbons, or dangerous cargo in bulk, must:

Report their intention to enter, shift berth or sail, 6 hours in advance, to Marine Lorient and Capitainerie du Port de Lorient, specifying the types of product carried and any damage or defect affecting their ability to manoeuvre.

3 Be attended by a tug if they are 125 m or more in length and not equipped with a bow thruster, or 140 m or more in length if so equipped.

Request unimpeded passage through the channel, from Vigie de Port-Louis Signal Station (4.116), giving their time of passing Les Trois Pierres (47°41′·5N, 3°22′·5W) on arrival, or Môle Central (47°43′·7N, 3°21′·8W) on departure.

4 Enter Lorient by the main channel through Passe de l'Ouest (4.135) and pass W of Île Saint-Michel (4.145).

Normally these vessels are authorised to enter Rade de Lorient from 2 hours before to 1 hour after HW, day or night, provided the wind is less than 33 kn and the visibility more than 700 m.

5 **National flags** must be worn by all vessels under way by day.

Harbour

General layout

4.126

1 **Rade de Lorient** extends nearly 3 miles NNE from its entrance, between La Citadelle de Port-Louis (47°42′·6N, 3°21′·8W) (4.134) and Pointe de Kernével (4 cables NNW), to its inner limit at the railway bridge (47°45′·4N, 3°21′·2W) spanning Le Scorff Rivière.

Rade de Port-Louis, the outer section, lies between La Citadelle de Port-Louis and Île Saint-Michel (1 mile NNE). Le Ter Rivière flows into its NW corner.

2 **Rade de Pen-Mané,** the middle section, extends 1 mile NE from Île Saint-Michel to Pointe de l'Espérance, the meeting point of Le Scorff and Le Blavet rivers.

Principal channel: passes W of Île Saint-Michel, then leads into the entrance to Le Scorff Rivière.

4.127

1 **Berthing areas.** Both the Port Militaire and the commercial part of the harbour are subdivided by function into the following component facilities and ports situated on the W shore of Rade de Lorient and both banks of Le Scorff river (listed from S to N):

2 Base Sous-marine de Kéroman (4.148), the submarine base, on Pointe de Kéroman (47°43′·6N, 3°22′·0W) and the N bank of Anse du Ter.

Port de Pêche de Kéroman (4.149), the fishing port extending NE from Pointe de Kéroman.

Port de Kergroise (4.150); tanker and cargo handling berths on the W side of Rade de Pen-Mané.

3 Avant-Port de Commerce (4.179), the old port now a ferry terminal and marina, extending WNW from Le Scorff river entrance.

Arsenal Principal (4.148), the naval dockyard, extending N from the mouth of Le Scorff.

Hazards

4.128

1 **Deep-draught vessels** have little room to manoeuvre and must follow the leading lines closely. For this reason the approaches are declared to be narrow channels, see 4.122 for details of the regulations, and traffic is strictly controlled, see 4.129 for details of the traffic signals.

2 **Dredging** is carried out constantly to remove silt brought down by the rivers.

Port traffic signals

4.129

1 International Port Traffic Signals (1.66) are displayed from a mast at the signal station on La Citadelle de Port-Louis (47°42′·7N, 3°21′·9W) whenever vessels described at 4.125 and 4.122 or submarines pass Île Saint-Michel (1 mile NNE of La Citadelle) outward bound or Les Trois Pierres (1¼ miles SSW of La Citadelle) inward bound. Other vessels may obtain information on these movements from Vigie Port-Louis on VHF channel 16. The entry prohibited signal does not apply to a vessel which is already between La Potée de Beurre (4 cables SSW of La Citadelle) and La Citadelle de Port-Louis when it is first shown.

Natural conditions

4.130

1 **Local magnetic anomaly.** Local deflection of the compass, sometimes by as much as 15°to 20°, occurs in the vicinity of Le Pot Buoy (port hand) (1½ cables NW of La Citadelle de Port-Louis) (4.139).

4.131

1 **Tidal streams.** The times of commencement and direction of the tidal streams in the approach channels are:

Passe de l'Ouest; between Grasu (47°41′·5N, 3°25′·0W) and Les Truies (1¼ miles ESE)

Interval from HW Brest	*Direction*
–0550	ENE
–0020	slack for 2 hours
+0140	WSW

2 Maximum rates: springs 1 kn, neaps ½ kn.

Passe de l'Ouest; inner part

–0600	NE
–0020	WSW

Maximum rates: in-going springs 2 kn, neaps 1 kn; out-going springs 2½ kn, neaps 1¼ kn.

Passe du Sud

–0620	N
–0020	S

Maximum rates: in-going springs 2 kn, neaps 1 kn; out-going springs 2½ kn, neaps 1½ kn.

When the rivers are in spate the duration and strength of the out-going tidal stream is increased; it may run continuously on the surface whilst the in-going stream flows at a varying depth below the surface.

4.132

1 **Tide gauges.** The height of the tide above chart datum is displayed on illuminated automatic boards situated on Fort de Kernével (47°43′N, 3°22′W) and Pointe de Toulhars (5 cables SW) near each entrance to Pass de la Citadelle secondary channel (4.141).

4.133

1 **Tidal streams** in Rade de Lorient, N of Passe de la Citadelle, generally follow the direction of the channel, see Directions (4.144, 4.145) for exceptions, and information on the chart for further details.

Slack water occurs at about the time of local HW and LW at a depth of 1·5 m and about 30 minutes later at a

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depth of 6 m. The maximum rate at springs is less than 2 kn and occurs at about half tide.

2 In Le Scorff river the duration of the out-going flow is increased to 7 or 7½ hours with N winds or after heavy rain.

Principal marks

4.134

1 **Landmarks:**

Les Trois Pierres Light-beacon (octagonal black and white tower, black top; 18 m in height) (47°41′·5N, 3°22′·5W).



Les Trois Pierres Light-beacon from WSW (4.134)
(Original dated 1996)

Church spire (47°42′·4N, 3°23′·0W) (at Larmour-Plage.

2 La Citadelle de Port-Louis (47°42′·6N, 3°21′·8W) with Vigie de Port-Louis, the former coastguard and signal station, standing on the NW buttress.



Vigie de Port-Louis from SSW (4.134)
(Original dated 1996)

3 Church spire (47°42′·5N, 3°21′·3W) at Port-Louis.



Church Spire at Port Louis from SW (4.134)
(Original dated 1996)

Conspicuous grain silo (47°44′·0N, 3°21′·4W) (4.139) at Kergroise.

Submarine pens at Pointe de Kéroman (47°43′·6N, 3°22′·0W).

Tour de la Découverte (47°44′·7N, 3°21′·2W), an observation tower which looks like a lighthouse.

Directions

(continued from 4.84)

Passe de l'Ouest

4.135

1 **Initial position:** 47°40′·8N, 3°24′·9W.

Leading lights:

Front: Les Sœurs Light (red turret, white bands) (47°42′·1N, 3°21′·8W) standing on Les Sœurs, a drying reef.



Les Soeurs Beacon and Port Louis Light from SW (4.135)
(Original dated 1996)

Rear: Port-Louis Light (white daymark, red bands, on building) (740 m ENE of front mark).

2 The alignment (057°) of these lights leads ENE through the fairway and dredged channel (uncharted), see 4.112 for controlling depth, to a position 4 cables WSW of the front light. The channel is marked by light-buoys numbered A2 to A8 omitting A3 and passes:

NNW of Banc des Truies marked by L.Banc des Truies Light-buoy (W cardinal) (47°40′·8N, 3°24′·5W) (4.83), thence:

3 NNW of Les Truies, a drying reef marked by Les Truies Beacon-tower (starboard hand) (47°41′·2N, 3°23′·2W) and Les Truies Ouest Buoy (starboard hand) (1 cable WSW), and:

SSE of Basse du Cheval (4 cables NNW of Les Truies Beacon-tower), a rocky patch, thence:

SSE of Basse de la Passe Ouest, the shoal extending SE from Basse Kaléri (47°42′N, 3°23′W).

4.136

1 **Small craft** navigating outside the dredged channel use the following leading and clearing marks.

Leading marks:

Front: Lohic Daymark (tall white wall beacon) (47°42′·2N, 3°21′·1W).

Rear: Kerbel old lighthouse (white tower, black top; 25 m in height) (1260 m ENE of front mark).

2 The alignment (061½°) of these marks leads ENE to the outer end of Passe de la Citadelle (4.139) and thence to the entrance of the SW approach to Baie de Locmalo (4.164), passing (positions given from Les Trois Pierres Light):

SSE of A5 Light-buoy (starboard hand) (4 cables W) (4.135), thence:

NNW of Pâté du Cheval Buoy (N cardinal) (3½ cables WSW) marking Le Cheval, a drying reef, thence:

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Passage de la Citadelle (4.139)
(Original dated 1995)
(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

3 SSE of A7 Light-buoy (starboard hand) (2 cables NW) (4.135), thence:
NNW of the shoal marked by Les Trois Pierres Light-beacon (47°41′·5N, 3°22′·5W) (4.134).

4.137

1 **Clearing marks:**
Front: La Potée de Beurre Beacon-tower (starboard hand) (47°42′·2N, 3°22′·0W) (4.139).
Rear: Prominent church spire (5 cables ENE of front mark) (4.81).
The alignment (060½°) of these marks clears about ½ cable SSE of the following dangers (positions given from La Pierre d'Orge Beacon-tower (47°41′·8N, 3°23′·6W)):

2 Basse de la Paille (5 cables SW) an unmarked rocky patch.
La Pierre d'Orge, a drying reef marked by La Pierre d'Orge Beacon-tower (E cardinal).
Extremity of rubble breakwater that covers and uncovers, marked by a buoy (special) (2½ cables E), extending SSW from Les Saisies a drying reef marked by a beacon (special) (3¾ cables NE).
Basse Kaléri whose S edge is marked by a beacon (port hand) (5 cables ENE).

3 **Caution.** The alignment passes NNW of Basse du Cheval (2 cables SSE of La Pierre d'Orge Beacon-tower) and over Basse de la Passe Ouest in a least charted depth of 3·9 m (1 cable ESE of Basse Kaléri Beacon).

4.138

1 **Useful marks:**
Grasu Beacon-tower (S cardinal) (47°41′·5N, 3°25′·1W) (4.100).
La Paix Beacon-tower (isolated danger) (47°42′·0N, 3°21′·9W) (4.164).

Passage de la Citadelle

4.139

1 **Initial position:** 47°42′·0N, 3°22′·2W.
Leading lights and mark:
Front light (white tower, green top; 14 m in height) (47°43′·5N, 3°21′·6W).
Rear light (similar tower; 19 m in height) (306 m NNE of front light).
Mark: Kergroise grain silo (white tower, black stripe; 68 m in height) (3½ cables NNE of rear light) from which red aircraft obstruction lights are exhibited.



Passage de la Citadelle Leading Lights and Mark from SSW (4.139)
(Original dated 1996)

2 **Sectored light and mark:**
Front mark: Les Trois Pierres Sectored Light (47°41′·5N, 3°22′·5W) (4.134).
Rear mark: Les Errants Beacon-tower (white, cylindrical topmark) (4 cables SSW of front mark), standing close NW of an inconspicuous statue of Saint Peter (2·4 m high).

3 The alignment (016½°) of Passage de la Citadelle Leading Lights and Kergroise grain silo ahead and either by day the line of bearing 196° of Les Errants Beacon-tower just open WNW of Les Trois Pierres Light, or at night the sector limit (196°) between the red and green sectors of Les Trois Pierres Light when the light

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appears to be white, astern, lead NNE through the approach to and the principal channel past La Citadelle de Port-Louis (4.134), passing (positions given from the signal station on the NW buttress of La Citadelle):

4 WNW of Basse de la Paix (7 cables S) marked La Paix Buoy (starboard hand), thence:
ESE of Ecrevisse Buoy (port hand) (6 cables SSW) and ESE of Toulhars Buoy (port hand) (5 cables SSW), both marking the edge of the fairway, and:
WNW of La Potée de Beurre, a drying reef (4½ cables S) marked by a beacon-tower (starboard hand), thence:

5 ESE of the buoy (preferred channel to starboard) (2 cables SW) marking the entrance to the secondary channel, thence:
ESE of La Petite Jument Light-beacon (port hand) marking the SE corner of La Jument (1½ cables WSW), a drying rock, thence:
Close WNW of a rock drying 0·6 m (½ cable SW) marked about 40 m SE by La Citadelle Light-beacon (starboard hand), thence:

6 ESE of Le Pot (1¼ cables NW), a drying rock, marked by Le Pot Buoy (port hand), thence:
ESE Le Cochon (2 cables NNW), a drying reef, marked by Le Cochon Light-beacon (preferred channel to starboard), and:
WNW of No 1 Buoy (starboard hand) (1½ cables NNE) moored 1 cable NW of a submerged wreck.

4.140

1 **Cautions.** The navigable channel for vessels of more than 8 m draught is only about 100 m wide, decreasing to 60 m in the narrows.

The rock drying 0·6 m, on the E side of the narrows, extends about 30 m W of La Citadelle Light-beacon (starboard hand) (4.139).

2 Between No 1 Buoy (starboard hand) and Le Pot Buoy (port hand) the last of the in-going tidal stream and the whole of the out-going tidal stream sets across the main channel towards Le Pot and La Jument. During the out-going tidal stream a vessel proceeding NNE through the narrows is first set towards the citadel and then, on passing the N end of the citadel, towards Le Pot.

4.141

1 **Secondary channel.** In the vicinity of the narrows W of La Citadelle de Port-Louis (47°42′·6N, 3°21′·8W), a secondary channel WNW of the main channel, dredged to a level 1 m above chart datum and marked on both sides by beacons (lateral), leads N then NNE, passing:

2 W of the buoy (preferred channel to starboard) moored 1 cable SSW of La Petite Jument Light-beacon (port hand) (47°42′·6N, 3°22′·1W) (4.139), thence:
W of the beacons (starboard hand) marking La Jument (4.139), thence:
WNW of Le Cochon Light-beacon (preferred channel to starboard) (2 cables NNE of La Petite Jument Light-beacon) (4.139).

Passe du Sud

4.142

1 **Initial position** 47°40′·5N, 3°22′·4W, 8 cables SSW of Pointe de Gâvres.

Leading lights and daymark:

Front: daymark (white rectangular panel, red stripe) (47°43′·7N, 3°21′·7W) attached to a girder above the warehouse on Môle Central.

2 Middle: Fish Market Light (red rectangular topmark green bands, on grey metal framework tower; 15 m in height) (140 m N of front mark).
Rear: Kergroise La Perrière Light (red rectangular topmark, white stripe, on grey metal framework tower; 25 m in height) (515 m N of Fish Market Light).

The alignment (008½°) of the daymark and lights, which have been reported (1983) to be difficult to see by day at a distance of 3½ miles, leads 1¼ miles N through Passe du Sud, passing (positions given from Les Trois Pierres Light):

3 W of Les Bastresses (6 cables SSE), two detached reefs, marked by Bastresses Sud Light-buoy (starboard hand) moored 1 cable SW of the S end of Les Bastresses, and Bastresses Nord Buoy (starboard hand) marking the W side of the N-most reef, and:

4 E of Les Errants (4 cables SSW), a drying reef, marked near its centre by Les Errants Beacon-tower (4.139) and on the E side by Les Errants Light-buoy (port hand), thence:

5 E of an unmarked rock (depth 2·2 m) (2¼ cables SSE), thence:
Over the bar extending ENE from Les Trois Pierres, see 4.112 for controlling depth, and:
W of Goëland Buoy (starboard hand) (2½ cables ENE), which is moored 1½ cables NW of Le Goëland, a reef.

4.143

1 **Entering Passage de la Citadelle.** From a position 2 cables ENE of Les Trois Pierres Light (4.134), the line of bearing 350° of Le Toulhars Beacon (black and white post) (47°42′·5N, 3°22′·3W) leads 3 cables N to the outer end of the leading line (016°) for Passage de la Citadelle (4.139), passing:
1 cable WSW of Basse de la Paix (47°42′N, 3°22′W) (4.139).

Rade de Port-Louis

4.144

1 **Initial position** 47°43′·0N, 3°21′·9W, at N end of Passage de la Citadelle.

Kéroman Eastern Leading Lights:

Front (red house, white bands; 5 m in height) (47°43′·6N, 3°22′·0W).
Rear (red and white topmark on grey metal pylon, red top; 12 m in height) (91 m N of front light).

2 **Kéroman Western Leading Lights:**

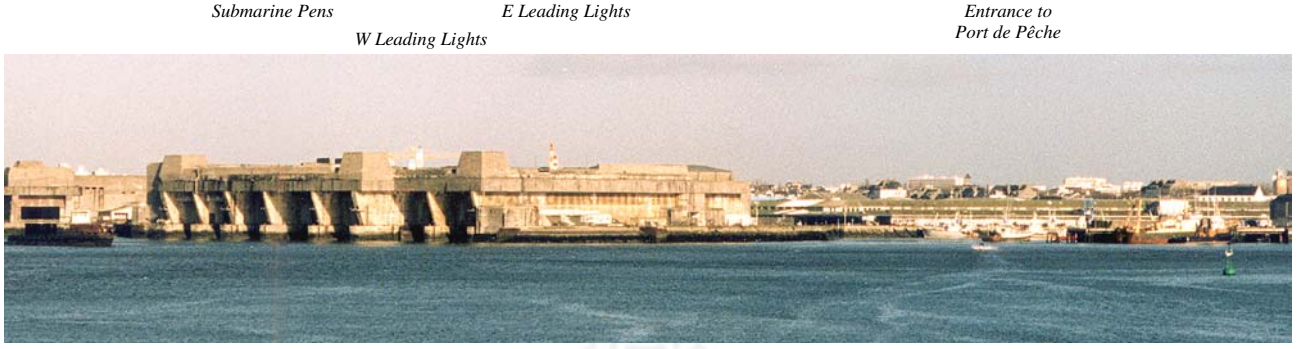
Front (white daymark green top) (47°43′·6N, 3°22′·1W).
Rear (similar daymark) (95 m N of front light).

Citadelle de Port-Louis Direction Light (47°42′·7N, 3°21′·7W).

3 The alignments (350°) of both these pairs of leading lights exhibited from the roof of the submarine pens and the white sector (169½°–170½°) of the direction light astern, lead 4 cables N through the buoyed channel, passing:
E of Kernéval Marina (4.174), and:
W of Banc du Turc (6 cables N of the direction light).

4 Normally only the E pair of leading lights are exhibited. The W pair of leading lights and the direction light, which lead through the deepest part of the channel, see 4.112 for controlling depth, are exhibited only for the passage of deep-draught vessels on demand by the pilot.

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Rade de Port-Louis Fairway from S (4.144)
(Original dated 1996)

5 **Caution.** In the vicinity of Banc du Turc Light-buoy (starboard hand) (47°43′·3N, 3°21′·8W) the tidal streams set across the channel, the in-going stream towards the light-buoy and the out-going stream on to the marina.

Passage west of Île Saint-Michel then through Rade de Pen-Mané

4.145

1 **Initial position** 47°43′·4N, 3°21′·9W.

Kernéval Leading Lights:

Front (red rectangular topmark on red and white metal framework tower; 10 m in height) (47°43′·0N, 3°22′·3W).

Rear (white square tower; 16 m in height) (290 m SW of front light).

2 **Pointe de l'Esperance Direction Light** (white tower, green top, 7 m in height) (47°44′·5N, 3°20′·7W).

The alignment (217°) of Kernével Leading Lights astern and the white sector (036¾°–037¼°) of Pointe de l'Espérance Direction Light ahead, lead 11 cables NE into and through Rade de Pen-Mané, passing (positions given from Kergroise grain silo (4.139)):

3 SE of a depth of 4·1 m at the extremity of a spit extending 1 cable SE from Pointe de Kéroman (6 cables SW), thence:

Close NW of the shoal surrounding Île Saint-Michel marked by No 5 Light-buoy (starboard hand) and No 7 Buoy (starboard hand), and:

SE of Port de Pêche de Kéroman quay (2 to 4 cables SW), thence:

4 SE of the petroleum wharf of Kergroise (1 cable SSW) (4.150), and:

NW of Banc Saint-Michel marked by J Buoy (N cardinal) (l½ cables SE), thence:

NW of Pengarne (1½ cables ESE), a drying reef marked by Pengarne Light-beacon (starboard hand; tower 6 m in height), and:

5 SE of the S end of Quai de Kergroise (¼ cable E) (4.150), thence:

NW of No 9 Buoy (starboard hand) and No 11 Light-buoy (starboard hand) marking the SE side of the fairway of Rade de Pen-Mané, thence:

Close NW of No 3 Mooring Buoy (white) (4 cables NE).

6 **Caution.** At springs and when the rivers are in spate the out-going tidal stream sets strongly WSW onto the N part of Quai de Kergroise (4.150). There is an eddy off Quai No 9 (47°44′·3N, 3°21′·2W) during both the in-going and out-going tidal stream.

4.146

1 **Useful marks:**

Port de Pêche de Kéroman Light (white truncated conical tower, green top; 6 m in height) (47°43′·6N, 3°21′·9W) exhibited from the head of Môle Central (4.149).

Passage de la Citadelle Rear Leading Light (2 cables E) (4.139) whose unintensified sector is visible throughout the channel.

Le Scorff Rivière

4.147

1 **Initial position** 2½ cables SW of Pointe de l'Espérance Light (4.145).

Approaching Arsenal Principal (4.148) and the entrance to Avant-Port de Commerce (4.179), the white sector (351½°–352½°) of Pont Gueydon Direction Light (white square hut 4 m in height) (47°45′·0N, 3°21′·0W) leads 3 cables N, passing (positions given from Pointe de l'Espérance Light):

2 W of No 13 Buoy (starboard hand) (1½ cables SW) marking a drying shoal, and:

E of No 10 Berth (2½ cables WSW) (4.148), which extends ESE into the river, and exhibits a light at its head, thence:

E of Avant-Port de Commerce Beacon (white tower, red top, on dolphin; 6 m in height) (2 cables W).

E of No 8 Buoy (port hand) (2½ cables WNW) marking the S side of the entrance to Avant-Port.

3 **Useful mark:**

150-tonne crane on Quai Cosmao-Dumanoir (47°44′·9N, 3°21′·1W).

Basins and berths

Port Militaire

4.148

1 **General information.** No detailed information about the berths in the naval base is published; the chart is the best guide to names, numbers and dimensions. See 4.107 for port limits and 4.125 for regulations concerning entry.

2 **Base Sous-marine de Kéroman** (47°43′·8N, 3°22′·3W) provides:

Berths Nos 8, 9, 10 and 11, alongside pontoons for submarines.

Seven concrete covered submarine pens situated SE of the pontoons.

3 **Arsenal Principal** (47°45′N, 2°21′W) contains:

Numerous berths shown on the chart.

Bassins Nos 1, 2 and 3 which are dry docks, see 4.151 for details of the largest.

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Bassin Long



Grand Bassin

Port de Pêche de Kéroman from SE (4.149)
(Original dated 1994)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

Quai Cosmao-Dumanoir, equipped with a 150 tonne crane (4.147).

Port de Pêche de Kéroman
4.149

1 The fishing port, entered E of Pointe de Kéroman (47°43′·6N, 3°22′·0W), is reserved for trawlers and consists of:

Môle Central that extends SW towards the entrance; the quay on its SE side is prolonged NE.

2 Grand Bassin, the E basin, with the Fish Market standing on its N side.

Bassin Long, the N basin. A slipway at its N end, equipped with a turntable, serves a careenage for six vessels maximum dimensions: 61 m long; 11 m beam; 4·5 m draught; 650 tonnes.

Port de Kergroise
4.150

1 **Appontement Petrolier** (47°43′·9N, 3°21′·5W), a petroleum wharf, length 112 m, depth alongside 10·0 m, berths tankers up to 200 m long, maximum draught see 4.113.

2 **Quai de Kergroise** (47°44′·1N, 3°21′·3W) is 568 m long and can berth vessels up to a maximum draught given at 4.113.

Quai No 9 (47°44′·3N, 3°21′·2W), 150 m long, can be used by vessels of the same maximum draught.

No 10 Berth (47°44′·4N, 3°21′·0W), a Ro-Ro berth for ferries.

Port services

Repairs
4.151

1 Repairs of all kinds carried out at naval dockyard, minor repairs by commercial firms. Bassin No 3 in Arsenal Principal, the largest dry dock length 203·4 m, width 36·0 m, depth over sill 7·0 m, may be used by merchant vessels.

Other facilities
4.152

1 Deratting and deratting exemption certificates issued.

Facilities provided by the French Navy and arranged through Ship's Agents or Capitainerie du Port include: divers and dockyard services; berth alongside 150-tonne crane (4.147); 50 tonne floating crane; water boats and lighters.

2 Hospitals: Maritime, in Arsenal Principal, shown on the chart.

Oily waste reception facilities are available.

Custom house, shown on the chart, at Port de Pêche de Kéroman.

Supplies
4.153

1 Fuel oil at Appontement Pétrolier or by barge; fresh water at all quays and by barge; provisions.

Communications
4.154

1 Ferry service to Port-Tudy (4.96), Île de Groix.

Rescue
4.155

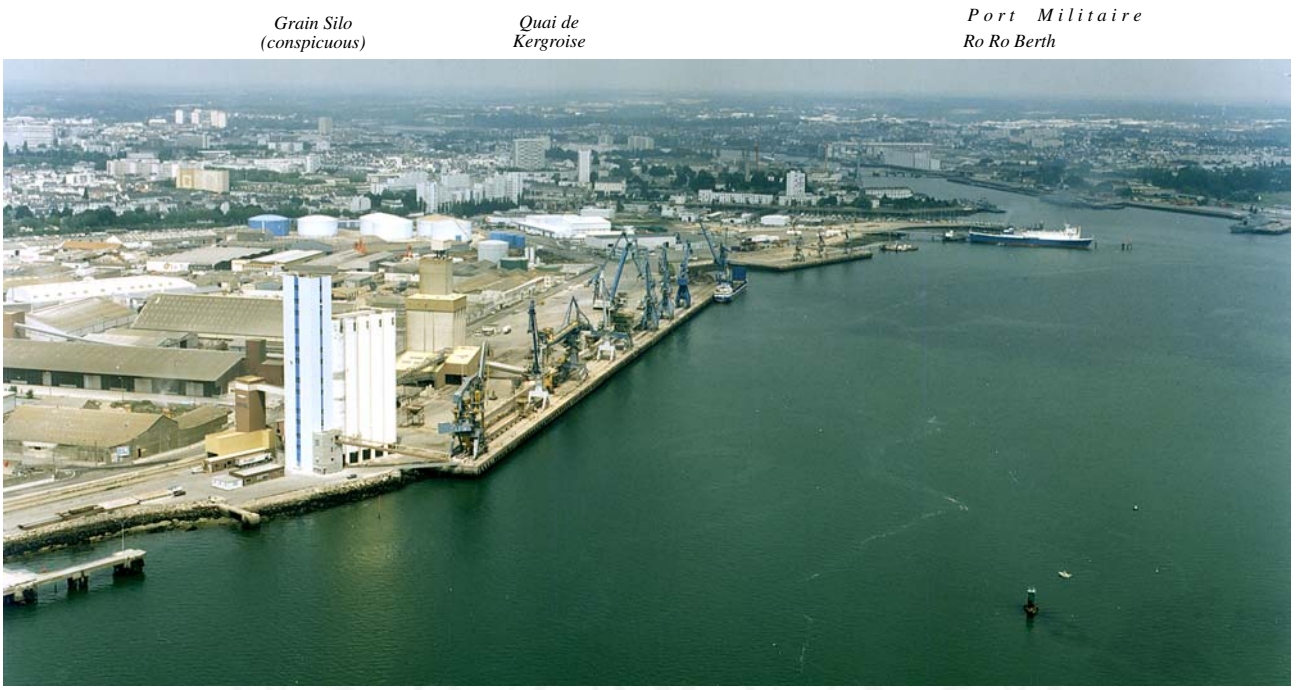
1 **Seagoing tugs:** based at Port Louis, Lorient (4.120).

Small craft

Larmor-Plage
4.156

1 **General information.** Larmor-Plage Harbour (47°42′·3N, 3°22′·8W), used mainly by fishing boats, is approached from the outer end of Passage de la Citadelle and entered between two beacons (port and starboard hand) marking the extremities of the landing slips extending E on both sides of the entrance. The harbour dries from 0 to 1 m between the landing slips at the entrance and about 3 m at the head of the slip on the W side of the basin. A breakwater that covers, marked by a beacon (port hand) at its head, extends ½ cable SE from the root of the slip on the S side of the entrance.

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Port de Kergroise from S (4.150)
(Original dated 1991)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

4.157

1 **Directions.** Initial position: vicinity of Toulhars Buoy (port hand) (47°42′·3N, 3°22′·3W) (4.139).

Leading marks:

Front mark: Beacon (port hand) at head of slip on S side of harbour entrance.

Rear mark: Larmor-Plage church spire (1¼ cables W of front mark).

2 The alignment (281°) of these marks leads to the entrance, passing:

S of the beacon (S cardinal) marking the SE end of a wreck that covers (½ cable ENE of front mark). The NW end of the wreck is marked by another beacon (N cardinal).

4.158

1 **Anchorage.** Numerous moorings for small craft are laid in summer off the harbour entrance. Temporary anchorage, sheltered from N and W, is obtainable outside these moorings.

Repairs of all kinds to small craft.

Supplies: provisions.

Anse de Goérem

4.159

1 **Anchorage** (47°41′·8N, 3°21′·5W) (uncharted) in Anse de Goérem, between the reefs extending W from the shore at the N and S ends of a sandy beach, is sheltered from E and to some extent from S. It is used by small craft awaiting slack water to enter Rade de Lorient.

Caution. On the S side of the bay the reef is unmarked: on the N side rocks which dry lie up to ½ cable S and W of Pesquerez Beacon (starboard hand) (47°41′·9N, 3°21′·6W) (4.165).

Petite Mer de Gâvres and approaches

General information

4.160

1 **Description.** Petite Mer de Gâvres (Baie de Locmalo on chart 2821), a natural basin that mostly dries, is entered between the N extremity of Presqu'île de Gâvres (47°42′N, 3°21′W) and the S side of Port-Louis (1½ cables N): it is frequented mainly by local fishing vessels. The approaches are shallow and encumbered by Île aux Souris (2 cables W of the entrance) and numerous drying reefs.

4.161

1 **Local knowledge.** Entry should be made at HW unless local knowledge is available. It is reported that the SW approach is the better of the two described in the directions (4.164).

4.162

1 **Traffic regulations:**

Speed limit in Petite Mer de Gâvres (Baie de Locmalo on chart 2821) and its entrance: 5 kn.

Anchorage is prohibited in two separate areas, shown on the chart, extending S from Port-Louis to Presqu'île de Gâvres and lying 1½ cables and 3½ cables E of Île aux Souris.

4.163

1 **Tidal streams** in the entrance to Petite Mer de Gâvres (Baie de Locmalo on chart 2821) begin at the following times:

Interval from HW Brest	*Direction*
–0550	E
–0015	W

The maximum rates are 4 kn at springs, 2 kn at neaps.

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Directions for south-western approach and entrance

4.164

1 **Initial position** 47°41′·7N, 3°22′·1W, at the N end of Passe du Sud (4.142).

Approaching Île aux Souris, the white sector (041½°–043½°) of Île aux Souris Light-beacon (green framework tower; 6 m in height) (47°42′·2N, 3°21′·5W), standing on a rock 0·8 m high, leads NE, passing (positions given from light-beacon):

2 Close NW of a light-buoy (starboard hand) (4 cables SW), thence:

Close SE of La Paix, a drying reef marked by La Paix Beacon-tower (isolated danger; 5 m high) (3 cables SW), and:

3 Close NW of a rocky patch with a least charted depth of 0·5 m (2½ cables SW), thence:

NW of Le Soulard, a drying reef marked by Le Soulard Beacon-tower (isolated danger) (1½ cables SSW), thence:

SE of Le Cabon, a drying reef marked by Le Cabon Beacon-tower (port hand) (1 cable WSW).

4.165

1 From a position 1 cable SW of Île aux Souris Light-beacon (4.164), the approach route leads about 1 cable N then NE, passing:

E of Le Cabon, thence:

NW of Île aux Souris Light-beacon.

2 **Clearing marks.** The alignment (180°), astern, of the following marks clears close W of the rocky foreshore of Île aux Souris in the vicinity of Île aux Souris Light-beacon (positions given from light-beacon):

Front: Le Soulard Beacon-tower (isolated danger) (1½ cables SSW) (4.164).

Rear: La Pesquerez Beacon (starboard hand; column) (2½ cables S).

4.166

1 **Entrance.** Initial position ½ cable N of Île aux Souris light-beacon, on the alignment (278°) of the following marks:

Front mark: La Potée de Beurre Beacon-tower (starboard hand) (47°42′·3N, 3°22′·0W) (4.139).

Rear mark: Larmor-Plage church (7 cables W of front mark) (4.157).

2 The scoured channel, for which the chart is the best guide, leads ESE then E, passing (positions given from Île aux Souris Light):

S of the reefs and slips extending S from Port-Louis, and:

N of Île aux Souris and of a reef (drying 2·7 m) (2 cables E) marked by a light-buoy (starboard hand) at its E end, thence:

3 Between Grand Belorc'h Beacon-tower (starboard hand) (3½ cables E) and Petit Belorc'h Beacon-tower (port hand) (3½ cables E) marking the tidal flats on each side of the channel.

Thence the channel is unmarked and leads 3 cables NE to Locmalo harbour (4.169).

Directions for west-north-western approach

4.167

1 **Initial position** 47°42′·4N, 3°22′·0W, 1 cable NW of La Potée de Beurre Beacon-tower (starboard hand) (4.139).

Leading marks:

Front mark: ENE edge of Île aux Souris (47°42′·2N, 3°21′·5W).

Rear mark: Light-beacon (starboard hand) (2½ cables ESE of front mark) marking the head of the ferry landing at Ban-Gâvres.

2 The alignment (112°) of these marks leads 3½ cables ESE to the entrance channel (4.166) in least charted depths of 0·2 m (2½ cables and 1 cable WNW of Île aux Souris Light-beacon), passing:

NNE of the drying reef marked at its NW corner by La Potée de Beurre Beacon-tower (starboard hand) (4.139), and:

3 SSW of the extremity of a drying sand spit (1 cable NE of La Potée de Beurre Beacon-tower), thence:

SSW of an unmarked reef (drying 0·8 m) (1 cable NW of Île aux Souris Light-beacon).

Ban-Gâvres

4.168

1 **General information.** Ban-Gâvres harbour (47°42′N, 3°21′W) on the S shore of Petite Mer de Gâvres (Baie de Locmalo on chart 2821) entrance is sheltered by a breakwater extending 115 m NNW from the N point of Ban-Gâvres.



Ban–Gâvres (4.168)

(Original dated 2002)

(Photograph – SHOM)

2 **Berths:**

Ferry landing (47°42′·0N, 3°21′·1W) dries 0 m at its head which is marked by a light-beacon (starboard hand) (4.167) and has an area of hard standing at its root.

Jetty (1 cable farther SE) extending NE, then N from the shore; both sides of the outer section dry from 1·2 m at the head to 2 m at inner end; landing slip on E side dries 1·3 m at its head.

3 A pontoon, for use by fishing vessels, extends WNW from the head of the jetty and forms a breakwater, from the head of which a light-beacon (port hand) is exhibited. A further pontoon, with berths for 40 leisure craft, extends WNW from the W side of the jetty.

Small craft can dry out in the area between the ferry landing and the jetty.

4 **Repairs** of a minor nature to engines carried out during the summer season.

Other facilities: several landing slips at Port-Louis in the vicinity of Lohic Daymark (4.136); the principal slip, used by ferries, dries 0 m at its head which is marked by a beacon (port hand).

Supplies: fresh water; provisions.

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Locmalo

4.169

1 **General information.** Locmalo harbour (47°42′·4N, 3°20′·8W), at the E end of Port-Louis, dries.

Anchorage: small craft moorings in the main channel.

Berth: jetty extends ESE, then NE then ENE from the shore; depths alongside decrease from 1 m at its head to drying 0 m at the inner elbow.

Repairs: see Port-Louis (4.170) for details.

Supplies: provisions.

Rade de Lorient: small craft passage and facilities

Port-Louis

4.170

1 **General information.** Port-Louis harbour (47°42′·7N, 3°21′·3W), situated at the N point of the walled town, is used by a few fishing vessels and numerous pleasure craft. There is a marina with 370 berths, 50 for visitors.

Layout. The port comprises:

Quai de la Pointe, a broad jetty extending NE from the shore with a light (white tower, green top; 7 m in height) at its head.

2 A landing slip extending 100 m NW from the head of Quai de la Pointe, marked by a beacon (starboard hand) at its extremity.

Area between the landing slip and the remains of a ruined jetty that covers lying about 60 m SW.

Marina in Anse de Driasker SE of Quai de la Pointe.

4.171

1 **Directions.** From a position 2 cables N of La Citadelle de Port-Louis (4.134), the approach leads 3 cables ESE, passing (positions given from the signal station on the citadel):

2 SSW of K Buoy (W cardinal) (2½ cables NNE) and of D2 Buoy (port hand) (3 cables NE) marking the W and S sides respectively of Banc de Kerzo, and:

NNE of No 1 Buoy (starboard hand) (1½ cables NNE) (4.139) and of D1 Buoy (starboard hand) (2¾ cables ENE) which marks the head of the ruined jetty (4.170).

4.172

1 **Anchorages:**

NE of La Citadelle de Port-Louis (4.134) and off the landing slip (4.170), outside the prohibited anchorage area; comparatively well sheltered but the French Sailing Directions advise against their use at night.

Berths:

Quai de la Pointe: NW side used by fishing vessels.

Marina: pontoons with depths of 1 to 1·5 m alongside.

4.173

1 **Repairs** of all kinds to small craft, at boatyard.

Other facilities: custom house; yacht club.

Supplies: fresh water; provisions.

Communications: frequent ferry service to Avant-Port de Commerce (4.179).

Kernével

4.174

1 **General information.** Kernével (47°43′·3N, 3°22′·1W) is the main yachting centre. A marina with 642 berths at pontoons in an area dredged to depths of 2 to 3 m and sheltered on its E and S sides by breakwaters is situated on the N side of the point.

2 **Port radio** at marina, see 1.41 for further details.

Repairs of all kinds to small craft.

Other facilities: pontoon landing stage (2 cables E of Kernével Front Leading Light) is private property; two yacht clubs, one near the marina, the other French Navy, located near the landing stage.

Supplies: fuel, fresh water at marina; provisions.



Kernével Marina from NW (4.174)
(Original dated 1994)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

Passage eastward of Île Saint-Michel

4.175

1 **Route.** A small craft channel with depths of more than 2 m in the fairway connects Rade de Port-Louis with Rade de Pen-Mané, passing E of Île Saint-Michel (47°43′·5N, 3°21′·5W) (4.176)

Directions. Initial position 4 cables SSW of Île Saint-Michel.

The channel leads generally NNE, passing (positions given from the N point of Île Saint-Michel):

2 WNW of Banc de Kerzo (7 cables S), marked by M1 Buoy (starboard hand), thence:

ESE of the drying bank extending S from Île Saint-Michel, marked by M2 Buoy (port hand) and M4 Buoy (port hand), and:

WNW of the drying area to the E of the route, marked by M3 Buoy (starboard hand), thence:

3 W of a submerged wreck (2½ cables SE) marked by M5 Buoy (starboard hand), thence:

ENE of Banc Saint-Michel (1 cable ENE) marked by M6 Buoy (port hand) and J Buoy (N cardinal), and:

WSW of Pengarne reef (2½ cables NE) marked by Pengarne Light-beacon (starboard hand) (4.145).

4.176

1 **Île Saint-Michel** (47°43′·5N, 3°21′·5W) is military property; landing is prohibited.

Sainte-Catherine

4.177

1 **General information.** Sainte-Catherine (47°43′·5N, 3°21′·0W), adjacent to Locmiquélic, is used by ferryboats and small craft.

Anchorage: in the channel off the harbour, E of the prohibited anchorage area shown on the chart and clear of the wreck marked by M5 Buoy (starboard hand) (4.175); numerous moorings.

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2 **Berths.** A jetty about 75 m in length extends NNW then NNE from a quay. A slip on the ESE side of the jetty head has a depth of 1 m at its extremity. The jetty shelters Locmiquélic marina, with pontoons and 227 berths for small craft. The berths are also used by fishing boats and ferry boats. Works are in progress (2004) to the W of the jetty.



Locmiquélic Marina from NW (4.177)

(Original dated prior to 2001)

(Photograph – SHOM)

Repairs to small craft hulls at boatyard.

Pen-Mané

4.178

1 **General information.** Pen-Mané landing slip (47°44′·1N, 3°20′·9W) extends NNW from the NW point of Pen-Mané; extremity, marked by a beacon (starboard hand), has a depth of 1 m. A marina is situated close NE of the slipway, and ferries from Avant-Port de Commerce (4.179) use the outer edges of the pontoons.

Anchorage: off the slip, SE of the prohibited anchorage area shown on the chart; numerous moorings.

Caution. Submerged piles situated 200 m N of Pen-Mané are a danger.

Berths. The marina, which is protected by wave breaking pontoons, has 150 berths with depths alongside of 1·5 to 3.0 m.

Avant-Port de Commerce

4.179

1 **General information.** Avant-Port de Commerce (47°44′·6N, 3°21′·2W), so called because it originally formed the outer part of the old commercial port of Lorient, extends 4 cables WNW from its entrance at the mouth of Le Scorff river. It is now used by small craft, ferries and various maritime services craft.

2 Bassin à flot, the wet dock at the head of the old port, together with the berths at its entrance, comprise the municipal marina. Bureau du Port de Plaisance, the marina office situated on the N side of the entrance to the wet dock, is equipped with VHF radio (1.41).

4.180

1 **Berths** on the S side of Avant-Port de Commerce, listed from E to W, and at its head, include:

Club Nautique de Lorient pontoon; 150 berths for small craft, a few for visitors.

Cale Ory; landing stage for Rade de Lorient ferryboats.

Quay about 200 m in length; berths for Île de Groix ferries and the Lights and Buoys Service vessel.

Port de Plaisance pontoons: 100 berths for small craft, 20 to 30 for visitors.

4.181

1 **Bassin à flot.** Entrance 7 m wide, sill 1 m above chart datum, is spanned by a swing bridge. Water level is maintained at 4 m above chart datum and the gate opened, by day only, from 1 hour before to 1 hour after HW springs and ¼ hour before to ¼ hour after HW neaps. Pontoon berths for 130 small craft, some for visitors.

4.182

1 **Repairs** of all kinds to small craft; slip.

Other facilities: yacht club; custom house (4.151); hospitals (4.151).

Supplies: fresh water at pontoons; provisions.

Le Blavet Rivière

Chart 304

Description

4.183

1 **Le Blavet Rivière** is entered from the NE end of Rade de Pen-Mané (47°44′N, 3°21′W). It is navigable by coasters as far as Hennebont (47°48′N, 3°17′W) (4.189) a town 6 miles upstream, where a low road bridge (4.184) forms the limit of navigation for masted craft. Above Hennebont the river is canalised and used by sand barges as far as Pontivy (60 km farther upstream), where small craft may enter the W section of the former Brest to Nantes canal (1.86).

Limiting conditions

4.184

1 **Controlling depths** in the channel:

From entrance to Port du Rohu (1 mile upstream): 2·1 m.

Thence to Hennebont: 0·3 m.

Tidal levels. See information in *Admiralty Tide Tables.*

Lorient. See 4.114 for details.

Hennebont. Mean spring range about 4.2 m; mean neap range about 2·1 m.

2 **Largest vessel:**

Port du Rohu: length 80 m.

Hennebont: length 60 m; draught 4 m at springs, 3 m at neaps.

Vertical clearances:

3 Pont du Bonhomme (47°46′ N, 3°18′ W) and Pont de Locoyarn (1¼ miles farther upstream), two road bridges: 22 m.

Hennebont railway bridge: 21 m.

Pilotage

4.185

1 **Compulsory** pilotage for vessels more than 40 m in length; provided by Lorient Pilots, see 4.119 for further details.

Local knowledge

4.186

1 Local knowledge is necessary as the channel from Pont du Bonhomme (4.184) to Hennebont is unmarked.

Directions

4.187

1 **Initial position** 47°44′·3N, 3°20′·7W, 1½ cables N of Pointe de Pen-Mané.

The channel, marked by light-buoys and buoys (lateral), leads 1 mile ENE to Port du Rohu (4.188).

Thence to Hennebont the channel is marked by beacons (lateral) as far as Pont du Bonhomme (47°46′N, 3°18′W) (4.184), where the river narrows.

Port du Rohu

4.188

1 **Berths** (47°44′·9N, 3°19′·4W), 120 m in length, is used by sand barges.

Hennebont

4.189

1 **General information.** At Hennebont (47°48′N, 3°17′W), a fortified medieval town, the river is spanned by a railway bridge (4.184) and about 500 m farther upstream by a fixed

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road bridge where the vertical clearance is only 2 m and the channel dries at LW.

4.190

1 **Berths,** on the W bank, suitable for vessels to take the ground, bottom sand and mud (positions given from the railway bridge) are:

Quai Sud (100 m S); length 45 m; depth alongside dries 1·5 m.

Quai Nord (100 m N); length 100 m; depth alongside dries 1·5 m.

2 A pontoon on the E bank downstream from the road bridge, depth alongside reported (1983) to be 1·4 m, provides berths for visiting small craft. There are 60 mooring buoys for craft of 4 to 12 m in length.

Repairs: A boatyard in the vicinity can repair small craft hulls.

Supplies: provisions.

Small craft

4.191

1 **Le Blavet river** has been reported (1984) to provide good sailing in sheltered waters and attractive surroundings when the tide is high.

4.192

1 **Saint-Guénaël** on the W bank of Le Blavet below Pont du Bonhomme (47°46′N, 3°18′W) (4.184) is the small craft harbour for the town of Lanester.

Anchorage: 70 small craft moorings; exposed to SW.

Berth: pontoon in deep water.

Repairs to engines.

Other facilities: yacht club; slip.

4.193

1 **Kervignac** is situated on the E bank of Le Blavet above Pont du Bonhomme (4.184).

Berth: pontoon.

4.194

1 **Le Blavet canal** which is part of the Breton inland waterways system is entered above Hennebont (47°48′N, 3°17′W) (4.189).

LES COUREAUX DE GROIX TO COUREAU DE BELLE-ÎLE

General information

Chart 2822

Route

4.195

1 From the E entrance of Les Coureaux de Groix, between Pointe de la Croix (47°38′N, 3°25′W) and Pointe de Gâvres (4 miles NE), the direct route to Coureau de Belle-Île leads 12 miles SE to the entrance of its NW approach between Plateau de Birvideaux (47°29′N, 3°17′W) and Beg an Aud (6 miles ENE), the NW point of Presqu'île de Quiberon.

2 Attention is drawn to the rocky patches and wrecks with depths of less than 10 m over them lying up to 4 miles E of Pointe des Chats (47°37′·3N, 3°25′·3W), the SE point of Île de Groix. Otherwise the passage is clear of charted dangers except for those extending up to 2½ miles from the mainland.

Topography

4.196

1 The mainland coast between Pointe de Gâvres (47°41′·2N, 3°21′·5W) and Beg an Aud (47°32′N, 3°10′W), is low lying. It consists of a sandy beach backed by sand dunes, except along the NW coast of Presqu'île de Quiberon where it is rocky.

The coast is fringed by numerous reefs and several islets, of which Roëlan (Rohellan) (16 m high) (47°36′N, 3°12′ W) is prominent as it appears black in contrast to the beach in the background.

2 There are no sheltered anchorages and the only harbours for small craft are Étel (47°39′N, 3°12′W) (4.208), which is difficult of access, and Portivy (47°32′N, 3°09′W) (4.220) which dries.

Exercise areas

4.197

1 **Firing practice areas,** described at 4.3, cover the whole route given at 4.195.

The whole or a part of the area lying NE of a line drawn from Pointe de Gâvres to Beg an Aud is in use on most working days and navigation is prohibited in the relevant target area during firings. The portion of the area lying NW of the entrance to Rivière d'Étel (47°39′N, 3°13′W) is especially hazardous due to small arms firing which is controlled from onshore and because the danger area is not patrolled by safety boats. A red flag is shown from flag staffs on the coast and from safety boats (if any) when firings are taking place.

4.198

1 **Targets:**

A target buoy (special) is moored in position 47°40′·3N, 3°17′·1W, as shown on the chart; several other target buoys are moored in the vicinity.

An orange coloured target (uncharted) for air to surface firings is moored on Basse du Guihel (47°37′·4N, 3°20′·0W); at night it exhibits a flashing orange light.

Rescue

4.199

1 **Lifeboat station** (1.77): at Étel (47°39′N, 3°12′W) (4.208).

Tidal streams

4.200

1 The tidal streams are rotary clockwise, see *Admiralty Tidal Stream Atlas: France West Coast* for further details. About 2½ miles offshore in the vicinity of Étel (47°39′N, 3°12′W) they are weak and the flow is influenced greatly by the wind.

Principal marks

4.201

1 **Landmarks:** on Île de Groix:

Crehal water tower (47°38′·0N, 3°27′·4W) (4.10).

Pointe des Chats Lighthouse (47°37′·3N, 3°25′·2W) (4.10).

On the mainland:

Plouhinec church (grey stone belfry) (47°41′·9N, 3°15′·0W) dominating the dunes.

2 Two radio masts (113 and 115 m in height) (1½ miles S of the church) which exhibit red and white aircraft obstruction lights.

Water tower (47°40′·3N, 3°13′·5W).

Water tower (47°39′·5N, 3°11′·6W) (4.214) at Étel.

Conspicuous tower of the firing range observation post (47°35′·9N, 3°08′·4W).

3 On Presqu'île de Quiberon:

Kéridenvel tower (47°30′·8N, 3°08′·4W) (5.34).

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Major lights:

Pointe des Chats Light—as above.

Pointe des Poulains Light (47°23′N, 3°15′W) (5.32).

Goulphar Light (47°19′N, 3°14′W) (5.11).

Radio direction-finding station

4.202

1 A VHF radio direction-finding station (1.38), for emergency use only, is located at Étel in the position (47°40′N, 3°12′W) shown on the chart. The procedure for obtaining the bearing of a vessel from the station is given in *Admiralty List of Radio Signals Volume 2*.

Directions

(continued from 4.84)

4.203

1 **Initial position** 47°39′·5N, 3°21′·5W, about 1½ miles S of Pointe de Gâvres.

The route with the deepest water leads 4 miles SE, passing (positions given from Étel Light (47°38′·7N, 3°12′·7W)):

2 Clear of an unmarked wreck (3½ miles W) with a charted depth of 15·8 m over it, and:

NW of Basse du Guihel (4½ miles WSW), on which the sea breaks only in heavy weather and on which a target (4.198) is sometimes moored, and:

SE of Basse Roheu (1½ miles W) marked by Roheu Beacon-tower (S cardinal).

4.204

1 The coastal route then continues about 8 miles SSE to the entrance of the NW approach to Coureau de Belle-Île, passing (positions given from Étel Light):

WSW of Baz Léneu (Basse Leno) (1½ miles SW) (4.214), an unmarked rocky patch, thence:

2 WSW of Les Pierres Noires (3½ miles S), a drying reef marked by a beacon-tower (isolated danger), and of a detached rocky patch (depth 5·4 m) lying 6 cables NW, thence:

WSW of a chain of reefs and islets extending nearly 3 miles NNW from Beg an Aud (7½ miles SSE), the NW point of Presqu'île de Quiberon.

4.205

1 **Small craft** rounding the E end of Île de Groix are advised to pass:

E of Edouard de Cougy Buoy (E cardinal) marking a wreck (7 cables ESE of Pointe de la Croix), thence:

E of Les Chats Light-buoy (S cardinal) (4.11) marking Basse des Chats (1¾ miles SSE of Pointe des Chats Light), towards which the tidal stream sets at certain times as shown on the chart.

4.206

1 **Clearing bearing.** The line of bearing 354° of the E foreshore of Roëlan (47°36′N, 3°12′W) (4.196) clears close W of the reefs extending nearly 3 miles NNW from Beg an Aud (4.204).

Caution. The above dangers and Les Pierres Noires (4½ miles NNW of Beg an Aud) (4.204) lie outside the 143° limit of Port Maria Main Light (47°28′·8N, 3°07′·4W) (5.32).

4.207

1 **Useful marks:**

Pointe de la Croix Light (47°38′·1N, 3°24′·9W) (4.84).

Abbaye Saint-Michel (bell tower) (47°35′·9N, 3°05′·8W) S of the large square building of a Benedictine monastery.

Île Téviec (9 m high) (47°33′·4N, 3°09′·8W) with Guernic, a large rock, close S.

Fort de Penthièvre (1½ miles SE of Île Téviec).

(Directions continue for NW approach to Coureau de Belle-Île at 5.33)

Étel and approach

Chart 2822 (see 1.18)

General information

4.208

1 **Description.** Étel (47°39′N, 3°12′W), population 2300 (2001), lies on the E bank of Rivière d'Étel 1 mile from its entrance. The harbour is used by fishing vessels and small craft.

Port Authority. Bureau du Port, 56410 Étel. Located at the N end of the quay.

Limiting conditions

4.209

1 **Controlling depths.** The depth over the bar at the river entrance varies. The French chart based on a 1984 survey shows a depth of 0·6 m, but at times the bar dries, exceptionally by as much as 5 m. The same French chart shows an inner bar with a least depth of 0·5 m (2½ cables inside the river entrance).

Tidal levels. See information in *Admiralty Tide Tables* Mean spring range about 3·4 m; mean neap range about 1·9 m.

2 **Maximum draught.** Normally vessels of 4 m draught can enter the river and berth alongside the quay (4.218).

Weather. With onshore winds, especially during the out-going tidal stream, the sea breaks right across the entrance making it impassable.

Night entry is forbidden.

Arrival information

4.210

1 **Pilotage.** There are no pilots but Sémaphore d'Étel (1 cable NW of Étel Light), the signal station, will direct vessels over the bar either in French on VHF channel 16 or, in answer to a vessels national flag shown from the masthead, by means of the visual signals described at 4.215. The station operates between sunrise and sunset from 2 hours before to 1½ hours after HW at Port-Tudy.

2 **Local knowledge** or directions from the signal station are essential for entry owing to the unstable nature of the bar which changes position under the influence of wind and sea.

4.211

1 **Prohibited anchorages:**

Anchoring is prohibited within the area shown on the chart that extends 5 cables S and W of Étel Light (4.214).

Anchoring and dredging are prohibited 50 m either side of the submarine cable laid across the river 6 cables within the river entrance.

Étel Harbour

4.212

1 **Layout**:

Port de Pêche (47°39′·4N, 3°12′·4W), the fishing harbour, lies on the E bank of the river 8 cables NNE of the entrance.

Port de Plaisance, the small craft harbour, occupies the basin at the N end of the fishing harbour.

Anchorage is available off the fishing harbour and, for small craft, farther up river.

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4.213

1 **Tidal streams** in the river abreast Port de Pêche begin at the following times:

Interval from HW Brest	*Direction*
–0450	In-going
+0110	Out-going

Maximum rates are 4 kn in-going and 5 kn out-going.

Directions

4.214

1 **Approaching the bar.** Initial position 47°36′·0N, 3°15′·5W, about 3 miles SW of the river entrance.

It is reported (1993) that the line of bearing of 036° on the water tower standing 1¼ miles NE of Étel Light (red pylon, 11 m in height) (47°38′·7N, 3°12′·7W) gives a good initial approach before being guided over the bar by Étel Signal Station (4.215), passing (positions given from the light):

2 NW of Les Pierres Noires (3¼ miles S) (4.204) and covered by the green sector of the light, thence:
NW of Poulleu (Poul-Haut) (1½ miles S), an above-water rock, and:
SE of Basse Roheu (1¼ miles W), a drying reef marked by Roheu Beacon-tower (S cardinal) (4.203) and covered by the red sector of the light.

3 Attention is drawn to Baz Léneu (Basse Léno) (1½ miles SW), an isolated unmarked rock with a depth of 3·2 m over it, which lies in the white sector of Étel Light.

4.215

1 **Crossing the bar.** The best time is reported to be from 2 hours to 1 hour before HW Port-Tudy when the in-going tidal stream is weakening.

Étel Signal Station (1 cable NW of Étel Light) is equipped with a rotating arrow mounted on a mast. Directions for crossing the bar are given by radio (4.210) or by means of the following signals:

Signal	*Meaning*
Arrow oscillated to left and right	Stand-by for directions
Arrow vertical, point up	Remain steady on present course
Arrow inclined	Alter course in the direction indicated
Black ball at masthead	Channel dangerous and closed to open boats and to craft less than 8 m in length
Red flag	Insufficient depth over bar.

2 **Caution.** Owing to the unstable nature of the bar depths in the river entrance can vary considerably from those shown on the chart. In 1984 a drying spit extended 3 cables SSW from Étel Light. Attention is drawn to limiting conditions at 4.209.

4.216

1 **Rivière d'Étel.** Within the outer bar the channel leads up river, passing (positions given from Étel Light (4.214)):
ESE of Épi de Plouhinec Light-beacon (red metal structure 8 m in height) (1 cable SSW) marking the head of a groyne on the point on the NW side of the entrance, thence:
E of a rock (¾ cable ESE), which dries 0·2 m, marked by a beacon (port hand), thence:

2 W of Banc des Moules (2½ cables NE), a drying bank, marked by a light-buoy (starboard hand), thence:
E of Roche Germain (3½ cables NNE), a rock in mid-channel with a least depth of 0·7 m, marked by a light-beacon (starboard hand), and:
E of a Pointe Saint-Germain (4 cables NNE), marked by a light-buoy (port hand), where the river deepens.

3 Thence depths of more than 5 m can be found in the channel as far as Pont-Lorois (2 miles NNE) where a fixed bridge, whose vertical clearance has been reported (1986) to be 9 m, spans the river.

Berths

4.217

1 **Anchorage** may be obtained:
Off Port de Pêche in a depth of 7 m sandy bottom, with depths of 3 m or more within a swinging circle of 150 m radius; strong tidal streams, see 4.213 for details.
Off Le Magouër (9 cables N of Étel Light).

Moorings for local craft are laid to seaward of the SW corner of Port de Pêche and off Le Magouër: they are sometimes run underwater by the tidal stream.

4.218

1 **Port de Pêche.** A quay extended N by a jetty provides 369 m of berthing space with depths alongside from 5 m to 0 m.

Port de Plaisance. Pontoons extending W from the E side of the basin E of the jetty provide finger berths for 150 small craft up to 15 m in length, 15 of them reserved for visitors. The outer berths have been reported (1983) to have a depth of 2·5 m.

Port services

4.219

1 **Repairs** of all kinds to small craft; patent slip on W bank of river; careening slip in basin.

Other facilities: custom house.

Supplies: marine diesel supplied by road tanker; fresh water at quay; provisions.

Portivy

Charts 2822 (see 1.18)

General information

4.220

1 **Description.** Portivy (47°31′·9N, 3°08′·8W), a small drying harbour on the N coast of Presqu'île de Quiberon 6 cables E of Beg an Aud, is seldom used except by local fishing vessels. Without local knowledge it should be entered only in fine weather and offshore winds.

Directions

4.221

1 **Initial position** 47°32′·0N, 3°10′·5W, about 6 cables W of Beg an Aud.

Leading marks:
Front mark: Pen Goc'h (rock 2 m high) (47°32′·6N, 3°09′·4W), which must not be confused with other rocks lying 2½ cables N and SE.
Rear mark: Carnac church spire (47°35′·1N, 3°04′·7W) (5.164).

2 The alignment (052°) of these marks leads NE to a position 3 cables SW of the front mark, passing (positions given from front mark):
Close SE of Roche Guillo (8 cables SW) (5.33), thence:

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NW of the extremity of Revidi Vihan (7 cables SSW), the drying reef extending 2½ cables NW from Beg an Aud, thence:

SE of Men Melein (5 cables W), a drying reef.

4.222

1 **Leading marks:**

Front mark: Portivy molehead (47°31′·9N, 3°08′·8W).

Rear mark: old mill (3½ cables SE of front mark) (uncharted).

The alignment (127°) of these marks then leads 7 cables SE to the vicinity of the front mark, passing (positions given from front mark):

2 Close SW of Roche Guédic (5 cables NW), a rock which dries, marked by Guédic Buoy (port hand), thence:

About ½ cable NE of the extremity of Revidi Vras (4 cables NW), a drying reef extending 5 cables NNW from the shore, thence:

About ½ cable SW of an unnamed drying reef extending 4 cables NW from the shore E of the harbour, marked by a beacon (port hand; iron) (1½ cables NNW).

Berths

4.223

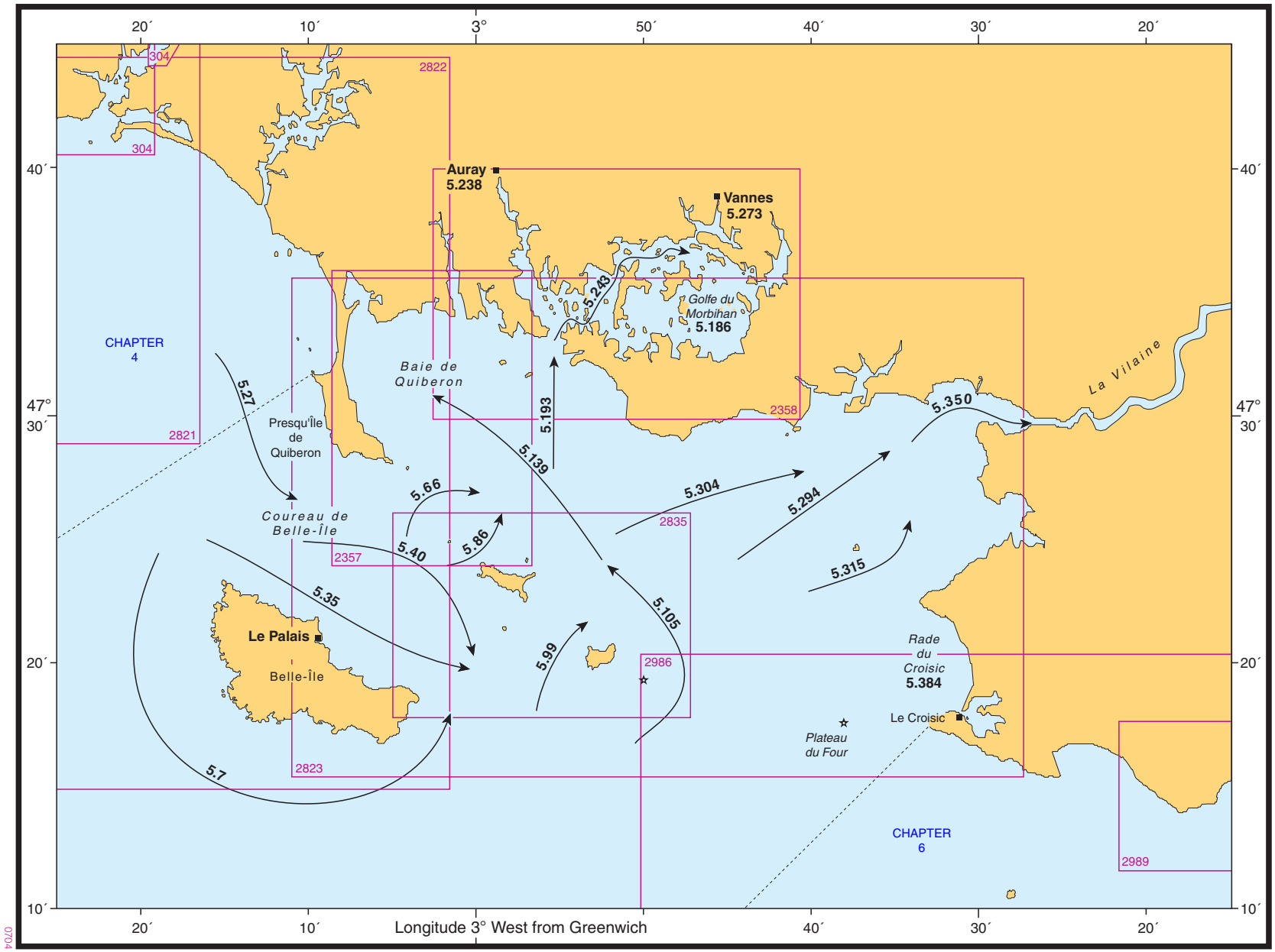
1 **Anchorage:** between the beacon (port hand) (1½ cables NNW of the molehead) (4.222) and Revidi Vras (2 cables farther WSW), in depths from 1½ to 3 m; mooring buoy laid W of the beacon.

Môle extends about 175 m N from the shore; depth alongside the E side has been reported (1983) to decrease from drying 0·5 m at the molehead, to drying 1·4 m 30 m from the molehead, to drying 4 m bottom rock at the head of the slip alongside the root of the mole.

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CHAPTER 5

BELLE-ÎLE, BAIE DE QUIBERON, MORBIHAN, LA VILAINE AND RADE DU CROISIC

GENERAL INFORMATION

Charts 2822, 2823, 2986

Scope of the chapter

5.1

1 The area covered by this chapter includes:

The coastal passage W and S of Belle-Île (47°19′N, 3°10′W) (5.7).

Coureau de Belle-Île (5.22), the channel passing NE of Belle-Île and SW of Presqu'île de Quiberon (7 miles N) and of the chain of islands and islets extending 14 miles SE to Les Cardinaux (47°20′N, 2°50′W).

2 The waters enclosed by Presqu'île de Quiberon, the aforementioned chain of islands and Plateau du Four (8 miles ESE of Les Cardinaux).

The last mentioned area is described in five parts:

Passage de l'Est (5.105), entered SE of Les Cardinaux thence passing NE of the chain of islands.

Baie de Quiberon (5.139), the NW part of the area, entered between Pointe du Conguel (47°28′N, 3°05′W), the SE point of Presqu'île de Quiberon, and Pointe du Grand Mont (47°30′N, 2°51′W).

3 Golfe du Morbihan (5.186), the extensive basin entered from the NE side of Baie de Quiberon.

La Vilaine and approaches (5.292), the NE part of the area, entered between Pointe du Grand Mont and Pointe du Castelli (14 miles SE).

Rade du Croisic and approaches (5.384), the SE part of the area, entered between Pointe du Castelli and Plateau du Four.

Topography

5.2

1 The W coast of Presqu'île de Quiberon and the SW coast of Belle-Île consist of bold rocky cliffs and are steep-to. Most of the rest of the area is comparatively shallow with a low-lying coastline.

Harbours and anchorages

5.3

1 The area covered by this chapter contains no port of any commercial importance but there are numerous fishing ports and small craft harbours.

Rade du Palais (47°21′N, 3°08′W), (5.52), on the NE side of Belle-Île, affords sheltered anchorage in heavy weather from S to W.

Exercise areas

5.4

1 French naval vessels, aircraft and shore batteries carry out firing practices in the W approaches to Coureau de Belle-Île and SW of Belle-Île. For further details see 4.3.

Pilotage

5.5

1 Lorient Pilots (4.119) and La Loire Pilots (6.5) are qualified to pilot vessels in Coureau de Belle-Île and Baie de Quiberon. There are no locally based pilots for these areas.

Flow

5.6

1 In the area covered by this chapter strong winds have a very great effect on the rate and direction of the tidal streams.

The tidal streams in the entrance and W part of Golfe du Morbihan are very strong. In the passages between the islands SE of Presqu'île de Quiberon they attain 3 kn at springs. Elsewhere much of the information on tidal streams, apart from that given for tidal stations on the charts, is from old reports and in some instances the maximum rates reported occur only when the wind or flood waters augment the flow.

COASTAL PASSAGE WEST AND SOUTH OF BELLE-ÎLE

General information

Chart 2822

Description

5.7

1 The coastal passage from Pointe des Poulains (47°23′N, 3°15′W) to Pointe de Kerdonis (9½ miles ESE) passing W and S of Belle-Île is clear except for some charted dangers lying within:

1¾ miles of Pointe des Poulains.

8 cables of Pointe de Kerdonis.

5 cables of the shore elsewhere between these two points.

2 **Caution.** Charted depths inshore are from lead-line surveys.

3 Several narrow inlets and two exposed bays provide temporary fair weather anchorages for small craft (5.15).

Topography

5.8

1 **Belle-Île** is a good landfall (2.11). The W and S coasts consist of flat-topped rocky cliffs 40 to 50 m high fronted by numerous islets and rocks lying close inshore.

Rescue

5.9

1 **Coastguard station** (1.75): Pointe du Talut (47°17′·7N, 3°13′·0W) (5.11).

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Tidal streams

5.10

1 Close to the coast of Belle-Île the times of commencement and direction of the tidal streams are:

Interval from HW Brest	*Direction*
W coast	
–0605	N
–0005	S

2 Maximum rates: N-going springs 1½ kn, neaps ¾ kn; S-going springs 1 kn, neaps ½ kn.

S coast	
–0605	E
–0005	W

Farther offshore, from 2 to 3 miles S of Belle-Île, the tidal stream becomes rotary clockwise, see *Admiralty Tidal Stream Atlas France West Coast* for further details.

Principal marks

5.11

1 **Landmarks:**

Goulphar Lighthouse (grey tower, red lantern; 52 m in height) (47°19′N, 3°14′W).



Goulphar Lighthouse from SW (5.11)

(Original dated 1994)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

Pointe du Talut Coastguard Station (white building with red and white radio tower) (1 mile SSE of Goulphar Light).

2 **Major lights:**

Goulphar Light-as above.

Pointe des Poulains Light (47°23′N, 3°15′W) (5.32).

Pointe de Kerdonis Light (47°19′N, 3°03′W) (5.32).

Directions

(continued from 4.13)

Pointe des Poulains to Pointe du Talut

5.12

1 **Initial position** 47°24′N, 3°19′W, about 2¾ miles WNW of Pointe des Poulains. The coastal route leads SSE, passing (positions given from the point):

WSW of Les Poulains, a ridge of drying and below-water rocks extending 2½ miles WNW from Pointe des Poulains, thence:

WSW of Les Poulains Buoy (W cardinal) (1 mile W) marking the SW extremity of Les Poulains.

2 Thence to the vicinity of Pointe du Talut (6 miles SSE of Pointe des Poulains) there are no charted dangers lying more than 5 cables offshore. B1 Buoy (special) (47°17′N, 3°16′W) is a firing practice target (5.4).

Pointe du Talut to Pointe du Skeul

5.13

1 In the passage from the vicinity of Pointe du Talut to that of Pointe du Skeul, also known as Pointe de l'Échelle, (5 miles farther E) it is possible to pass either side of La Truie (1 mile ESE of Pointe du Talut), a rock with a least depth of 1·6 m marked by a beacon-tower (isolated danger). Except for a 9 m patch (3 cables W of La Truie) there are no other known dangers lying more than 2 cables offshore.

Pointe du Skeul to Pointe de Kerdonis

5.14

1 From the vicinity of Pointe du Skeul to that of Pointe de Kerdonis (2½ miles further NE) the inshore route leads NE then N, passing (positions given from Pointe de Kerdonis):

SE of Basse de la Rade (7 cables SE), thence:

E of an isolated 9·3 m patch (7 cables ESE), thence:

E of Les Galères Buoy (E cardinal) (5 cables NE) moored NE of charted dangers lying up to 3½ cables from the shore in the vicinity of Pointe de Kerdonis.

2 **Caution.** The tidal stream sets towards the dangers in the vicinity of Pointe de Kerdonis at certain states of the tide.

(Directions are given for Coureau de Belle-Île, E end at 5.37, and for offshore passage past La Loire approaches at 6.20)

Small craft anchorages

Port du Vieux Château

5.15

1 **General information.** Port du Vieux Château (Port de Ster Vraz) (47°22′·5N, 3°15′·0W) consists of Ster Vraz, a small bay entered N of Beg en Nuet (Pointe du Vieux-Château) and Ster Ouen, an inlet less than ¼ cable wide extending about 2 cables SSW from the S side of the bay.

5.16

1 **Directions.** Care is necessary to avoid above-and below-water rocks which extend about 1½ cables W and S of the N entrance point of Ster Vraz, and encumber the bay E of the entrance to Ster Ouen. It has been reported that the S side of the bay W of the entrance to Ster Ouen is steep-to.

Caution. The tidal stream sets across the entrance to the bay, see 5.10 for further details.

2 **Useful mark:**

Roc'h Toul (2½ cables S of Beg en Nuet), a distinctive rock with a hole through it visible from NW, helps to locate Ster Vraz which is not easily identified from seaward.

5.17

1 **Anchorage:** near the head of Ster Ouen for a few small craft; untenable in strong winds between SW and NW or when there is a heavy swell from W or NW; a rope used

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to secure boats spans the main E arm of the inlet where it divides into two branches.

Facilities and supplies: none.

Port Goulphar

5.18

1 **General information.** Port Goulphar (47°18′·2N, 3°13′·6W), an inlet used by a few fishing craft, is sheltered except from SW winds and swell from seaward when it is unsafe.

Directions. The line of bearing 015° of Goulphar Light (5 cables N of Port Goulphar) (5.11) open ESE of an hotel (about 5 cables SSW of the light) is reported to lead into the entrance of the inlet which extends NE.

2 **Clearing bearing.** The line of bearing 115° of La Truie Beacon-tower (isolated danger) (2 miles SE of Goulphar Light) (5.13), open SSW of Pointe du Talut (1¼ miles WNW of the beacon-tower), clears close SSW of the dangers lying W of Port Goulphar entrance.

Anchorage: at NE end of inlet, outside fishing boat moorings.

Supplies: provisions.

Port Kerel

5.19

1 **Anchorage** (47°17′·8N, 3°12′·1W) about 5 cables SW of the head of the creek, flat sandy bottom good holding.

Port Herlin

5.20

1 **Anchorage** (47°18′·0N, 3°10′·0W) about 1½ to 2 cables off the beach, bottom sand; exposed to S.

Port Maria

5.21

1 **Anchorage** (47°17′·6N, 3°04′·2W) flat sandy bottom, outside fishing boat moorings; exposed to E.

Supplies: provisions at Locmaria (1 km W).



Port Maria from E (5.21)
(Original dated 1996)
(Photograph – Mr T S Plews, Yacht "Du Bleiz")

COUREAU DE BELLE-ÎLE AND PASSAGE DE L'EST

GENERAL INFORMATION

Charts 2822, 2823

Waterways

5.22

1 **Coureau de Belle-Île** (5.27) is entered between Pointe des Poulains (47°23′N, 3°15′W), the NW end of Belle-Île, and the SW point of Presqu'île de Quiberon (7 miles NE). The passage leads about 15 miles SE passing SW of the chain of islands, shoals and reefs whose four principal groups are (positions given from Pointe du Conguel, the SE point of Presqu'île de Quiberon):

2 Chaussée de la Teignouse (extending 1½ miles ESE and S).
Chaussée du Béniguet (4 miles SE).
Île Houat (6½ miles SE) and Chaussée de l'Île aux Chevaux (8 miles SE).
Île Hoëdic (11 miles SE) and Chaussée des Cardinaux (13 miles SE).

5.23

1 **Passage de l'Est** (5.105) leads N then NW from the SE end of Coureau de Belle-Île, passing E of Chaussée des Cardinaux then NE of the other reefs and islands listed at 5.22. The description of this passage includes the principal anchorages and harbours of Île Houat (5.131) and of Île Hoëdic (5.118).

5.24

1 **Passages** connecting Coureau de Belle-Île with the inner end of Passage de l'Est, each passing between two of the four groups of reefs and islets listed at 5.22, are (positions given from Pointe du Conguel):

2 Passage de la Teignouse (2 miles SE) (5.66); the most used and only lit of the three passages.
Passage du Béniguet (5 miles SE) (5.86); deep but narrow.
Passage des Sœurs (10 miles SE) (5.99); shallowest of the three passages.

3 Navigation of these three passages is not difficult in fair weather and good visibility. In less favourable conditions, especially during the in-going tidal stream, vessels bound for Baie de Quiberon are advised to use Passage de l'Est or anchor in Rade du Palais (47°21′N, 3°08′W) (5.52) until the weather improves.

5.25

1 **Small craft channels,** whose use requires local knowledge and suitable tidal and weather conditions, lead:
Through Chausée de la Teignouse (5.72).
S and E of Île Houat (5.90).

Flow

5.26

1 **Tidal streams** in Coureau de Belle-Île and in the passages connecting it with the inner end of Passage de l'Est, are rotary clockwise. The flow is much influenced by the wind.

In Coureau de Belle-Île the maximum rates are about 1½ kn: see 5.31 for further details.

2 In the passages (5.24) the tidal streams are stronger and at times set across the channel, notably during the first hour after HW and LW. Maximum rates occur midway between the times of HW and LW when the tidal streams set in the direction of the channels. Further details are

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given later for each passage: the rates are from old reports and are thought to be somewhat exaggerated.

COUREAU DE BELLE-ÎLE

General information

Charts 2822, 2823

Routes

5.27

1 Coureau de Belle-Île is approached from:
NW between Plateau des Birvideaux (47°29′N, 3°17′W) and the W coast of Presqu'île de Quiberon (4 miles ENE).
W between Plateau des Birvideaux and Les Poulains (4 miles S of the plateau) (5.12).

2 The channel is entered between Pointe des Poulains (47°23′N, 3°15′W) and Beg er Lan (7 miles NE) and leads SE to its S entrance between Pointe de Kerdonis (9 miles ESE of Pointe des Poulains) and Basses des Cardinaux (9 miles E of Pointe de Kerdonis).

Routes through Coureau de Belle-Île pass either SW or NE of Bancs de Taillefer (6 miles E of Pointe des Poulains), shoals with a least charted depth of 8·3 m lying in mid-channel.

Pilotage

5.28

1 See 5.5.

Regulations

5.29

1 **Prohibited anchorage.** Anchoring and fishing are prohibited, owing to submarine cables, in the area shown on the chart extending from the S coast of Presqu'île de Quiberon (47°28′N, 3°07′W) SSW to Belle-Île and SE to the S coast of Île Houat.

Rescue

5.30

1 **Coastguard station** (1.75):
Fort Saint-Julien (47°29′·8N, 3°07′·5W) (5.149).
Lifeboat stations (1.77):
Le Palais (47°21′N, 3°09′W) (5.50).
Port Maria (47°28′·5N, 3°07′·5W) (5.57).

Tidal streams

5.31

1 For details of the tidal streams at the entrances to Coureau de Belle-Île see information on the chart:
3¼ miles NE of Pointe des Poulains.
1½ miles ENE of Pointe de Kerdonis.

2 In Coureau de Belle-Île the tidal streams are rotary clockwise, except close inshore, and set generally as follows:

Interval from HW Brest	*Direction*
–0620	NW
–0320	NE
–0020	E to SE
+0240	SW to W

The rates are greatest, from 1 to 2 kn at springs, when the directions are N to NE and W.

The S-going set is of short duration and weak.

The wind has a considerable influence on the flow.

3 Close to the N coast of Belle-Île the times of commencement and direction of the tidal streams are:

Interval from HW Brest	Direction
Between Pointe des Poulains and Pointe de Taillefer	
–0605	ESE
–0120	WNW

4 Maximum rates: springs 1 kn, neaps ½ kn.

Off Le Palais	
–0605	SSE
–0135	NNW

Principal marks

5.32

1 **Landmarks** on the N coast of Belle-Île:
Pointe des Poulains Lighthouse (white square tower and dwelling, red lamp; 18 m in height) (47°23′N,3°15′W).



Pointe des Poulains Lighthouse from W (5.32)
(Original dated 1994)
(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

Taillefer Coastguard signal station (disused) (white building) (47°21′·8N, 3°09′·4W).
Pointe de Kerdonis Lighthouse (white square tower, red top and white dwelling; 14 m in height) (47°19′N, 3°03′W).

2 Landmarks on the NE shore of Coureau de Belle-Île:
Port Maria Main Lighthouse (white truncated tower, black band and top ; 25 m in height) (47°28′·8N, 3°07′·4W).
Château Turpault (4 cables SW of Port Maria Main Light) on Beg er Lan, the SW point of Presqu'île de Quiberon. See view of Port Maria.
Quiberon church (3 cables NE of Port Maria Main Light).

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Old fort (47°23′·3N, 2°57′·6W) on the summit of Île Houat.

3 **Major Lights:**

Pointe des Poulains Light-as above.

Goulphar Light (47°19′N, 3°14′W) (5.11).

Pointe de Kerdonis Light-as above.

La Teignouse Light (47°27′N, 3°03′W) (5.69).

Directions

(continued from 4.13 or 4.207)

North-western approach

5.33

1 **Initial position** about 47°33′N, 3°17′W.

A white sector (098°–143°) of Port Maria Main Light (47°28′·8N, 3°07′·4W) (5.32) leads into the entrance of the NW approach to Coureau de Belle-Île, passing (positions given from the light):

2 NE of Plateau des Birvideaux which is covered by a green sector of Port Maria Main Light and extends 1½ miles ENE from Plateau des Birvideaux Light (7 miles W) (4.11), and:

SW of Roche Guillo (4 miles NNW), over which Port Maria Main Light is obscured, and which lies 5 cables NW of Beg an Aud, the NW point of Presqu'île de Quiberon. A dangerous wreck lies 5 cables SW of the rock.

3 The NW approach then continues SE into Coureau de Belle-Île, passing:

SW of the rocks bordering the W coast of Presqu,île de Quiberon.

5.34

1 **Useful marks** on Presqu'île de Quiberon:

Kéridenvel tower (square; elevation 43 m) (47°30′·8N, 3°08′·3W).

Fort Saint-Julien Coastguard Station (1 mile N of Port Maria Main Light) (5.149).

Kerné water towers (3 cables SSW of Fort Saint-Julien).

Western approach

5.35

1 **Initial position** approximately 47°26′N, 3°18′W.

Another white sector (051°–081°) of Port Maria Main Light (47°28′·8N, 3°07′·4W) (5.32) leads through the W approach to Coureau de Belle-Île, passing (positions given from the light):

SSE of an 8·4 m patch (6½ miles W) at the S end of Plateau des Birvideaux, which is covered by a green sector, and:

2 NNW of Les Poulains Buoy (W cardinal) (8¼ miles SW) (5.12) marking the W end of Les Poulains, which is covered by a red sector.

Charts 2822, 2823, 2835

Route south of Bancs de Taillefer

5.36

1 **Initial position** about 1½ miles N of Pointe des Poulains.

By day the line of bearing 129° of Pointe de Kerdonis (47°19′N, 3°03′W) open NE of Pointe de Taillefer (5 miles NW), or at night the line of bearing 131° of Pointe de Kerdonis Light (5.32), leads SE to a position about 1½ miles NW of Pointe de Taillefer, passing (positions given from Pointe des Poulains):

2 NE of Nord Poulains Buoy (N cardinal) marking Les Chambres (1 cable N), a drying reef, thence:

NE of Le Gareau Beacon-tower (starboard hand; 4 m high) marking Le Gareau, a drying reef (1½ miles ESE), thence:

NE of an 8·9 m patch (2½ miles ESE) lying 4 cables NE of Pointe de Kerzo.

3 The recommended route then leads ESE to a position about 2 miles ESE of Pointe de Taillefer, passing about 5 cables off the point.

5.37

1 **Leading marks:**

Front mark: Pointe de Taillefer (47°22′N, 3°09′N).

Middle mark: Le Gareau Beacon-tower (starboard hand) (2½ miles WNW of front mark) (5.36).

Rear mark: Pointe des Poulains Lighthouse (1½ miles WNW of middle mark) (5.32).

2 By day the alignment (289½°) of these marks, or at night the line of bearing 289½° of Pointe des Poulains Light, astern, leads ESE to the SE entrance of Coureau de Belle-Île, passing (positions given from Pointe de Kerdonis Light):

3 NE of Basse du Palais (3¾ miles NW), thence:

Close to an unmarked wreck (charted depth 12 m) (3¼ miles NW), thence:

SSW of Chaussée de l'Île aux Chevaux, a chain of islets, drying and below-water rocks extending 2¼ miles both WNW and ESE from Île aux Chevaux (4½ miles NE), a conical grass covered islet, thence:

4 SSW of Le Chariot Buoy (S cardinal) marking the S extremity of Basses du Chariot (7 miles E), thence:

SSW of Basse des Cardinaux (9 miles E), an unmarked rocky patch lying 1 mile S of Les Grands Cardinaux Light (5.111).

5.38

1 **Clearing bearing.** The line of bearing 272° of Goulphar Light (47°19′N, 3°14′W) (5.11), open S of Pointe de Kerdonis Light (7 miles E) (5.32), clears close S of Basse des Cardinaux. Note that the alignment (271°) of these two lights passed over the patch.

5.39

1 **Useful marks:**

Le Palais Citadel (47°21′N, 3°09′W).

Grimaud Tost (47°21′·3N, 2°57′·9W) and Grimaud Pell (2 cables ESE), two tall rocks of similar height.

Caspéraquiz (47°20′·3N, 2°53′·5W) a rock 10 m high.

Île Hoëdic church (tower with pointed roof) (47°20′·5N, 2°52′·7W) and disused signal station (white building) (close NW).

Charts 2357, 2835, 2823

Route north-east of Bancs de Taillefer

5.40

1 **Initial position** 47°27′N, 3°10′W, about 2 miles SW of Beg er Lan (5.32).

The route leads SE for about 5 miles, passing (positions given from Beg er Lan):

SW of Le Pouilloux Buoy (S cardinal) (5 cables SSW) moored 2 cables S of the extremity of the reef extending 3 cables SW from Beg er Lan, thence:

2 SW of Basse Cariou Buoy (W cardinal) marking the SW extremity of Basse Cariou (1½ miles SE), thence:

SW of Roche du Hoche (2¾ miles SE), an unmarked rock lying 2 cables W of Goué Vas Ouest, a shoal marked at its NW and SE extremities respectively

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by Goué Vas Nord Buoy (N cardinal) and Goué Vas Sud Light-buoy (S cardinal), thence:
NE of Bancs de Taillefer (5 miles SSE).

5.41

1 The route then leads SSE to join the route that passes S of Bancs de Taillefer (5.36) in a position SW of Île aux Chevaux (47°21′N, 2°58′W) (5.37), passing (positions given from the islet):
WSW of Basse Occidentale (2 miles WNW), thence:
WSW of Er Gréheu (1½ miles W) a rocky patch lying 5 cables W of Le Pot de Fer, drying rocks marked by a buoy (isolated danger).

5.42

1 **Caution.** The tidal stream sets N, NE then E towards the dangers on the NE side of the route from about 6 hours before until HW Brest.

5.43

1 **Clearing line.** The sector limit (340°) of a white sector of Port Maria Main Light (47°28′·8N, 3°07′·4W) (5.32) clears close WSW of Basse Cariou and of Roche du Hoche, which are covered by a green sector. Farther SSE the same limit (340°) clears ENE of Bancs de Taillefer, which are covered by a white sector.

5.44

1 **Useful marks:**
Le Four Beacon-tower (S cardinal) (1 mile SE of Beg er Lan) (5.76).
Two beacon-towers (E and W cardinal) (5.71) marking Les Esclassiers (2 miles S of La Teignouse Light).
Le Rouleau Beacon-tower (W cardinal) (47°23′·8N, 3°00′·2W) (5.88).

(Directions are given for Passage de la Teignouse at 5.70, for Passage des Sœurs at 5.102, for Passage du Béniguet at 5.88, for Passage de l'Est at 5.112, and for the offshore route past La Loire approaches at 6.20)

Sauzon

Chart 2822 (see 1.18)

General information

5.45

1 **Sauzon harbour** (47°22′·5N, 3°13′·0W) is entered 3 cables SSE of Pointe du Cardinal. It is used by small craft and fishing boats.

Outer anchorage: off the harbour entrance, W of the prohibited anchorage area (5.29); depth from 4 to 6 m; sheltered from S and W.

Harbour

5.46

1 **General layout**:
Outer harbour: sheltered by two breakwaters; entrance 80 m wide, 3 m deep.
Inner harbour: 2000 m long and about 150 m wide; dries, bottom sand and mud; entrance between moles is 20 m wide, dries 1 m; wet dock, depth 1·5 m sill drying 3·5 m, situated on W shore 3 cables S of entrance.

Directions

5.47

1 **Initial position** 47°22′·8N, 3°12′·8W, about 1 cable E of Le Gareau Beacon-tower (starboard hand) (5.36).

Leading marks
Front: NW Breakwater head Light (white turret, green top; 5 m in height) (47°22′·6N, 3°13′·0W).
Rear: W Mole Light (white tower, green top; 9 m in height) (1½ cables SSW of front mark).
The alignment (about 204°) of these lights leads to the harbour entrance.

2 **Useful marks:**
SE Breakwater head Light (white truncated turret, red top; 5 m in height) (½ cable SE of NW Breakwater head light).

Berths

5.48

1 **Outer harbour:**
E side: restricted anchorage and moorings for small craft.
W side: small craft berth bows E lying to an anchor, stern secured to a flat ledge which covers at half tide, marked at its N end by a beacon (special).

2 **Inner harbour:**
E side: berth alongside mole dries 1 m bottom hard sand.
W side: quay and landing slip, sheltered by W mole, dries about 1·5 m alongside; used mainly by fishing boats: wet dock provides about 40 berths.

Port services

5.49

1 **Facilities:** yacht club.
Supplies fresh water; provisions.
Communications: airfield 5 km SSE.

Le Palais

General information

5.50

1 **Description.** Le Palais (47°21′N, 3°09′W), population 2400 (2003), is the principal port of Belle-Île. It is used by ferry boats and fishing vessels: there are berths for 250 small craft.

Port Authority: Bureau du Port on Quai Bonnelle.

Limiting conditions

5.51

1 **Least charted depth:** 2·9 m in entrance.
Deepest berths: in Avant-Port (5.55).
Tidal levels. See information in *Admiralty Tide Tables.* Mean spring range about 4·4 m; mean neap range about 2·1 m.
Strong winds from NW through NE: to SW can make the outer harbour untenable by small craft.

Arrival information

5.52

1 **Port radio:** see 1.41 for details.
Anchorage in Rade du Palais: E of the harbour entrance and of the prohibited anchorage area (5.29); depth 3 to 18 m; bottom mud and sand good holding; sheltered from SW but uncomfortable in E winds due to choppy seas.

2 **Pilotage:** no local Pilots; La Loire Pilots (6.5) are qualified to pilot vessels into Le Palais.

Harbour

5.53

1 **General layout**. The harbour consists of the following four sections listed from E to W:
Avant-Port sheltered by two breakwaters; berths for ferries and fishing vessels; moorings for small craft.

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Le Palais from SE (5.50)

(Original dated 1994)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

Inner drying harbour; bordered N by the walls of the citadel, S by quays.

Wet dock closed by single lock gate; used for laying-up vessels.

Bassin de la Saline; a marina entered past Pont de l'Hôpital, a lifting bridge.

Directions

5.54

1 **Initial position** about 3 cables E of the harbour entrance.

Approach. North Breakwater Light (white round tower, green top: 10 m in height) (47°20′·9N, 3°08′·9W) bearing between 225° and 305° leads towards the entrance, passing (positions given from the light):

S of a 2·9 m patch (2 cables NE), and:

N of a 0·8 m patch (1½ cables SE) lying 1 cable offshore.

2 **Entrance,** 40 m wide between rocks at the foot of the two breakwater heads, faces SE.

Caution. Ferry boats enter and leave at frequent intervals and take up most of the channel.

3 **Useful marks**:

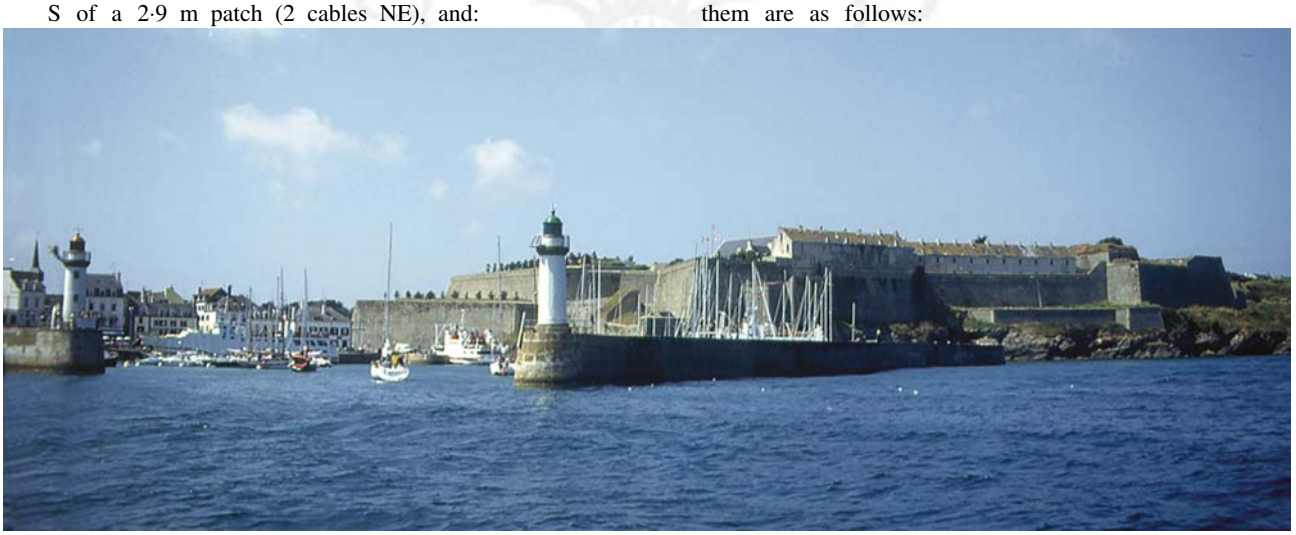
S Breakwater head Light (white round tower, red lantern; 10 m in height) (about 60 m SW of N Breakwater head Light).

Le Palais Citadel (2 cables NW).

Basins and berths

5.55

1 Details of basins, listed from E to W, and the berths in them are as follows:



Entrance to Le Palais from SE (5.54)

(Original dated 1996)

(Photograph – Mr T S Plews, Yacht "Du Bleiz")

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Name	*Remarks*
Avant-Port	Depth from 2 to 4 m.
Môle Bourdelle	N Breakwater; trots for small craft; ferries berth overnight stern-to inner end
Môle Bonnelle	S Breakwater; reserved for fishing vessels
Quai Macé	W side of basin; reserved for ferry boats
Inner harbour, S side Quai de l'Yser	At entrance to inner harbour; depth alongside E end 2 m, W end dries 0 m; fuelling station
Wet dock entrance	Lock 10 m wide at top, 7·5 m at base, sill 1 m above chart datum.

Port services

5.56

1 **Repairs:** gridiron for vessels up to 20 m long at W end N side of inner harbour; boatyard.

Other facilities: custom house; yacht club.

Supplies fuel; fresh water; provisions.

Communications: daily passenger and car ferry service to Quiberon (5.65); small airfield 4 km W.

Port Maria

Chart 2357

General information

5.57

1 **Description.** Port Maria (47°28′·5N, 3°07′·5W), an artificial harbour on the W side of the bay on the S coast of Presqu'île de Quiberon, is a ferry terminal and fishing port. It is the port of the town of Quiberon, population 4600 (2003), that is also served by Port Haliguen (5.151) which is principally a small craft harbour.

Limiting conditions

5.58

1 **Deepest berths:**

Anchorage in middle of harbour: about 3 m.

Ferry terminal, E berth (5.64).

Tidal levels. See information in *Admiralty Tide Tables.* Mean spring range about 4·4 m; mean neap range about 2·1 m.

Weather: heavy seas from SE to SW result in dangerous breakers in the harbour entrance; in these conditions it is advisable to seek shelter off Belle-Île or in Port Haliguen (5.151).

Arrival information

5.59

1 **Pilotage:** no official pilot.

Prohibited anchorage: in the approach within the area shown on the chart (5.29).

Château Turpault *Môle Sud* *Môle Central*



Môle Est *Front Leading Light*

Port Maria from E (5.57)

(Original dated 1994)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

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Harbour

5.60

1 **General layout:** ferry terminal in NE part; anchorages for fishing vessels and small craft in the W part, the bottom elsewhere being rocky.

5.61

1 **Tidal streams.** In the vicinity of Les Deux Frères (2 cables S of the harbour entrance) the tidal streams are weak; about 1 mile farther S their times of commencement and direction are:

Interval from HW Brest	*Direction*
–0135	W
+0520	E

Maximum rates: springs 3 kn, neaps 1½ kn, at local half tide.

Directions

5.62

1 **Initial position** 1 mile S of Port Maria Main Light (5.32).

Port Maria Leading Lights:

Front light (white truncated tower, black band and top; 13 m in height) (1 cable NE of breakwater head).

Rear light (similar structure, 11 m in height) (on sea front 230 m N of front light).

The alignment (006½°) of these lights leads to the vicinity of the breakwater head passing (positions given from front light):

2 W of Basse an Tréac'h (7 cables S), a 1·5 m patch marked by An Tréac'h Buoy (isolated danger), thence:

Close E of the beacon (port hand) (3 cables S) marking the E-most of Les Deux Frères (two rocks, the W-most drying 3·2 m), thence:

W of the beacon (starboard hand) (1½ cables SSW) marking Basse Frégate (drying 0·8 m).

5.63

1 **Useful marks**

Port Maria Main Light (47°28′·8N, 3°07′·4W) (5.32).

Quiberon church (3 cables NE of the main light) (5.32).

Môle Est Head Light (white tower, green lantern; 7 m in height) (2 cables SSE of the main light).

Breakwater Light (white tower, red lantern; 5 m in height) (½ cable farther SE).

Berths

5.64

1 **Ferry terminal:** two slips, depths alongside E-most 3 m.

Môle Central: quay on SW side and extending SW, depth alongside 2 m; fuelling point on molehead.

Môle Sud: landing steps near junction with breakwater, depth alongside less than 1 m; two slips depth alongside extremities 1 m and drying 0 m.

Port services

5.65

1 **Repairs:** small boatyard; gridiron near root of Môle Sud.

Other facility: custom house.

Supplies: fuel; fresh water. provisions.

Communications: ferry services to Belle-Île (5.50), Île Hoëdic (5.129) and Île Houat (5.138).

Passage de la Teignouse

General information

5.66

1 **Passage de la Teignouse** leads generally NE from Coureau de Belle-Île to Baie de Quiberon, passing:

SE of Chaussée de la Teignouse, an area of islets, reefs and shoals extending 1½ miles ESE and S from Pointe du Conguel (47°28′N, 3°05′W), and:

NW of Chaussée du Béniguet, a similar but detached area extending from 2¼ miles SSE to 5 miles SE of Pointe du Conguel.

Controlling depth in the fairway: 11.7 m.

5.67

1 **Prohibited anchorage.** Anchoring and fishing are prohibited in the SW approach to the passage; see 5.29 for further details.

5.68

1 **Tidal streams** are rotary clockwise; they set in the general direction of the passage when the rates are greatest, 3 kn at springs, but across it at other times; see information on the chart for further details. The tidal streams are greatly influenced by the wind.

5.69

1 **Principal mark:**

La Teignouse Lighthouse (white tower, red top; 20 m in height) (47°27′·5N, 3°02′·7W).



La Teignouse Lighthouse from SE (5.69)

(Original dated 1997)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

Major light:

La Teignouse Lighthouse — as above.

Directions

(continued from 5.44)

5.70

1 **Initial position** about 3 miles SW of La Teignouse Light (5.69).

To enter Passage de la Teignouse. The line of bearing 036° of La Teignouse Light, which bisects the white sector (033°–039°), leads NE into the passage, passing (positions given from the light):

2 SE of Goué Vas Sud Light-buoy (S cardinal) (2¼ miles SW) (5.40), thence:

NW of Basse du Milieu Light-buoy (starboard hand) (1¾ miles SSW) moored 1 cable W of Basse du Milieu.

5.71

1 **By day.** Initial position 1¾ miles SW of La Teignouse Light, where Les Esclassiers Beacon-towers (W and E

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cardinal; both 5 m high) (1¾ miles S of La Teignouse Light) are in alignment (119½°).

The line of bearing 068° of Abbaye de Saint-Gildas-de-Rhuys (prominent square tower) (47°30′·1N, 3°50′·3W) (Chart 2823) leads ENE to the S entrance of Baie de Quiberon, passing (positions given from La Teignouse Light):

2 SSE of Goué Vas Est Light-buoy (port hand) (1½ miles SW), thence:
NNW of NE Teignouse Light-buoy (starboard hand) (1 mile SE) moored ¾ cable N of a 9·8 m patch, thence:
NNW of a dangerous wreck (1 mile SE), thence:
SSE of Basse Nouvelle Light-buoy (port hand) (7 cables SE) marking a 12 m patch 3 cables SE of Basse Nouvelle.

(Directions continue for Baie de Quiberon at 5.150)

Small craft passages through Chaussée de la Teignouse

General information

5.72

1 **Routes.** Chaussée de la Teignouse contains a network of interconnecting passages. Various different routes between Coureau de Belle-Île and Baie de Quiberon are used by small craft depending on the weather and tidal conditions.

2 The route closest inshore passes:
S of Le Four Beacon-tower (S cardinal) (47°27′·8N, 3°06′·5W) (5.76), thence:
N of Les Trois Pierres Beacon-tower (N cardinal) (1 mile ESE of Le Four Beacon-tower) (5.76), thence:
S then E of Roc er Vy (47°27′·9N, 3°04′·3W), a group of rocks from 0·5 to 2·5 m high.

3 Between Les Trois Pierres Beacon-tower and Roc er Vy two alternative routes lead off into Passage de la Teignouse passing N and S respectively of Er Pondeu Beacon-tower (S cardinal) (6 cables ESE of Les Trois Pierres Beacon-tower) (5.82).

4 An outer route passes:
S of Basse du Chenal (47°26′·8N, 3°05′·5W) into Passage de la Teignouse, thence:
Between La Teignouse Lighthouse (5.69) and Basse Nouvelle (4 cables ESE of the light).

5.73

1 **Limiting conditions:**
Daylight and good visibility are essential.
The route E of Roc er Vy requires local knowledge; it should be attempted only near slack water.

5.74

1 **Tidal streams** are rotary clockwise; the maximum rates occur at half tide when the tidal stream sets in the direction of the channels; at other times it may set across the channels especially during the first hour after HW and LW. See the chart for information concerning Passage de la Teignouse; further details of tidal streams in the small craft passages are:

Interval from HW Brest	*Remarks*
+0520	Tidal streams turning: E in passage N of Les Trois Pierres N in passage E of Roc er Vy
–0620	Tidal stream turning N in passage between La Teignouse Light and Basse Nouvelle
–0135	Tidal streams turning: W in passage N of Les Trois Pierres S in passage E of Roc er Vy
–0020	Tidal stream turning S in passage between La Teignouse Light and Basse Nouvelle.

2 The directions of the tidal streams given in the table are those of maximum rate which is:
4 kn at springs, 2 kn at neaps in the passage E of Roc er Vy.
3 kn at springs, 1½ kn at neaps in the other two passages.

5.75

1 **Caution.** The directions given in the following paragraphs (5.76 to 5.85) are derived from small craft reports; bearings and depths are taken from the largest scale French chart which is based on a survey made in 1898.

Directions for route north of Les Trois Pierres and of Er Pondeu

(continued from 5.40)

5.76

1 **Initial position** 47°27′·6N, 3°06′·5W, 2 cables S of Le Four Beacon-tower (S cardinal, 4·5 m high).

To pass Les Trois Pierres. The line of bearing 093° of La Teignouse Light (47°27′·5N, 3°02′·7W) (5.69) leads E through the passage, passing (positions given from Le Four Beacon-tower):

2 S of the extremities of the reefs extending from 5 to 6 cables S from the shore between Beg er Vil (5 cables N) and Pointe du Conguel (1¼ miles ENE), and:
N of Les Trois Pierres (rocks drying up to 4·8 m) (9 cables ESE), marked at their NE end by Les Trois Pierres Beacon-tower (N cardinal; 4·5 m high).

(Directions for route S of Er Pondeu Beacon-tower are given at 5.83)

5.77

1 **Leading marks:**
Front mark: Beacon (S cardinal) (6 cables ENE of Les Trois Pierres Beacon-tower) standing on a rock drying 2·7 m.
Rear mark: Two white cairns (3 cables NE of the front mark), nearly in alignment, standing on Iniz En Toull Bras.

2 The alignment (about 048°) of these marks leads 1 cable NE from a position 3 cables E of Les Trois Pierres Beacon-tower (N cardinal) (5.76), passing (positions given from front mark):
SE of a 2·3 m patch (2½ cables WSW), and:
NW of a 1·6 m patch (3 cables SW).

(Directions for route E of Roc er Vy are given at 5.80)

5.78

1 **Leading marks:**
Front mark: Le Tonneau Beacon (isolated danger) (4 cables NE of Les Trois Pierres Beacon-tower) standing on a rock drying 3·3 m.
Rear mark: Quiberon church (2¼ miles NW of the front mark) (5.32).

2 The alignment (310°) of these marks astern then leads SE through the passage NE of Er Pondeu, passing (positions given from front mark):

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NE of the 1·6 m patch (3½ cables SSE) (5.77), thence:
SW of a 0·8 m patch (6½ cables ESE), thence:
Close NE of Basse Er Pondeu (7½ cables SE), and:
SW of a rock (drying 0·3 m) (8½ cables ESE).

5.79

1 **Leading marks:**
Front mark: Les Trois Pierres Beacon-tower (N cardinal) (1¾ miles W of La Teignouse Light) (5.76).
Rear mark: Le Four Beacon-tower (S cardinal) (9½ cables WNW of the front mark) (5.76).

2 The alignment (about 289½°) of these marks astern then leads ESE into Passage de la Teignouse, passing:
SSW of a 2·3 m patch (3 cables SW of La Teignouse Light).

(Directions are given for Passage de la Teignouse at 5.70, and for the route W of Basse Nouvelle at 5.85).

Directions for route east of Roc er Vy

(continued from 5.77)

5.80

1 **Initial position** 47°27′·6N, 3°04′·5W, at the intersection of the 048° and 310° alignments previously described at 5.77 and 5.78 respectively.

To approach the passage E of Roc er Vy: the route leads ENE to a position ¾ cable E of the beacon (S cardinal) (6 cables ENE of Les Trois Pierres Beacon-tower) (5.77), passing not less than 30 m SE of the same beacon.

5.81

1 **To enter** the passage E of Roc er Vy: the line of bearing 343° of the beacon (E cardinal) (47°28′·2N, 3°04′·4W) marking the extremity of the drying reef extending nearly 1½ cables NE from En Toull Bihan, an islet 9 m high, open E of the beacon (E cardinal) (3¼ cables farther SSE) marking the NE corner of Roc er Vy, leads very close ENE of Roc er Vy to a position about ½ cable from the nearer beacon, whence the channel continues NNW passing from 25 to 40 m E of the same beacon.

5.82

1 **Leading marks:**
Front mark: Beacon (E cardinal) (47°27′·9N, 3°04′·2W) (5.81) marking the NE corner of Roc er Vy.
Rear mark: Er Pondeu Beacon-tower (S cardinal) (7½ cables S of front mark).

2 The alignment (about 186°) of these marks astern then leads N out of the passage E of Roc er Vy, passing approximately (positions given from front mark):
W of a depth of 1·2 m (½ cable NE), thence:
E of a rock (drying 0·4 m) (1 cable NNW), thence:
W of a rock (drying 1 m) (1 cable NE), thence:
E of the beacon (E cardinal) (3¼ cables NNW) (5.81) marking the NE extremity of the foreshore of En Toull Bihan.

(Directions for the ESE approach to Port Haliguen are given at 5.157)

Directions for the route south of Er Pondeu

(continued from 5.76)

5.83

1 **Initial position** 47°27′·6N, 3°05′·1W, 1 cable NE of Les Trois Pierres Beacon-tower (N cardinal) (5.76), whence the route leads SSE to a position about 2 cables SE of the same beacon-tower.

2 **Leading marks:**
Front mark: Les Trois Pierres Beacon-tower (N cardinal) (5.76).
Rear mark: Port Maria Main Lighthouse (2 miles NW of front mark) (5.32).

The alignment (312°) of these marks astern then leads SE into Passage de la Teignouse, passing (positions given from front mark):

3 NE of several isolated pinnacle rocks (1½ cables SSE to 4 cables SE) with depths from 0·8 to 1·8 m over them, and:
SW of a pinnacle rock (drying 1·5 m) (4 cables ESE), thence:
SW of the SW corner of Er Pondeu (reef drying 4·2 m) which extends about 1 cable W from Er Pondeu Beacon-tower (S cardinal) (6 cables ESE) (5.82).

(Directions are given for Passage de la Teignouse at 5.70, and for the route W of Basse Nouvelle at 5.85)

Directions for route north of Goué Vas Ouest then west of Basse Nouvelle

(continued from 5.40)

5.84

1 **Initial position** 47°26′·3N, 3°05′·4W, about 1 cable NNW of Goué Vas Nord Buoy (N cardinal) (5.40) and about 2 cables SSE of a wreck with a clearance of 2 m over it, position doubtful.

2 The route leads ENE, passing (positions given from La Teignouse Light):
NNW of Goué Vas Ouest (2 miles SW) and of other shoal patches farther E marked by Goué Vas Est Light-buoy (port hand) (1½ miles SW) (5.71) moored off their E side, thence:
SSE of Er Pondeu (1¼ miles WSW), the drying reef marked by Er Pondeu Beacon-tower (S cardinal) (5.82), thence:
SSE of a rocky 2·3 m patch (3 cables SW).

5.85

1 **Leading marks:**
Front mark: Beacon-tower (E cardinal) (2 miles S of La Teignouse Light) (5.71) marking the E end of Les Esclassiers.
Rear mark: Pointe de Kerdonis Light (7 miles S of the front mark) (Chart 2823) (5.32).

2 The alignment (185°) of these marks astern leads N into Baie de Quiberon, passing:
W of Basse Nouvelle (3¾ cables ESE of La Teignouse Light), thence:
E of the 5 m depth contour surrounding La Teignouse.

(Directions continue for Baie de Quiberon at 5.150, and for ESE approach to Port Haliguen at 5.157)

Passage du Béniguet

Chart 2835

General information

5.86

1 **Route.** Passage du Béniguet (47°24′·5N, 3°00′·0W) leads NNE from Coureau de Belle-Île to the SE approach to Baie de Quiberon, passing SE of Chaussée du Béniguet and NW of the dangers lying off the NW end of Île Houat. It is about 1¼ cables wide at the narrowest point and unlit.

Least charted depth: 15·4 m in the fairway of the N approach.

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5.87

1 **Tidal streams** in the passage are rotary clockwise; the directions given below are those of the maximum rates:

Interval from HW Brest	*Remarks*
–0050	Stream turns towards SSW; later increases to a rate of 3 kn at springs, 1½ kn at neaps, at local half tide
+0540	Stream turns towards NE; later increases to similar rates.

Directions

(continued from 5.44)

5.88

1 **Initial position** 47°24′N, 3°01′W, about 7 cables SW of Le Grand Coin, the islet 13 m high situated at the SE end of Chaussée du Béniguet.

Passage du Béniguet, leads NE then NNE, passing (positions given from Le Grand Coin):

2 NW of Le Rouleau Beacon-tower (W cardinal; 7 m high) (8 cables S), thence:

NW of a 0·8 m patch (5 cables S) at the extremity of the reef extending 2 cables W from Île Guric, thence:

SE of Le Grand Coin, marked at its SE corner by a beacon-tower (E cardinal; 4·5 m high), and:

3 WNW of Bonen Bras (Bonnenn Braz) Beacon-tower (W cardinal. 5 m high) (3 cables SE) standing on a rock drying 5·5 m, and of the reef of drying and below-water rocks extending 3 cables NNE that includes Men er Broc (Brog), a prominent rock (5 m high) lying 1 cable NE of the beacon-tower, thence:

ESE of an unmarked isolated rock (2 cables NE) with a depth of 5·4 m over it.

4 When passing between Le Grand Coin and Bonen Bras vessels should pass closer to Le Grand Coin which is comparatively steep-to.

Clearing marks:

Front mark: Le Grand Coin Beacon-tower (E cardinal).

Rear mark: Pointe de Taillefer (7 miles WSW of front mark) (chart 2823) on Belle-Île.

The alignment (248°) of these marks clears close NNW of the reef extending 3 cables NNE from Bonen Bras Beacon-tower (W cardinal).

5.89

1 **Northern approaches.** Routes then lead either N or NE into the NW end of Passage de l'Est, passing (positions given from Le Grand Coin):

E of Chaussée du Béniguet.

NW of Grande Basse de Houat (1½ miles ENE).

W and SE, respectively, of Petite Basse de Houat (1¼ miles NE)

(Directions are given for Passage de l'Est NW end at 5.113)

Small craft passages south and east of Île Houat

General information

5.90

1 **Routes** and limiting conditions. Passage de l'Île aux Chevaux, the channel passing between Île aux Chevaux, (47°21′·5N, 2°58′·2W) (5.37) and Île Houat (1¼ miles NE), and the routes leading thence E into Passage des Sœurs (5.99) and N along the E side of Île Houat, are used by small craft by day in fair weather.

2 **Caution.** The directions given in subsequent paragraphs (5.93 to 5.98) are derived from small craft reports; bearings and depths are taken from the largest scale French chart which in this area is based on surveys made between 1898 and 1908; only those charted dangers with depths of less than 3 m over them are mentioned.

5.91

1 **Prohibited anchorage.** Anchoring and fishing are prohibited S and E of Île Houat within the areas shown on the chart, see 5.29 and 5.109 for further details.

5.92

1 **Tidal streams** in Passage de l'Île aux Chevaux are rotary clockwise; the directions given below are those of the maximum rates:

Interval from HW Brest	*Remarks*
–0620	Stream turns towards E subsequently increasing to a rate of 2 kn at springs, 1 kn at neaps, at local half tide
–0200	Stream turns towards W subsequently increasing to similar rates.

Directions for Passage de l'Île aux Chevaux

(continued from 5.44)

5.93

1 **North-western approach.** Initial position 47°23′N, 3°01′W, about 9 cables SW of Le Rouleau Beacon-tower (W cardinal) (5.88). The route leads about 2 miles SE, passing:

2 SW of Men Portz Plous , two drying rocks (1¼ miles SE of Le Rouleau Beacon-tower). Below-water rocks, lying parallel to and about 4 cables off the SW coast of Île Houat, extend 5 cables SE and NW from Men Portz Plous. Thence:

NE of a 1·0 m patch (1¼ miles WNW of Île aux Chevaux) and of Le Pot de Fer (3 cables farther ESE), drying rocks marked close W by a buoy (isolated danger).

3 **Clearing bearing.** The line of bearing 116° of Beg er Faut (47°19′·8N, 2°52′·9W), the S point of Île Hoëdic, open NNE of Île aux Chevaux, clears 2 cables NNE of Le Pot de Fer.

5.94

1 **South-western entrance.** The channel between Île aux Chevaux and Le Pot de Fer (nearly 1 mile WNW) (5.41) is clear of charted dangers except for a rock 3·3 m high lying 1 cable N of the islet.

5.95

1 **Passage de l'Île aux Chevaux.** From a position about 2½ cables N of Île aux Chevaux, the passage leads 2½ miles E into Passage des Sœurs, passing:

S of a 2·7 m patch (8 cables NE of Île aux Chevaux), thence:

N of Men er Vag (1½ miles E of Île aux Chevaux), a drying rock marked by buoy (isolated danger) moored about ½ cable SW, and:

2 S of a 0·6 m patch (5 cables NNW of Men er Vag), thence:

N of Les Sœurs Beacon-tower (W cardinal) (1 mile ESE of Men er Vag) (5.102), and:

S of a shoal with a least charted depth of 1·4 m (6 cables NNW of Les Sœurs Beacon-tower).

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5.96

1 **Useful marks:**

Beg Pell (1¼ miles NE of Île aux Chevaux), the S-most of three large high rocks off the SE corner of Île Houat.

Er Spernec Bras Beacon-tower (S cardinal; 5 m high) (1 mile E of Beg Pell).

(Directions are given for Passage des Sœurs at 5.102)

Directions for route east of Île Houat

5.97

1 **Leading marks:**

Front mark: Men er Houteliguet Beacon-tower (isolated danger) (5 cables NNE of Beg Pell).

Rear mark: Er Yoc'h (8 cables N of front mark).

2 The alignment (about 006°) of these marks leads N from Passage de l'Île aux Chevaux (5.95) to a position about 1 cable S of the front mark, passing (positions given from Beg Pell):

W of a 0·6 m patch (3 cables ESE) (5.95), thence:

E of a rock (7 m high) (1 cable NE), which is steep-to on its E side.

Men er Houteliguet Beacon-tower (isolated danger) may be passed on either side at a distance of about ½ cable.

5.98

1 **Leading marks:**

Front mark: Men er Houteliguet Beacon-tower (isolated danger) (5.97).

Rear mark: Try Men (5 cables SSW of front mark) lying close S of Beg Pell.

2 The alignment (about 208°), astern, of the front mark and the left hand edge of Try Men leads NNE into the NW part of Passage de l'Est, passing (positions given from front mark):

WNW of Bonen ar Rade (4 cables NE), a rock drying 0·6 m) , thence:

ESE of Er Yoc'h (8 cables N) (5.97).

(Directions are given for Passage de l'Est, NW part, at 5.113)

Passage des Sœurs

General information

5.99

1 **Route.** Passage des Sœurs (47°21′N, 2°55′W) leads N then NE from Coureau de Belle-Île to Rade de Hoëdic passing:

E of Chaussée de l'Île aux Chevaux (5.37) and of the dangers lying SE of Île Houat.

W of the dangers lying W of Île Hoëdic.

The fairway is marked but unlit.

2 **Least charted depth** in the fairway: 5·5 m in position 47°21′·2N, 2°55′·0W, about 2 cables W of Les Sœurs Beacon-tower (W cardinal) (5.102).

5.100

1 **Prohibited anchorage.** Anchoring and fishing are prohibited in the NE part of the passage, in the area shown on the chart, see 5.109 for further details.

5.101

1 **Tidal streams** in Passage des Sœurs are rotary clockwise; the directions given below are those of the maximum rates:

Interval from HW Brest	*Remarks*
–0020	Stream turns towards SSW; subsequently increases to a rate of 3 kn at springs, 1½ kn at neaps, at local half tide
+0540	Stream turns towards NNE; subsequently increases to similar rates.

Directions

(continued from 5.44)

5.102

1 **Initial position** 47°20′·0N, 2°55′·5W, about 2 cables W of Er Palaire.

The line of bearing 019° of the steeple of Abbaye de Saint-Gildas-de-Rhuys (47°30′·1N, 2°50′·3W) (chart 2823) leads into the Passage de Sœurs, passing (with positions given from Er Palaire):

2 WNW of a rock awash (1 cable NW) thence:

ESE of a 3 m patch (5 cables WNW) at the SE end of Chaussée de l'Île aux Chevaux, thence:

WNW of Coh Carreg (8 cables NNE), an above water rock, thence:

Close WNW of Les Sœurs Beacon-tower (W cardinal; 4·5 m high) (1 mile NNE) standing 1 cable NW of Les Sœurs, two rocks awash.

5.103

1 **Leading marks:**

Front mark: Drévantec Vraz (47°20′·8N, 2°56′·7W), a rock 8 m high.

Rear mark: Pointe de Kerdonis Light (5 miles WSW of front mark) (Chart 2823) (5.32).

2 The alignment (245°) of these marks, astern, leads ENE from a position about 1½ cables N of Les Sœurs Beacon-tower (W cardinal) (5.102) into Rade de Hoëdic, passing (positions given from Les Sœurs Beacon-tower):

SSE of a 4·3 m patch (4 cables NNW), thence:

SSE of Bonen er Rouzès (8 cables NNE) a rock which covers and uncovers.

5.104

1 **Clearing marks:**

Front mark: Drévantec Vraz (47°20′·8N, 2°56′·7W) (5.103).

Rear mark: the SE extremity of Belle-Île (7 miles SW of front mark).

The alignment (236°) of these marks clears:

1 cable SE of Bonen er Rouzès (5.103).

2 cables SE of the 3·9 m patch on the SE edge of Banc de Houat (1¼ miles NE of Bonen er Rouzès).

(Directions are given for NW part of Passage de l'Est at 5.113)

PASSAGE DE L'EST

General information

Charts 2835, 2823

Routes

5.105

1 Passage de l'Est is the name given to the route leading N then NW to Baie de Quiberon (47°30′N, 3°00′W) (5.139), passing:

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E of Les Grands Cardinaux (47°19′N, 2°50′W), thence:
NE of Île Hoëdic and Île Houat (2 and 7 miles, respectively, NW of Les Grands Cardinaux), thence:
SW of Plateau de la Recherche (7 miles NNE of Les Grands Cardinaux).

5.106

1 Other routes leading off from the entrance of Passage de l'Est, NE towards La Vilaine estuary (17 miles NE of Les Grands Cardinaux) (5.292), and E to Rade du Croisic (11 miles E of Les Grands Cardinaux) (5.384) are described in subsequent sections of this chapter.

Depths

5.107

1 **Least charted depth** in the fairway of Passage de l'Est is 11·1 m (2¾ miles NE of Île Hoëdic) at the N end of Plateau de l'Artimon, an area of foul ground over which there is a heavy sea in bad weather.

Pilotage

5.108

1 See 5.5.

Traffic regulations

5.109

1 **Prohibited anchorage.** Anchoring and fishing are prohibited, owing to submarine cables, in an area shown on the chart lying between the W part of the N coast of Île Hoëdic (47°21′N, 2°53′W) and the E coast of Île Houat (4 miles farther NW) and extending N to Plateau du Grand Mont (9 miles N of the Île Hoëdic) thence NE to the mainland.

2 The landing point of the cables on Île Hoëdic is marked by the alignment (175°) of two beacons (blue and white, circular topmarks) (uncharted), and on the E point of Île Houat by a pair of beacons (uncharted).

Tidal streams

5.110

1 In the entrance to Passage de l'Est, in position 47°18′N, 2°44′W, the tidal streams are reported to set:

Interval from HW Brest	*Direction*	*Spring rate (kn)*
–0620	W	1
–0520	NW	½
–0320	NNE	2
–0020	E	¼
+0140	S	1
+0240	SW	3

2 The stronger rates probably occur only at extreme spring tides or when the rivers are in spate. The rates at neaps are half those at springs.

In the inner part of Passage de l'Est, N of Île Hoëdic and Île Houat, the tidal streams are weak and variable.

Principal marks

5.111

1 **Landmarks:**

Les Grands Cardinaux Lighthouse (red tower white band; 27 m in height) (47°19′N, 2°50′W).



Les Grands Cardinaux Lighthouse from S (5.111)
(Original dated 1994)
(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

Île Hoëdic church and disused signal station (47°20′·5N, 2°52′·7W) (5.39).
Le Four Lighthouse (white tower, black diagonal stripes, green top; 27 m in height) (47°18′N, 2°38′W).
Île Houat church (47°23′·5N, 2°57′·3W) (5.135).
La Vieille (conical islet) (47°24′N, 2°57′W).
La Teignouse Lighthouse (47°27′N, 3°03′W) (5.69).

2 **Major lights:**

Le Four Light - as above.
Goulphar Light (47°19′N, 3°14′W) (5.11).
Pointe de Kerdonis Light (47°19′N, 3°03′W) (5.32)
La Teignouse Lighthouse - as above.

Directions

(continued from 5.44)

Entrance

5.112

1 **Passage de l'Est** is entered between Basse des Cardinaux (47°18′·5N, 2°50′·0W), which is unmarked, and Ouest Basse Capella Light-buoy (W cardinal) (5¾ miles farther SE) moored 1½ miles W of Basse Capella, the N part of Banc de Guérande.

2 The route then leads N, passing:

A safe distance E of Les Grands Cardinaux (1 mile N of Basse des Cardinaux), marked by Les Grands Cardinaux Light (5.111) and by Cohfournik Beacon-tower (E cardinal; 3·5 m high) (3 cables

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Le Four Lighthouse (5.111)
(Original dated 1994)
(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

ENE of the light), observing that depths of 12 m or less lie up to 5 cables E and SE of Cohfournik Beacon-tower, thence:

3 E of Bonen, a shoal extending 3 cables N from Er Gurannic'h (1 mile N of Les Grands Cardinaux), rocks drying 1·6 m and marked by a beacon-tower (E cardinal; 3·5 m high).

(Directions are given for approaches to Rivière de Pénerf and La Vilaine estuaries at 5.298, and for Rade du Croisic and approaches at 5.391).

By day

5.113

1 **Leading Marks:**

Front mark: La Teignouse Lighthouse (47°27′·5N, 3°02′·7W) (5.69).

Rear mark: Quiberon church tower (3½ miles WNW of front mark (5.32).

The alignment (298°) of these marks leads WNW, from a position 3 miles NNE of Les Grands Cardinaux to the entrance of Baie de Quiberon, passing (positions given from front mark):

2 Over Plateau de l'Artimon (11 miles ESE) (5.107), thence:

SSW of Plateau de la Recherche (9½ miles E), marked at its W end by Recherche Light-buoy (W cardinal), thence:

NNE of Banc de Houat (8 miles ESE), thence:

NNE of an area of mussel beds (5 miles ESE) marked on its N limit by two light-buoys (cardinal), thence:

3 SSW of a group of unmarked wrecks (4¾ miles ESE), thence:

NNE of Grande Basse de la Houat (4¼ miles SE), thence:

NNE of Petit Basse de la Houat (3½ miles SE).

5.114

1 **Clearing Marks:**

Front mark: Arzon church spire (47°33′·0N, 2°53′·5W) (5.149).

Rear mark: Baden church spire (4½ miles NNE of front mark (chart 2358) (5.202).

The alignment (346°) of these marks clears 5 cables WSW of Plateau de la Recherche.

5.115

1 **Useful marks:**

Men Groise beacon (E cardinal); 3·5 m high) (47°22′·8N, 2°54′·9W).

Er Yoc'h (47°23′·4N, 2°56′·2W).

Pointe du Grand Mont (47°30′N, 2°51′W), a prominent headland with a disused signal station (white house; uncharted) on its extremity and Abbaye de Saint-Gildas-de-Rhuys (5.71) 5 cables farther E.

At night

5.116

1 **Leading lights:**

Front: La Teignouse Light (5.69).

Rear: Port Maria Main Light (3½ miles WNW of front light) (5.32).

The alignment (293°) of these lights leads WNW, from a position 4 miles NNE of Les Grands Cardinaux to the entrance of Baie de Quiberon, passing (positions given from front light):

2 Over Plateau de l'Artimon (11½ miles ESE) (5.107), thence:

SSW of Plateau de la Recherche (9½ miles E), marked at its W end by Recherche Light-buoy (W cardinal) (5.113), thence:

3 NNE of Banc de la Houat (8 miles ESE), thence:

Close SSW of two unmarked wrecks (4¾ miles ESE), noting the route passes over another unmarked wreck (14 m) (4¾ m,iles ESE), thence:

NNE of Grande Basse de la Houat (4¼ miles SE), thence:

NNE of Petit Basse de la Houat (3½ miles SE).

5.117

1 **Clearing line:** the limit (297°) of a white sector of Port Maria Main Light (5.32) clears 3 cables NNE of Petit Basse de la Houat, which is covered by a green sector, and also about 2 cables NNE of Banc de la Houat, which lies beyond the nominal range of the same green sector.

(Directions continue for Baie de Quiberon at 5.150, and for the channel N of Plateau de la Recherche at 5.305).

Île Hoëdic

Chart 2835

General information

5.118

1 **Harbours and anchorages,** except for Rade de Hoëdic (47°22′N, 2°51′W) (5.125), are suitable for small craft only.

Supplies: fuel is not available; fresh water may be rationed in summer; provisions are scarce.

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Port de la Croix

5.119

1 **General information.** Port de la Croix (47°20′·1N, 2°52′·5W), protected on the S and E by moles, dries 2·8 m at its entrance in the SE corner and 3 m or more within the harbour. It is exposed to winds from seaward, especially those from E or S, and is dangerous if a heavy swell is running.

5.120

1 **Directions.** Small craft are reported to enter by the following route; local knowledge is necessary.

Leading marks:

Front mark: Madavoar Beacon-tower (S cardinal) (1 mile WNW of Les Grands Cardinaux Light), which must not be confused with Roch Melen Beacon-tower (S cardinal) (6 cables farther W).

Rear mark: NE corner of Hoëdic old fort (7 cables NW of front mark).

2 The alignment (about 320°) of the front mark with the right hand edge of the old fort leads NW from a position about 5 cables NW of Basse des Cardinaux (5.37) to a position about 2 cables SE of the front mark, passing (positions given from front mark):

NE of Ar Fer (2·8 m patch) (1 mile SSE), thence:

3 NE of Basse Sainte-Anne (1 m patch) (6 cables S), and:

SW of Truguen Menut (rocks drying 1·6 m) (5 cables SE), thence:

NE of Basse er Grouière (rocks drying 1 m) (2 cables S).

5.121

1 The route then leads generally NW, passing about ½ cable SW of Madavoar Beacon-tower (S cardinal) (5.120) and a rock (drying 0·7 m) (1 cable SE of Madavoar Beacon-tower), to the harbour entrance channel which lies between:

Reefs extending 2½ cables E and 2 cables N from Roch Melen Beacon-tower (5.120), and:

Reefs on the foreshore marked near their SW corner by Men Cren Beacon-tower (starboard hand) (2 cables NE of Roch Melen Beacon-tower).

5.122

1 **Anchorage** off the entrance in the channel is reported to be suitable at springs for craft that can take the ground, and for other craft at neaps.

Berths alongside the S mole reported to dry 3 m at the outer end. Numerous mooring buoys.

East coast anchorage

5.123

1 **General information.** A fair weather anchorage for small craft is reported to lie in the entrance of the bay between Grand Mulon (rock 16 m high) (47°20′·3N, 2°51′·7W) and Beg er Lannegui, a point (3 cables N); bottom, sand and weed; sheltered from N through W to S.

5.124

1 **Directions.** Small craft are reported to approach the anchorage by the following route:

Initial position 47°21′·0N, 2°50′·8W, 7 cables E of Beg Lagad, the NE point of Île Hoëdic. The route leads S, passing (positions given from Beg Lagad):

E of Er Hoélannec (rock 7 m high) (6 cables ESE), which is step-to on its E side, and:

W of Bonen (9 cables E), shoals extending 3 cables N from Er Gurannic'h Beacon-tower (E cardinal) (5.112).

2 **Leading marks:**

Front mark: Grand Mulon (8 cables S of Beg Lagad) (5.123).

Rear mark: Men Cren Beacon-tower (starboard hand) (5 cables WSW of front mark) (5.121).

3 The alignment (about 241°) of the N edge of the front mark with the rear mark then leads from a position 2 cables W of Er Gurannic'h Beacon-tower WSW to the anchorage, passing (positions given from front mark):

NNW of Bonen (rocks drying 0·6 m) (6 cables E), thence:

SSE of Men Rond , a 0·3 m rocky patch (4 cables NE).

Rade de Hoëdic

5.125

1 **Roadstead** lying NE of Île Hoëdic, and E of the prohibited anchorage area (5.109) shown on the chart, depth 13 to 14 m, bottom sand and mud, good holding, is sheltered from S and SW winds.

Good anchor berths lie about 5 cables N and 1 mile NE of Beg Lagad, the NE point of Île Hoëdic; the latter berth is shown on the chart.

Port de l'Argol

5.126

1 **General information.** Port de l'Argol (47°20′·7N, 2°52′·5W) although protected on its NW side by a breakwater, is not well sheltered from N, the direction of the *Vent Solaire* (1.135) at night.

Depths vary from 2 m in the entrance to 0·5 m alongside the slip at the root of the breakwater. The head of the landing slip on the E side of the harbour dries 0 m.

5.127

1 **Directions.** To approach from NNE. A white sector (183°–203°) of Port de l'Argol Light (white tower, green top; 7 m in height) on the breakwater head leads to the harbour entrance, passing (positions given from the light):

2 WNW of a beacon (N cardinal) marking Men Lienienn, a rock which covers and uncovers (4 cables NE); and of other drying rocks lying up to 1 cable offshore between it and the harbour entrance, all of them covered by a green sector, noting the 2.8 m patch 1 cable W of the beacon, And:

ESE of La Chèvre (drying rocks) (4 cables N) marked by a beacon (isolated danger) and covered by another green sector.

5.128

1 To approach from NNW. Another white sector (143°–163°) of Port de l'Argol Light (5.127) leads to the harbour entrance, passing (positions given from the light):

ENE of En Tal (4 miles NW), the low sandy NE point of Île Houat, covered by a green sector, and:

Over Banc de Houat in a least charted depth of 3·5 m (6 cables ENE of En Tal), thence:

2 ENE of Men Groise Beacon (E cardinal) (2¾ miles NW) (5.115), marking a rock (drying 1·7 m), thence:

ENE of a buoy (E cardinal) (1¾ miles NW) marking Er Rouzès, a rock awash. The ruins of a beacon-tower stand on the rock. Thence:

3 WSW of La Chèvre (4 cables N) (5.127).

ENE of a light-buoy (special) (3 cables NW) marking a submarine cable.

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5.129

1 **Anchorage** off the harbour entrance, E of the prohibited anchorage area (5.109) and S of La Chèvre (5.127), is sheltered from E through S to W.

Berths in the harbour:

three white conical mooring buoys for 10 to 12 small craft each.

Anchor N of fairway, stern secured to breakwater.

Slip at root of breakwater, reserved for Quiberon ferry.

Port Neuf

5.130

1 **Berth:** landing slip (47°20′·8N, 2°53′·2W), about 1½ cables ESE of Pointe de Vieux Château; E side can be used in fair weather.

Port Saint-Gildas

General information

5.131

1 Port Saint-Gildas (47°23′·6N, 2°57′·4W) on the N coast of Île Houat is well sheltered and the only harbour on an island noted for its unique wild flowers and sandy beaches.

Much of the harbour is taken up by local fishing vessels' moorings; it is a popular port of call for small craft in summer.

Limiting conditions

5.132

1 **Depths:** from 2 m to 2·5 m in the N part of the harbour; S-most part dries. A rock in the middle of the harbour is a danger to craft of more than 1 m draught.

Tidal levels: no data available; see chart for levels at adjacent ports.

Outer anchorages

5.133

1 Anchorages in the approaches to Port Saint-Gildas lie (positions given from Port Saint-Gildas Light):

E of Grande Basse de Houat (1¼ miles NNW) in depths from 14 to 17 m, sand clay and mud, good holding, sheltered from SW winds.

E of La Vielle (7 cables NNE), in the position shown on the chart (8 cables NE).

2 S of La Vieille, in the position shown on the chart (2½ cables NE) or farther N, in depths from 7 to 10 m, sand and mud, good holding, sheltered from SE to W. A shellfish farm (6 cables NNE), marked by buoys (special; uncharted) at its four corners, lies about 1 cable SSW of La Vieille. A mussel bed marked by buoys (1 mile NNE) is centred about 5½ cables NNE of La Vieille.

3 For small craft; off the harbour entrance where the holding is poor, or off Port Navallo (8 cables WNW) where it is better; both exposed to the *Vent Solaire* (1.135) at night.

Directions

5.134

1 **North-eastern approach.** A white sector (210°–240°) of Port Saint-Gildas Light (white truncated turret, green top; 5 m in height), standing on the breakwater head, leads to the harbour entrance, passing (positions given from the light):

2 NW of Er Jeneteü (6 cables ENE), a rock 13 m high off En Tal (5.128) the NE point of Île Houat, covered by a green sector, and:

SE of La Vieille (7 cables NNE) (5.111) and a shellfish farm (6 cables NNE) (5.133), covered by another green sector, thence:

NW of Basse Holern, a rock (drying 3·6 m) (3 cables ENE) at the extremity of a reef extending 1 cable NW from the shore.

5.135

1 **Northern approach.** Leading marks:

Front mark: Port Saint-Gildas Light (5.134).

Rear mark: Île Houat church spire (1¼ cables S of the front mark).

By day the alignment (about 185°) of these marks, or at night a white sector (168°–198°) of Port Saint-Gildas Light, leads to the entrance, passing (positions given from the light):

2 E of Grande Basse de Houat (1¼ miles NNW), covered by a green sector, and:

W of the mussel bed (1 mile NNE) (5.133), thence:

W of La Vieille (7 cables NNE) (5.111) and a shellfish farm (6 cables NNE) (5.133), covered by another green sector, and:

E of Roche de l'Euménide (6 cables NNW), thence:

E of Basse Carpaliée, a drying reef (1½ cables NW) marked by a beacon (N cardinal).

Berths

5.136

1 **Inside breakwater:** fishing vessels usually secure stern to a mooring and bows to the breakwater; the W-most berth is reserved for the ferry.

Caution. Rocks extend about 8 m from the base of the breakwater; a shallow rocky patch has been reported (1981) to lie between the third and fourth vertical ladder from the breakwater head.

There are a few moorings for small craft.

5.137

1 **Quay** on S side of harbour dries 2·5 m alongside.

Port services

5.138

1 **Supplies:** marine diesel fuel; fresh water may be rationed in summer.

Communications: ferry service to Quiberon (5.65).

BAIE DE QUIBERON

General information

Charts 2823, 2357

Description

5.139

1 Baie de Quiberon fairway is entered between the E extremity of Chaussée de la Teignouse (47°27′N, 3°02′W) (5.22) and the SW corner of Plateau du Grand Mont (5 miles ENE) and leads 6 miles NW to the head of the bay. It has an average width of 3 miles between the shoals and reefs lying about 2 miles offshore on the NE and SW sides of the bay.

2 Approach routes lead off from the main fairway to the following destinations:

Port Haliguen (47°29′N, 3°06′W) (5.151).

La Trinité-sur-Mer (47°35′N, 3°02′W) (5.166).

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Golfe du Morbihan entrance (47°33′N, 2°55′W) described in the next section (5.186).

Topography

5.140

1 Baie de Quiberon, entered between Pointe du Conguel (47°28′·2N, 3°04′·7W) and Pointe du Grand Mont (47°30′N, 2°52′W) is bounded:

W by Presqu'île de Quiberon.
N by the mainland.
E by Presqu'île de Rhuys.

The coast at the head of the bay is low-lying; at the sides, especially on the E shore, it is higher.

Shellfish beds

5.141

1 Numerous shellfish beds, some uncharted, lie in the NW part of the bay, in the area shown on the charts. Containers standing up to 1·3 m above the sea bed are laid in this area.

Pilotage

5.142

1 Described at 5.5.

Traffic Regulations

5.143

1 Anchoring and grounding are prohibited in areas where numerous shellfish beds exist, see 5.141.

Prohibited area

5.144

1 A dangerous wreck (47°31′·2N, 3°05′·5W) containing explosives, marked by Bugalet Buoy (isolated danger), lies in the W part of the bay. Anchoring, dredging, trawling, fishing and diving are prohibited within 250 m of the wreck, in the area shown on the chart.

Rescue

5.145

1 **Coastguard station** (1.75): Fort Saint-Julien (47°29′·7N, 3°07′·5W) (5.149).

Lifeboat stations (1.77):

La Trinité-sur-Mer (47°35′N, 3°02′W) (5.166).
Port du Crouesty (47°32′·6N, 2°53′·6W) (5.215).

Tidal streams

5.146

1 See information on the chart for details of the tidal stream in the middle of the bay (47°30′N, 3°00′W).

5.147

1 Near the head of Baie de Quiberon, the tidal streams are weaker and set:

Interval from HW Brest	*Remarks*
–0615	Slack water
–0515	NNW-going stream begins
–0315	Reaches maximum rate, 1 kn
–0015	Slack water
+0045	SSE-going stream begins
+0245	Reaches maximum rate, 1½ kn

5.148

1 Off Plateau du Grand Mont (47°28′·3N, 2°55′·0W) the tidal stream is rotary clockwise and sets:

Interval from HW Brest	*Direction*	*Spring rate (kn)*
–0615	SSW	½
–0515	NW	½
–0315	NE by E	½
–0015	ESE	½
+0245	SSE	1

Principal marks

5.149

1 **Landmarks:**

La Teignouse Lighthouse (47°27′N, 3°03′W) (5.69).
Quiberon church (47°29′N, 3°07′W) (5.32).
Fort Saint-Julien (8 cables NNW of the church).
Kéridenvel tower (47°30′·8N, 3°08′·3W) (5.34).
Locmariaquer church (47°34′N, 2°57′W) (5.233).
Arzon church (spire) (47°33′N, 2°53′W).

2 **Major lights:**

La Teignouse Light — as above.
Port Navalo Light (47°33′N, 2°55′W) (5.201).

Directions

(continued from 5.71, 5.85 or 5.117)

5.150

1 **Initial position:** approximately 47°28′N, 2°58′W, noting the unmarked wreck (13 m) 6 cables WSW.

The fairway leads NW to the head of Baie de Quiberon, passing (positions given from La Teignouse Light unless stated otherwise):

2 SW of Chimère Buoy (S cardinal) marking Basse de la Chimère (6 miles ENE), the SW-most danger of Plateau du Grand Mont, thence:

NE of Basse Nouvelle Light-buoy (port hand) (7 cables SE) (5.71), marking Basse Nouvelle, the E-most danger of Chaussée de la Teignouse, thence:

3 NE of Banc de Quiberon, marked at its S and N ends respectively by Sud Banc de Quiberon Light-buoy (S cardinal) (7 cables NNE) and Quiberon Nord Buoy (N cardinal) (2¼ miles N), and:

4 SW of Basses de Méaban and of Les Buissons de Méaban, dangers extending SE and W respectively from Îlot Méaban (6 miles NE) and marked by (positions given from Îlot Méaban): Méaban Buoy (S cardinal) (1 mile SSE), Le Grand Buisson Beacon (W cardinal; 5 m high) (4 cables W), Buissons de Méaban Buoy (S cardinal) (1 mile W), Le Petit Buisson Beacon (W cardinal; 2·5 m high) (1¼ miles WNW), thence:

5 SW of Roche Souris (4½ miles NNE) marked by Souris Buoy (isolated danger), and of Roche Rat (1 mile farther NW) marked by Le Rat Buoy (isolated danger), thence:

NE of Bugalet Buoy (isolated danger) marking the wreck containing explosives (4 miles NNW) (5.144), and of Men er Roué (1 mile farther NNW) a rock drying about 2 m marked by a beacon (isolated danger; 2 m high).

(Directions are given for Port Haliguen approaches at 5.157, for Port d'Orange at 5.163, for Le Pô at 5.157, for La Trinité-sur-Mer approach at 5.173, and for Golfe du Morbihan approach at 5.202)

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Vieux Port



Bassin Est *Bassin Ouest*

New Breakwater
Head Light-beacon

Port Haliguen from NNE (5.151)

(Original dated 1994)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

Port Haliguen

Chart 2357 (see 1.18)

General information

5.151

1 **Position and function.** Port Haliguen (47°29′N, 3°06′W) consists mainly of a marina with 720 berths at pontoons and 40 at moorings. A few coastal fishing vessels also use the port.

The roadstead (5.154) contains a number of mooring buoys for naval vessels and provides shelter for vessels waiting to enter Morbihan (5.191).

2 **Approach and entry.** The roadstead may be approached from both N and S of Banc de Quiberon (2½ miles E of the harbour) (5.157).

The harbour is entered by passing either N or S of shoals lying 3 and 5 cables ENE of the entrance.

3 **Port Authority:** Bureau du Port, Port Haliguen I, 56170 Quiberon: situated on S side of Vieux-Port (5.154).

Limiting conditions

5.152

1 **Deepest berth:** 2 m.

Tidal levels. See information in *Admiralty Tide Tables.* Mean spring range about 4·5 m; mean neap range about 2·3 m.

Maximum size of vessel handled: length 35 m, draught 2·5 m.

Arrival information

5.153

1 **Port radio** (1.41): see *Admiralty Maritime Communications* for details.

Pilotage: See 5.5.

Harbour

5.154

1 **Roadstead** lies between Presqu'île de Quiberon and Banc de Quiberon (2 miles E).

Port. Two breakwaters contain three basins:

Bassin Ouest lying SW of the entrance.

Bassin Est entered N of Appontement Central, the pier separating it from Bassin Ouest.

Vieux-Port, the old drying harbour, entered at the S corner of Bassin Ouest.

2 Visiting small craft berth in Bassin Est on arrival, at the pontoon extending E from the head of Appontement Central or at the buoy off the pierhead.

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5.155

1 **Tidal streams** in the roadstead (1½ miles ENE of the harbour entrance) set:

Interval from HW Brest	*Rate (kn)*		
	Direction	*Springs*	*Neaps*
–0515	N	¾	½
–0315	NW	1	½
–0215	WNW	½	¼
–0115	SSW	¼	¼
–0015	S	½	¼
+0245	S	1½	¾
+0445	S	½	¼

5.156

1 **Landmarks,** (positions given from the first named):

New Breakwater Light-beacon (white tower, red top; 8 m in height) (47°29′·4N, 3°05′·9W) on outer spur of S breakwater.

Old Breakwater Light-beacon (white tower, red top; 7 m in height) (¾ cable S) on inner spur of S breakwater.

Disused lighthouse (white tower, green top; 11 m in height) (2 cables SSW) on W side of Vieux-Port entrance.

Fort Neuf (4 cables SSE).

Directions

(continued from 5.82, 5.85 or 5.150)

5.157

1 **East-south-eastern approach.** Initial position about 1 mile E of La Teignouse Light (5.69).

A white sector (299°–306°) of Port Haliguen New Breakwater Light (5.156) leads to the harbour entrance, passing (positions given from the light):

2 SSW of Sud Banc de Quiberon Light-buoy (S cardinal) (2¾ miles ESE) (5.150) marking the S end of Banc de Quiberon, covered by a red sector, and:

NNE of Chaussée de la Teignouse extending 2 miles ESE from Pointe du Conguel (1½ miles SE) and covered by another red sector, thence:

3 NNE of Basse du Furet (7 cables SE), an unmarked pinnacle rock lying 1½ cables E of Les Pierres Dupont Beacon (E cardinal), thence:

SSW of Port Haliguen Buoy (S cardinal) marking an isolated 1·7 m patch (3 cables ENE).

5.158

1 **East-north-eastern approach.** Initial position about 3 miles ENE of Port Haliguen.

A white sector (246°–252°; obscured on both sides) of Port Maria Main Light (1 mile WSW of Port Haliguen) (5.32) leads to a position 3 cables ESE of the harbour entrance, passing (positions given from Port Haliguen New Breakwater head Light):

2 NNW of Quiberon Nord Buoy (N cardinal) (2½ miles E) (5.150) marking the N end of Banc de Quiberon, thence:

SSE of an unmarked detached 3·9 m patch (5 cables ENE), thence:

SSE of Port Haliguen Buoy (S cardinal) (5.157).

A white sector (299°–306°) of Port Haliguen New Breakwater Light (5.156) then leads to the harbour entrance.

5.159

1 **North-eastern approach.** Initial position about 2 miles NE of Port Haliguen.

Another white sector (233°–240½°) of Port Haliguen New Breakwater Light (5.156) leads to the harbour entrance, passing (positions given from the light):

2 SE of a mooring buoy (5 cables NE) (5.161), and:

NW of a 3·9 m patch (5 cables ENE), covered by a red sector, thence:

NW of a 1·7 m patch (3 cables ENE) (5.157), covered by another red sector, thence:

SE of SE Olibarte Buoy (S cardinal) (1 cable NNW) marking Basse Olibarte.

5.160

1 **Useful marks** (positions given from Port Haliguen New Breakwater Light) (5.156):

NW Mole light (white structure, green top; 9 m in height) (½ cable WSW).

Beacon (N cardinal) (2½ cables NNW) marking a rock which dries 1.7 m.

Baguen Hir (5 cables NNW), a rock 4 m high.

Basins and berths

5.161

1 **Anchorage** in roads (5.154) in depths from 3 to 11 m, bottom sandy mud, good holding; sheltered from S through W to N.

Mooring buoy (white) belonging to the French Navy is moored 5 cables NE of Port Haliguen New Breakwater Light.

Bassin Ouest contains a pontoon complex and moorings for large yachts and fishing vessels.

2 **Bassin Est.** Four pontoons with finger berths extend N from the SW side of the basin; the W-most has 80 berths reserved for visitors; the E-most lies alongside the inner end of the breakwater.

Fore and aft moorings are laid on the W side of the basin S of Ponton d'Accueil, the reception berth (5.154) for visiting small craft.

3 **Vieux-Port.** Quay which dries alongside at the entrance and dries 2·15 m at S and W corners of basin; W side used by fishing boats, E side by small craft.

Port services

5.162

1 **Repairs** of all kinds carried out; gridiron on S side of Bassin Ouest; careening slip at SW corner of Bassin Est.

Other facilities: 13-tonne boat lift at E side of Vieux-Port; customs house in Quiberon; yacht club.

Supplies: fuel from floating service station at entrance to Bassin Est and at Vieux-Port E quay; fresh water at pontoons and quays; provisions from Quiberon (1 km W).

Small craft

Port d'Orange

5.163

1 **Description.** Port d'Orange (47°31′·4N, 3°07′·5W), the harbour of Saint-Pierre-Quiberon village, consists of Anse de Saint-Pierre a small drying bay sheltered by a mole extending 115 m NNE from its S entrance point.

2 **Directions.** The line of bearing 238° of Saint-Pierre-Quiberon church spire (2 cables SW of Port d'Orange mole head), just open SE of a large block of flats, leads to the vicinity of the mole head.

3 **Useful marks** (positions given from mole head):

Fort de Beg Rohu (7 cables SSE), on a spur between two beaches.

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Ours de Kerbourgnec Beacon (isolated danger) (3 cables SSE) marking a drying rock.
Ours de Kerret Beacon (starboard hand; 2 m high) (2 cables N) marking a rock drying 3·2 m.

4 **Drying berths** alongside the mole are used in fair weather only as the bottom of rock and sand is very hard. The slip alongside the outer end of W side of the mole is reported to dry 0·6 m at its head.

5 **Repairs** of all kinds at two boat yards.
Other facility: yacht club.

Le Pô

5.164

1 **Description.** Le Pô (47°34′·9N, 3°06′·0W), a small drying harbour once the port of Carnac (2 km E), consists of a jetty and a slip on the N side of Anse du Pô.

2 **Directions.** It has been reported (1983) that the following route is used by small craft.
Initial position 47°33′·6N, 3°08′·0W, about 3 cables S of Pointe Saint-Colomban.

3 **Approach.** The line of bearing 334° of Sainte-Barbe chapel (47°36′·5N, 3°08′·0W; uncharted), open WSW of Rocher Kerivor (rock 6 m high) (2 miles SSE of chapel), leads NNW across drying flats to a position 3 cables SSE of the rock.
Caution: the approach is encumbered with oyster beds; see 5.141 for further details.

4 **Entry.** The channel then leads N for 5 cables, passing (positions given from Rocher Kerivor):
W of Deux Frères Beacon (starboard hand) (2 cables SE), thence:
E of Rocher Kerivor thence:
W of another beacon (starboard hand) (1½ cables ENE).

5 The line of bearing 077° of Carnac church spire (1¼ miles ENE of Rocher Kerivor), open SSE of the S-most house on the quay at Le Pô (9 cables WSW of Carnac church), then leads into Anse du Pô.

6 **Jetty:** extends 75 m S from shore at Le Pô; both sides may be used; dries 2·5 to 4 m.
Slip: extends about 50 m SSW from shore 40 m W of jetty; dries 2·5 to 4 m.

Carnac-Plage

5.165

1 **General information.** Carnac-Plage, a holiday resort fronted by a sandy beach, lies between Pointe de Beaumer (47°34′·2N, 3°03′·1W) and Port en Dro (1 mile W), a small drying boat harbour for dinghies.

2 Several reefs extend up to 4 cables from the shore in the vicinity of Carnac-Plage; the extremities of the following are marked by beacons (S cardinal; 2·5 m high) (positions given from Pointe de Beaumer):
Karreg Bernard (4 cables SW).
Karreg Pellan (1 mile WSW).
Karreg Segal (1½ miles WSW).

3 **Anchorage** S of Pointe de Beaumer, bottom muddy sand good holding, is sheltered from W through N to E. Four buoys (special) are moored in the area; see 5.145 concerning oyster beds.

4 **Landing slip,** situated close W of Port en Dro entrance, dries 0·6 m at its head. It is approached on the alignment (011°) of a beacon (uncharted) at its head and Chapelle de Saint-Michel (47°35′·3N, 3°04′·3W) which stands on a hillock 43 m high.
Caution. A sewer extends 5 cables S from the shore 2 cables NE of the entrance to Port en Dro.

5 **Repairs** to hulls and engines by small boatyard.
Other facility: yacht club at Port en Dro.

La Trinité-sur-Mer

Chart 2358

General information

5.166

1 **Position.** La Trinité-sur-Mer (47°35′N, 3°02′W) lies on the W bank of Rivière de Crac'h 2 miles from its entrance on the N shore of Baie de Quiberon.
Function. La Trinité-sur-Mer, population 1400 (2003), is the most prestigious yachting centre in Bay of Biscay. It is also a centre for the local oyster farming industry.

2 **Port authority:** Bureau du Port de Plaisance de La Trinité-sur-Mer, BP12, 56470 La Trinité-sur-Mer. Office situated at the S end of Darse Centrale (5.169).

Limiting conditions

5.167

1 **Controlling depth:** 2·1 m on a bar at entrance to the port between Nos 7 and 12 Light-buoys.
Vertical clearance beneath Pont de Kerisper (5.177): 11 m.
Vessels 50 m long, 3 m draught can berth alongside.
Small craft: maximum draught 3 m; those of less than 2 m draught can berth at any state of the tide.

2 **Tidal levels,** See information in *Admiralty Tide Tables.* Mean spring range about 4·6 m; mean neap range about 2·2 m.

Arrival information

5.168

1 **Port radio** (1.41). See *Admiralty Maritime Communications*
Notice. In summer the harbour becomes very crowded: early notice is advisable if an alongside berth is required.
Traffic regulations.
Anchoring and fishing are prohibited in Rivière de Crac'h between the entrance and Dalh Buoy (5.176).

2 Power driven vessels more than 20 m long, lighters and oyster dredgers have right of way.
Vessels in the main channel have right of way over vessels entering or leaving the basins and their access channels.
Speed limit: 5 kn.

Harbour

5.169

1 **General layout.** There are four basins named, from S to N, Darse Sud, Le Vieux Port, Darse Centrale and Darse Nord.
Le Vieux Port is used by fishing vessels, the remaining basins by small craft. Visitors berth at Ponton d'Accueil on S side of Darse Centrale.

5.170

1 **Tidal streams.** The times of commencement and direction of the tidal streams off Darse Sud are:

Interval from HW Brest	*Direction*
–0550	N
+0010	S

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La Trinité-sur-Mer from S (5.166)
(Original dated 1994)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

Maximum rates: N-going, springs 2 kn, neaps 1 kn; S going, springs 3 kn, neaps 1½ kn.

5.171

1 **Weather.** The harbour is sheltered but winds between E and S produce a chop in the anchorages, especially near HW and during the out-going tidal stream.

5.172

1 **Landmarks.** Rivière de Crac'h entrance is not easily identified from a distance; the most prominent marks in its vicinity are:

Rivière de Crac'h Rear Leading Lighthouse (47°34′·4N, 3°00′·4W) (5.173) which is partially obscured on some bearings.

Îlot Méaban (3½ miles farther SE).

Directions

5.173

1 **Initial position** vicinity of 47°31′N, 2°59′W.

Rivière de Crac'h Leading Lights:

Front light (white turret, green top; 6 m in height; sectored light) (47°34′·1N, 3°00′·3W).

Rear light (white tower, green top; 15 m in height) (560 m NNW of front light).

2 The alignment (347°) of these lights leads in the intensified sector (337°–357°) of the rear light to the river entrance, passing (positions given from the front light):

WSW of Buissons de Méaban Buoy (S cardinal) (2¾ miles SSE) (5.150) marking Basse des Buissons and covered by a green sector of the front light, thence:

3 WSW of Le Petit Buisson (2¼ miles SSE), a reef marked by a beacon (W cardinal) (5.150) near its W end, and:

ENE of Roche Souris (2¼ miles SSW), covered by a red sector of the front light and marked by Souris Buoy (isolated danger) (5.150), thence:

4 WSW of Roche Révision (1¾ miles SSE), unmarked, thence:

ENE of Banc de Crac'h (1 mile S), thence:

WSW of the reef extending 1 mile SSE from Pointe de Kernevest (1½ cables SE). Mousker (4 cables SSE), a whitened rock, lies on the reef. And:

5 ENE of Petit Trého Light-buoy (port hand) (6 cables SSW) marking the SE extremity of reefs extending 6 cables SSE from Pointe de Kerbihan, thence:

ENE of the rocky shoal extending 6½ cables SE from Pointe de Kerbihan.

6 At night the white sector (345°–013½°) of Rivière de Crac'h Front Leading Light leads to the river entrance in a least charted depth of 5·1 m (6 cables SSE), passing between the other shallower dangers described above.

5.174

1 **Rivière de Crac'h.** From a position 2½ cables SSE of the front leading light (5.173), the line of bearing 131°, astern, of the NE end of Îlot Méaban (3¼ miles SE of the front leading light) just open SW of Mousker (4 cables SSE

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of the front leading light) (5.173) leads 3 cables NW into the river entrance.

5.175

1 The white sector (346°–348°) of La Trinité-sur-Mer Direction Light (white turret, 6 m in height) (1 mile NNW of the front leading light), on the E bank of the river, then leads 8 cables NNW in the channel, passing:

Close WSW of the steep-to rocky shore of the E bank of the river, and:

ENE of Grassus Buoy (port hand) (9 cables S of the direction light) then of Nos 2, 4 and 6 Buoys (port hand) (farther N) which mark the edge of Vasière Vaneresse, the mud flat on the W side of the channel.

5.176

1 The white sector (293½°–300½°) of South Pierhead Light (white turret, red top; 6 m in height) (3½ cables WNW of the direction light) then leads 3 cables WNW in the channel, which is marked by:

Dalh No 1 Buoy (starboard hand) on the N side, and:

Nos 8 and 10 Buoys (port hand) on the S side.

5.177

1 The main channel then leads over a bar (5.167) and 4 cables N to Pont de Kerisper (4 cables N of South Pierhead), an arch bridge (see 5.167 for vertical clearance). The channel is marked by light-buoys (lateral).

Basins and berths

5.178

1 **Darse Sud:** two pontoons with finger berths for small craft; careening slip in SW corner.

Vieux Port: bottom shoals steeply from 3 to 5 m at entrance to drying 2·5 m alongside quay on W side; berths at mole on S side and at jetty on piles extending N from E end of mole.

2 **Darse Centrale:** depth from 0·5 to 5 m: protected on S side by jetty slatted to form wave breaker; berths at numerous pontoons, the S-most having 120 for visitors.

Darse Nord: numerous drying moorings.

5.179

1 **Moorings:** 150 laid off Vieux Port and Darse Centrale, in Darse Nord and N of Pont de Kerisper.

Anchorage. It has been reported (1984) that anchoring is not allowed S of Pont de Kerisper but is possible N of the bridge, clear of the oyster beds.

Port services

5.180

1 **Repairs** of all kinds at boatyards, on E bank upstream of Pont de Kerisper (5.177), whose approach is shallow; 25 and 13-tonne boatlifts.

Other facilities: yacht club on S side of Darse Sud; custom house.

Supplies: fuel from service station on W side of Darse Nord; fresh water at pontoon berths; provisions.

Saint-Philibert and approaches

General information

5.181

1 Rivière de Saint-Philibert is approached from SSW from the approach to Rivière de Crac'h, and entered 1 mile ESE of Rivière de Crac'h Front Leading Light (5.173). In offshore winds and with sufficient rise of the tide it is navigable as far as Saint-Philibert village (47°35′·2N, 2°59′·8W) by craft of 2 m draught; local knowledge is necessary.

Directions

5.182

1 **Initial position** about 1½ miles SSE of Rivière de Crac'h Front Leading Light (5.173).

Approach. The channel leads NE, passing (positions given from the same light):

2 NW of Roche Révision (1¾ miles SSE 5.173), thence:

SE of the extremity of the reef, marked by Er Gazeg Beacon (S cardinal, post 5 m high) (1¼ miles SE), that extends 8½ cables SSE from the shore 3 cables E of Pointe de Kernevest, and:

NW of two unmarked rocks (2½ cables SE of Er Gazeg Beacon) with depths of 2·1 and 2·4 m over them.

5.183

1 **Leading marks:**

Front mark: Le Grand Pellignon Beacon (port hand; post 4 m high) (1 mile ESE of Rivière de Crac'h Front Leading Light).

Rear mark: building of an oyster farm (uncharted; about 9 cables N of front mark).

The alignment (about 353°) of these marks has been reported (1983) to lead through a deep to a position about 1 cable S of the front mark.

5.184

1 **Rivière de Saint-Philibert** is entered by passing 20 m E of Le Grand Pellignon Beacon which marks the SE end of a drying reef.

The channel, marked by perches, then leads 1½ miles NNW to Saint-Philibert village. It shoals rapidly within the entrance and dries at its N end. Craft awaiting the tide to proceed upstream may anchor about 1 cable N of Le Grand Pellignon Beacon in depths of more than 2 m.

Berth

5.185

1 A slip extends about 50 m E from the shore close S of the chapel at Saint-Philibert; it has been reported (1983) to dry 2·5 m at its extremity.

GOLFE DU MORBIHAN AND APPROACHES

GENERAL INFORMATION

Chart 2358

Topography

5.186

1 Golfe du Morbihan, whose name is often abbreviated to Morbihan, a Breton word meaning "little sea", is an extensive shallow basin lying NE of Baie de Quiberon and entered at its SW corner (47°33′N, 2°55′W) between Presqu'île de Rhuys and the mainland W. It is encumbered with numerous islands mostly wooded; all are privately owned except for Île aux Moines and Île d'Arz the two largest which lie near its centre.

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Waterways

5.187

1 Morbihan entrance (47°33′N, 2°55′W) is approached from S through Grand Chenal (5.193), thence:

Rivière d'Auray (5.224) leads 7 miles NNW to the town of Auray (5.238), and:

The principal channel through the Morbihan, described at 5.243, leads 9 miles NE to the city of Vannes (5.273).

The SE Morbihan is intersected by small craft channels (5.278) which terminate at the mouth of Rivière de Noyalo (47°35′N, 2°43′W).

Anchorages and harbours

5.188

1 Several anchorages in the main channels within Morbihan are suitable for coasters; they and the principal small craft anchorages are described after the relevant waterway. Temporary anchorage may be obtained in many other places but care must be taken to avoid areas where the tidal streams are strong.

5.189

1 **Harbour:** small vessels berth at Vannes, at Le Pont-Vert (47°38′·5N, 2°45′·6W) (5.275).

Marinas near the entrance and within Morbihan include:

Port du Crouesty (47°32′·5N, 2°54′·0W) (5.215).

Port de l'Île aux Moines (47°36′·2N, 2°51′·1W) (5.266).

Vannes (47°39′·1N, 2°45′·4W) (5.277).

Navigation

5.190

1 Navigation requires particular care when entering and within Morbihan owing to the very strong tidal streams, whirlpools and eddies in the narrow passages. Within Morbihan navigation is practicable by day only as few of the marks are lit.

Pilotage

5.191

1 **General information.** Pilotage or local knowledge is essential for all vessels, except small craft, entering and navigating Morbihan. Only an unofficial pilot (1.30), based at Locmariaquer (47°34′N, 2°57′W) (5.233), is available.

Requests for the pilot: telephone via Saint-Nazaire or Brest-Le Conquet Radio, see *Admiralty List of Radio Signals Volume 6(2)* for details, or via Fort Saint-Julien Coastguard Station (5.149) on VHF radio; 6 hours notice required.

2 **Boarding** place: vicinity of Méaban Buoy (S cardinal) (47°31′N, 2°56′W).

Waiting anchorage: at the boarding place, bottom sand, good holding; with strong W winds anchorage in Port Haliguen roadstead (6 miles W) is preferable.

Traffic regulations

5.192

1 **Shellfish beds.** Anchoring and grounding are prohibited in areas where shellfish beds exist. The beds are marked by stakes but not all are charted.

MORBIHAN APPROACHES AND ENTRANCE

General information

Charts 2358, 2823

Routes

5.193

1 **Grand Chenal** (5.202), the principal approach, leads 4 miles N to Morbihan entrance (47°33′N, 2°55′W), passing:

W of Plateau du Grand Mont (3½ miles SSE of the entrance), thence:

Between the shoals that lie up to 2 miles off the SW coast of Presqu'île de Rhuys.

The channel between these shoals is narrow and unmarked, but in favourable tidal and weather conditions small craft can cross them.

5.194

1 **Morbihan entrance** (5.205) is entered between Pointe de Port Navalo (47°32′·9N, 2°55′·1W), the W-most point of Presqu'île de Rhuys, and Pointe de Kerpenhir (5 cables farther NW). The channel leads about 8 cables NNE; it is nearly 4 cables wide between the beacons on either side, but only the E half has a depth of more than 5 m.

5.195

1 Several small craft channels (5.209) lead into Grand Chenal and to Morbihan entrance from W and SW.

Nature reserve

5.196

1 Îlot Méaban (47°32′N, 2°57′W) is a nature reserve: landing is forbidden from 15th April to 31st August.

Rescue

5.197

1 **Coastguard station** (1.75): Fort Saint-Julien (47°29′·7N, 3°07′·5W) (5.149).

Lifeboat station (1.77): Port du Crouesty (47°32′·6N, 2°53′·6W) (5.215).

Tidal streams

5.198

1 Off Plateau du Grand Mont in position 47°28′·3N, 2°55′·0W the tidal streams are weak, see 5.148 for further details.

5.199

1 In Morbihan entrance W of Pointe du Mouton (47°33′·5N, 2°54′·8W), the mean maximum rates of the tidal streams on each side of the deep water channel are as follows:

Position	*In-going rate (kn)*		*Out-going rate (kn)*	
	Springs	*Neaps*	*Springs*	*Neaps*
E side	*4½*	*3*	*5¾*	*3¾*
W side	*3½*	*2¼*	*4¼*	*3*

2 Farther S the rates are less.

At the N end of the entrance channel the tidal streams are very strong, see information on chart 2358 for details. The greatest rates occur in the close vicinity of Le Grand Mouton (3 cables N of Pointe du Mouton) (5.206) where the out-going stream is reported to have a maximum rate of 8 kn.

5.200

1 **Slack water.** In Morbihan entrance the periods when the tidal streams are less than 1 kn last about 30 minutes at springs and 1 hour at neaps. Off Pointe de Port Navalo the out-going and in-going tidal streams begin 1¼ hours after

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HW and LW, respectively, at Port Navalo: W of Le Petit Mouton (7 cables farther N) they begin from 15 to 20 minutes later.

Principal marks

5.201

1 **Landmarks:**
Petit Mont (47°32′N, 2°54′W), a round wooded hill.
Kerpenhir disused signal station (1½ miles NW).
Major light:
Port Navalo Light (white tower and dwelling; 21 m in height) (1 mile NW of Petit Mont); from S only the top is visible above surrounding trees.

Directions

(continued from 5.150)

Grand Chenal

5.202

1 **Initial position** 47°28′N, 2°55′W.
Leading marks:
Front mark: Petit Vézid Daymark (47°34′·2N, 2°55′·1W), a white obelisk.
Rear mark: Baden church spire (3 miles N of front mark).

2 By day the alignment (001°) of these marks leads into and through Grand Chenal, passing (positions given from Port Navalo Light):
W of Basse de la Chimère (4 miles SSE) marked by Chimère Buoy (S cardinal) (5.150), thence:
W of Basse de Thumiac (3½ miles S), thence:
W of Basse Morbihan (2½ miles S), and:
E of Basse de Kerjouanno (2½ miles S), thence:

3 E of Méaban Buoy (S cardinal) (2 miles SSW) moored 3 cables SE of Basses de Méaban, thence:
W of an isolated unmarked rock (depth 5 m) (1½ miles S), and:
E of a depth of 4·4 m at the S extremity of Barre du Morbihan, the shoal on the W side of the channel, which is also unmarked.

4 The alignment then passes about 1 cable E of the 5 m depth contour on the W side of the channel and over a least charted depth of 5·4 m (1¼ miles S), and much deeper water lies close E of the alignment until it passes:
W of Basse du Taleg (4 cables S), thence:
W of Pointe de Port Navalo.

5 **Caution.** The alignment must be followed very precisely to pass between Basse Morbihan and Basse de Kerjouanno and also to pass between the dangers 1 mile farther N. Good visibility is necessary as the S-most pair of dangers lie 7 miles from the rear leading mark.

5.203

1 **At night** the white sector (359°–015°) of Port Navalo Light (47°33′N, 2°55′W) (5.201) leads to a position about 1 mile S of the light, in a least charted depth of 3·9 m (1½ miles SSW of the light), passing shallower dangers, described in the preceding paragraph, as follows:

2 W of Basse de la Chimère, Basse de Thumiac and Basse Morbihan, which are covered by the green sector, and:
E of Basses de Méaban, which are covered by the red sector.

5.204

1 **Useful marks** (positions given from Port Navalo Light):
Butte de Tumiac (2 miles ESE), a hillock which appears black in contrast to the beach below it.
Arzon church (1 mile E) (5.149).
Locmariaquer church (1½ miles NW) (5.233).
Bagen Hir Beacon-tower (E cardinal) (9 cables SW) (5.213).

Chart 2358

Morbihan entrance

5.205

1 **Initial position** 1¾ cables NW of Port Navalo Light.
The line of bearing 022° of Le Grand Mouton Light-beacon (starboard hand; green tripod 8 m in height) (9 cables NNE of Port Navalo Light) leads 4 cables NNE, passing (positions given from Port Navalo Light):
WNW of Grande Truie (3 cables NNE) a drying reef marked by a beacon-tower (W cardinal), thence;
WNW of Pointe du Mouton (5 cables NNE).

5.206

1 **Leading marks:**
Front mark: Grégan Light-beacon (S cardinal; truncated conical tower 7 m in height) (1 mile N of Port Navalo Light).
Rear mark: Baden church spire (3¼ miles N of front mark) (5.202).

2 The alignment (359°) of these marks then leads N from a position 2 cables N of Grande Truie Beacon-tower (W cardinal) (5.205), passing (positions given from the front mark):
W of Le Faucheur (4 cables SSE) (5.212), thence:
E of Basse du Lieu (3 cables SSW), and:
W of Grand Mouton (2½ cables SE), a drying rock marked by Le Grand Mouton Light-beacon (starboard hand) (5.205).

5.207

1 Attention is drawn to the charted 5 m and 2 m depth contours on the W side of the channel. Rocks awash lying on the W side of the entrance are marked by:
Kerpenhir Beacon-tower (port hand) (4 cables WNW of Port Navalo Light).
Goëmorent Beacon-tower (port hand) (5 cables farther N) (5.228).

2 **Clearing marks.** The alignment (001°) of Petit Vézid Daymark and Baden church spire, previously described at 5.202, clears close E of a rock (1¼ cables ENE of Goëmorent Beacon-tower) with a depth of 0·9 m over it.

5.208

1 **Caution.** The tidal stream between Grand Mouton (5.206) and Petit Mouton (1 cable S) sets NE and SW at maximum rates of 6·9 kn and 8 kn, respectively, at extreme spring tides.

(Directions continue for Rivière d'Auray at 5.227, and for Morbihan, from entrance to Vannes, at 5.253)

Small craft channels

General information

5.209

1 **Routes** through the shoals and reefs which encumber the SW approaches to the entrance of Golfe du Morbihan lead:
ENE into Grand Chenal (5.202) passing SSE of Îlot Méaban (1¾ miles SW of Port Navalo Light) and over Barre du Morbihan in a least charted depth of 4·1 m.
NE to Morbihan entrance, in a least charted depth of 0·5 m, passing NW of Îlot Méaban.

2 The latter route may also be entered from:
WSW, passing NNW of Le Grand Buisson (3 cables W of Îlot Méaban).
W, passing N of Le Petit Buisson (1 mile WNW of Îlot Méaban) and over a rock drying 0·1 m.

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Directions for route south of Îlot Méaban

(continued from 5.150)

5.210

1 **Initial position** 1 mile SW of Îlot Méaban.

Line of bearing 070° of Butte de Tumiac (47°32′·5N, 2°52′·3W) (5.204), just open S of the coast of Petit Mont (1 mile WSW) (5.201) leads ENE into Grand Chenal (5.202), passing (positions given from Petit Mont summit):

2 SSE of an unmarked rock (drying 0·1 m) (2 miles WSW) lying 2 cables S of Îlot Méaban, thence:

NNW of the 5 m depth contour around Basses de Méaban (1¾ miles SW), and:

SSE of a group of rocks awash (1¾ miles WSW), thence:

Over Barre du Morbihan (1¼ miles WSW).

(Directions for Grand Chenal are given at 5.202).

Alternative directions for route south of Îlot Méaban

(continued from 5.150)

5.211

1 **Initial position** 1 mile SW of îlot Méaban.

Leading lights:

Front (red daymark white stripe, on metal framework tower; 9 m in height) (47°32′·6N, 2°53′·8W)

Rear (white tower; 27 m in height) (315 m ENE of front light).

The alignment (058°) of these lights leads ENE, passing (positions given from front light):

SSE of an unmarked rock (drying 0.1 m) (2 miles WSW) lying 2 cables S of îlot Méaban, thence:

NNW of the 5 m depth contour around Basses de Méaban (2 miles WSW), and:

SSE of a group of rocks awash (2 miles WSW), thence:

Over Barre du Morbihan (1½ miles WSW)

(Directions for Grand Chenal are given at 5.202)

Directions for route north-west of Îlot Méaban

(continued from 5.150)

5.212

1 **Initial position** 1 mile SW of Îlot Méaban.

Leading marks:

Front mark: Le Faucheur (47°33′·6N, 2°54′·8W) a prominent whitened rock. Reported as likely to be difficult to identify unless recently painted.

Rear mark: Square tower (1½ miles NE of front mark) on Île Berder.

2 The alignment (041°) of these marks leads NE into the entrance to the Morbihan, passing (positions given from front mark):

SE of Le Grand Buisson (2½ miles SW) a drying reef marked at its W end by Grand Buisson Beacon (W cardinal), thence:

NW of the foreshore of Îlot Méaban (2¼ miles SW), thence:

Over a depth of 0·5 m (1¾ miles SW), sandy bottom, thence:

3 SE of the S end of Les Bourésaux, a reef marked by a beacon (S cardinal) (1¾ miles SW), and:

NW of a drying reef (1½ miles SW) marked at its E end by Bagen Hir Beacon-tower (E cardinal), thence:

SE of a depth of 0·3 m (8 cables SW) lying 1 cable SSW of Kerpenhir Beacon-tower (port hand).

(Directions for Morbihan entrance channel are given at 5.205)

Directions for route north of Le Grand Buisson

(continued from 5.150)

5.213

1 **Initial position** 1¼ miles W of Îlot Méaban.

Leading marks:

Front mark: Bagen Hir Beacon-tower (E cardinal; 6 m high) (9 cables SW of Port Navalo Light).

Rear mark: small house (uncharted; 1 mile ENE of front mark) standing on the top of a hillock 27 m in height.

2 The alignment (069°) of these marks is reported to lead ENE to join the route NW of Îlot Méaban (5.212) in a position 6 cables WSW of the front mark, passing (positions given from front mark):

SSE of Buissons de Méaban Buoy (S cardinal) moored 1 cable SW of Basse des Buissons (1¾ miles WSW), thence:

3 Close NNW of a dangerous wreck (1¼ miles WSW), thence:

Close NNW of Le Grand Buisson (1 mile WSW), a drying reef marked at its W end by Grand Buisson Beacon (W cardinal), thence:

SSE of an unmarked rock (9 cables WSW) that dries 2 m.

(Directions for the route north-west of Îlot Méaban are given at 5.212)

Directions for route north of Le Petit Buisson

(continued from 5.173)

5.214

1 **Initial position** 2 miles SSE of Rivière de Crac'h Rear Leading Light (5.173).

Line of bearing 097° of Bagen Hir Beacon-tower (E cardinal) (9 cables SW of Port Navalo Light), just open S of Petit Mont (1¼ miles farther E), leads E to join the route NW of Îlot Méaban in a position 3 cables W of Bagen Hir Beacon-tower, passing (positions given from the beacon-tower):

2 S of Kerhelegui (1¾ miles WNW), a drying rock marked by a beacon (S cardinal; 3 m high), thence:

N of Le Petit Buisson (1½ miles W) a drying reef marked at its W end by Petit Buisson Beacon (W cardinal) (5.150), thence:

S of an unmarked reef (1¼ miles WNW) that dries 1 m, thence:

3 Over a rock (1¼ miles W) (5.209) that dries 0·1 m, with a rock awash close E of it, thence:

Close N of an unmarked rock (1 mile W) that dries 0·5 m, thence:

S of the beacon (S cardinal) (6 cables WNW) marking the S end of Les Bourésaux.

(Directions for the route north-west of Îlot Méaban are given at 5.212)

Port du Crouesty

General information

5.215

1 **Description.** Port du Crouesty (47°32′·5N, 2°54′·0W), a marina, is approached from the N end of Grand Chenal through a buoyed channel leading ENE to its entrance. It has 1432 berths including 130 for visitors.

Port Authority: Bureau du Port de Plaisance du Crouesty, BP20, 56640 Arzon; situated on SE side of inner harbour.

Limiting conditions

5.216

1 **Controlling depth** in approach channel: 1·8 m.

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Port du Crouesty from WSW (5.215)
(Original dated 1994)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

Deepest berth (5.218): W side of N-most basin.

Tidal levels. See information in *Admiralty Tide Tables.* Mean spring range about 4·6 m; mean neap range about 2·2 m.

Strong winds from SW make entry and departure difficult.

Arrival information

5.217

1 **Port radio:** see 1.41 for details.

Prohibited anchorage: within the approach channel marked by buoys.

Visiting small craft berth in basin 1 cable S of rear leading light (5.219), or on the pontoons on the S side of the outer harbour.

Harbour

5.218

1 **Layout:**

Outer harbour: fuelling, slipping and repair facilities on S side.

Inner harbour: five basins with berths at pontoons, all dredged to 2 m except for berths on W side of N-most basin which are dredged to 3 m.

Directions

5.219

1 **Initial position**: in Grand Chenal (5.202), 9 cables S of Port Navalo Light (5.201).

Leading lights:

Front (red daymark white stripe, on white metal framework tower; 9 m in height) (47°32′·6N, 2°53′·8W).

Rear (white tower, 27 m in height) (315 m ENE of front light).

The alignment (058°) of these lights leads ENE, passing (positions given from front light):

2 NW of No 1 light-buoy (starboard hand) (5 cables WSW), thence:

Through the approach channel, marked on both sides by buoys (lateral) (from 4½ to 1 cable WSW), thence:

3 Over the bar (70 m WSW of the entrance), see 5.216 for controlling depth, thence:

Into the outer harbour between N and S Breakwater head (1½ cables WSW), each marked by a light (red and green lantern, respectively, on white square tower; 7 m in height).

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5.220

1 Within the outer harbour, the channel, dredged to 2 m, continues ENE for ½ cable and leads E into the inner harbour, where all docks except Darse Noroit are dredged to 2 m, and is marked by:

Several beacons (port hand) on the N side.

Beacon (starboard hand) on S side at bend in the channel.

Port services

5.221

1 **Repairs** of all kinds carried out; 45-tonne mobile boat-hoist; gridiron; boat slip.

Other facilities: yacht club; custom house at Port Navalo (5.223).

Supplies fuel; fresh water; provisions.

Bays and landings

Port Blanc

5.222

1 **General information.** Port Blanc (47°32′·7N, 2°54′·9W) is a small bay on the S side of Pointe de Port Navalo.

Berth: It has been reported (1983) that small craft can dry out alongside E side of the landing slip marked by a beacon (starboard hand) at its head.

Port Navalo

5.223

1 **General information.** Port Navalo (47°33′N, 2°55′N), a shallow bay on the E side of the entrance to Morbihan, is used by fishing vessels and ferry boats.

Anchorage in the bay, depth about 1 m, is reserved for fishing boats: it is uncomfortable when there is a swell from SW.

2 **Berths:**

Two landing slips, on E side of mole extending N from the shore 1 cable NE of Port Navalo Light (5.201), used by ferries.

Quay (50 m farther E), which dries 1 m alongside, fronting a parking area.

Old jetty marked by a beacon (starboard hand) at its head; in SE corner of the bay; reported (1983) to dry 2·5 m alongside.

3 **Other facilities:** custom house.

Communications: ferry services to Auray (5.242), Vannes (5.276) and various other places in Morbihan.

RIVIÈRE D'AURAY

General information

Chart 2358

Description

5.224

1 **Rivière d'Auray** leads NNW from Morbihan entrance inner end (47°34′N, 2°55′W) to Auray (7 miles NNW) (5.238) where Pont de Saint-Goustan is the limit of navigation. The lower part of the river flows between islands and mud flats, the upper part between wooded banks.

Limiting conditions

5.225

1 **Controlling depths:**

From river entrance to the narrows at Le Rocher (47°38′·1N, 2°57′·7W) (5.230): 4·1 m.

Between Le Rocher and Auray (5.238): 0·2 m.

Vertical clearance under road bridge (47°39′·6N, 2°58′·6W) (5.240) near Auray Harbour entrance: 14 m.

Tidal streams

5.226

1 For information on the tidal streams at the entrance to Rivière d'Auray and in the channel in the vicinity of Le Grand Huernic (47°35′·0N, 2°56′·1W) see the chart; the tidal stream arrows give the extreme spring rates.

In the channel 2 cables ESE of Le Grand Huernic the direction of the tidal streams reverses about 30 minutes after HW and LW at Port Navalo.

2 In the channel WSW of Petit Vézid (1 mile SE of Le Grand Huernic) the rates of the tidal streams are similar to those 6 cables farther NNW, shown on the chart, and the direction of the tidal stream reverses about 40 minutes after HW and LW at Port Navalo.

Directions

(continued from 5.208)

Entrance

5.227

1 **Initial position** 2 cables S of Grégan Light-beacon (S cardinal) (5.206).

Leading marks:

Front mark: Le Grand Huernic (1¼ miles NW of Grégan Light-beacon).

Rear mark: Pointe de Kerlevarec (1¼ miles NW of front mark).

2 The alignment (324½°) of the SW edge of the front mark and the NE edge of the rear mark leads NW to a position 4 cables SE of the front mark, passing (positions given from Grégan Light-beacon):

NE of Basse du Lieu (2 cables SSW), thence:

SW of Grégan Light-beacon (S cardinal) (5.206) thence:

3 SW of Petit Vézid (3 cables NNW) and of a beacon (starboard hand) marking a drying rock (3½ cables NW), thence:

NE of Karreg Ker (5 cables NW) a rock which lies on the edge of the mud flats on the SW side of the channel.

4 **Caution.** The in-going tidal stream sets NNE towards Grégan with great strength. In these conditions small craft should pass close to Basse du Lieu. The best time for vessels to enter the river is at the beginning of the out-going tidal stream.

Er Runio to Pointe de Kerlevarac

5.228

1 **To pass Le Grand Huernic.** The line of bearing 164° of Goëmorent Beacon-tower (port hand) (5 cables SW of Grégan Light-beacon), astern, then leads NNW passing:

WSW of the foreshore of Er Runio (Île Renaud) (4 cables SE of Le Grand Huernic), and its two drying rock pinnacles (Justice Sud and Justice Nord; uncharted), thence:

ENE of E Harnic Buoy (port hand) which marks the E point of the foreshore of Le Grand Huernic.

2 The passage then leads NW for 2 cables, passing (positions given from Le Grand Huernic):

SW of the spit (1 cable NE) extending 1 cable W from Sept Îles, thence:

NE of N Harnic Buoy (port hand) close N of a drying rock (1 cable N), and:

SW of the beacon (starboard hand) (1½ cables N) marking the SW extremity of the foreshore of Pointe du Blair.

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5.229

1 The channel then leads NNW for 1¼ miles, passing (positions given from Pointe de Kerlevarec):

ENE of Kerlevarec Buoy (port hand) marking Roche Kerlevarec (1 cable E), thence:

WSW of Catis Buoy (starboard hand) (3 cables N) marking the SW extremity of Basse Catis, a mud flat.

Pointe de Kerlevarec to Auray

5.230

1 The river then leads 2 miles generally N to the narrows at Le Rocher (47°38′·1N, 2°57′·7W).

The channel, whose position can best be seen on the chart, is marked by a beacon (port hand) (1¼ miles SSE of the narrows), passes over a shallow (3 cables farther N) see 5.225 for controlling depth, and lies closer to the E bank as far N as the beacon (starboard hand) (9 cables SSE of the narrows) marking a reef at the S entrance point of Baie de Kerdréan: it then leads NW towards the W bank opposite the N entrance point of the same bay.

5.231

1 From Le Rocher narrows to Auray (2 miles farther NNW) the channel is shallow, see 5.225 for limiting conditions, and passes (positions given from the narrows):

SW of the beacon (S cardinal) (1½ cables N) marking Banc de la Sarcelle on the N side of the entrance to Port du Bono (5.237), and of a beacon (starboard hand) (2 cables NW), thence:

2 Close E of César Buoy (port hand) (4 cables NW) which marks the underwater remains of Pont de César, a Roman bridge, and of a shoal that dries 1 m ½ cable farther N, thence:

Close E of a beacon (port hand) (7 cables NNW).

Thence the channel is marked by starboard hand beacons to the entrance of Auray Harbour (5.238).

Anchorages and harbours

Locmariaquer anchorage

5.232

1 Anchorage in the main channel extends from Banc du Milieu (47°34′·1N, 2°55′·4W) to a position about 6 cables farther NNW abreast Er Runio island, depths from 12 to 19 m, bottom mud. It is rather exposed for small craft and subject to moderately strong tidal streams, see 5.226 for further details.

Locmariaquer

5.233

1 **General information.** Locmariaquer Harbour, an important centre for the oyster farming industry, consists of a landing slip at Pointe du Guilvin (47°34′N, 2°56′W) and a drying anchorage extending 2½ cables WNW to a jetty.

Directions. A narrow channel marked by beacons (port hand) leads 3 cables WSW from the S end of Locmariaquer anchorage (5.232) to Pointe du Guilvin slip.

2 It has been reported (1983) that the jetty (2½ cables WNW of Pointe du Guilvin) can be approached across the tidal flats on the alignment (238°) of the head of the jetty with Locmariaquer church spire (1 cable farther WSW).

Berths:

Pointe du Guilvin landing slip: extremity, marked by a beacon (port hand), reported (1983) to have a depth of 0·6 m; in constant use by ferry boats.

Jetty: slip on S side dries 2·4 m alongside.

Le Blair anchorage

5.234

1 Anchorage in the main channel between Le Grand Huernic (47°35′·0N, 2°56′·1W) and Pointe de Kerlevarec (1 mile NNW); depths from 10 to 16 m, bottom mud, good holding; sheltered from all directions; tidal streams moderate except in the vicinity of Le Grand Huernic.

Pointe de Kerlevarec to Le Rocher

5.235

1 **Anchorage** for small craft almost anywhere in the river clear of the oyster beds, which are marked by yellow buoys where they lie in deep water. Above Pointe Espagnole (W bank 1 mile N of Pointe de Kerlevarec) it is sheltered except from strong N or S winds.

Le Rocher anchorage

5.236

1 Anchorage S of the narrows (47°38′·1N, 2°57′·7W); restricted swinging room in depths from 7 to 9 m, muddy bottom; small craft moorings and anchorages on both sides of the channel.

Port du Bono

5.237

1 **General information.** Port du Bono (47°38′·5N, 2°57′·1W) lies on the E bank of Rivière du Bono between two bridges which span the river; the one downstream has sufficient vertical clearance for most small craft, the one upstream is low.

Harbour: drying basin (uncharted) about 100 m long and 50 m wide, muddy bottom; sheltered from SW by a jetty extending about 30 m NNW from the shore.

2 **Berths:**

Rivière du Bono: numerous small craft moorings; bad holding ground.

At jetty: on W side, hard bottom reported (1983) to dry 1·5 m near N end; E side on slip depth 0·5 m at N extremity.

Supplies fresh water; provisions.

Auray

General information

5.238

1 **Auray** (47°40′N, 2°59′W), population 10 300 (2003, is a medieval town built on a steep hill on the W bank of Rivière d'Auray, opposite its ancient port of Saint-Goustan.

Limiting conditions

5.239

1 **Vertical clearance** beneath bridge: see 5.225.

Deepest berths:

Quai Franklin (5.241).

Anchorage in the pool (5.240).

Tidal levels. See information in *Admiralty Tide Tables.* Mean spring range about 4·1 m; mean neap range about 2·2 m.

Harbour

5.240

1 Pont de Saint-Goustan (47°40′·1N, 2°58′·7W), a masonry bridge with several arches, forms the N limit of navigation and of the harbour, which extends about 300 m downstream and varies in width from 65 m at the entrance to 59 m at the elbow in the quay on the E side.

2 A pool in midstream has been reported (1982) to be dredged to 3 m off the quay on the E side as far N as the elbow, where it shoals rapidly.

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A road bridge spans the river 4 cables S of Pont de Saint-Goustan: the passage beneath it (see 5.225 for vertical clearance) is 30 m wide between marks.

Berths

5.241

1 **Moorings** for small craft: in the pool and in two trots on E side of channel near entrance; it has been reported (1982) that the latter may be used by visitors.

Quai Franklin, on E bank, dries from 0·5 to 1 m alongside; it includes three landing slips and a boat dock which dries about 3·5 m. The quay is supported on arches which are exposed at half tide and then present a hazard to small craft.

2 **Petit Port,** a small basin between Quay Franklin and Pont de Saint-Goustan, has been reported (1983) to dry from 1 to 1·3 m.

Quai Martin, the dry-stone wall on the W bank, dries from 1·2 to 2 m alongside.

Port services

5.242

1 **Repairs** to small craft and engines.
Supplies fresh water; provisions.
Communications: ferry service to Port Navalo (5.223).

MORBIHAN: FROM ENTRANCE TO VANNES

General information

Chart 2358

Route

5.243

1 The principal route from the entrance to Golfe du Morbihan (5.194) to the entrance of Rivière de Vannes leads generally:
NE for 3½ miles from Morbihan entrance inner end (47°34′N, 2°55′W) to the passage between the NW point of Île aux Moines and the mainland, thence:
ENE for 2½ miles to the vicinity of Pointe de Penboc'h (47°37′·1N, 2°48′·0W), passing N of Îles Logoden (7 cables WSW of Pointe de Penboc'h).

2 Rivière de Vannes then leads generally NE for 2½ miles to Pointe de Larmor (47°38′·5N, 2°45′·5W), the E entrance point of Port de Vannes (5.273).

Controlling depths

5.244

1 Controlling depths are:
In the passage N of Îles Logoden: 4 m.
In Rivière de Vannes: 0·7 m.
Rivière de Vannes silts and is dredged periodically.

Regulations

5.245

1 **Prohibited anchorages.** Anchoring, fishing and waiting are prohibited within the following areas shown on the chart:
In the channel between lines joining: Pointe du Monteno (47°33′·8N, 2°54′·4W) to the S point of Île Longue (2 cables N); N point of Île de la Jument (47°34′·4N, 2°53′·2W) to the S point of Île Berder (2 cables NNW).

2 Between Pointe des Réchauds (47°36′·2N, 2°51′·2W) and Port Blanc anchorage (1¾ cables WNW).

Anchoring, dredging and trawling are prohibited within the following areas shown on the chart:
Between Pointe du Trec'h (47°36′·5N, 2°50″3W), Île d'Irus (5 cables NW) and Pointe d'Arradon (5 cables NE) due to submarine cables, power cable and pipeline.

3 Between Pointe de Penboc'h (47°37′·1N, 2°48′·0W) and Pointe du Béluré (8 cables SSE) due to a submarine pipeline.

5.246

1 **Nature reserves.** Landing on Erlannig (47°34′1N, 2°53′·7W) and Île Creïzig (47°34′7N, 2°52′·0W) is forbidden from 15th April to 31st August.

Rescue

5.247

1 **Lifeboat** (1.77): based at Arradon (47°36′·9N, 2°49′·7W) (5.267).

Tidal streams

5.248

1 **Caution.** The tidal streams in the passages are very strong and irregularities in the bottom cause eddies and whirlpools.

In the narrows the maximum rates at springs of the out-going tidal streams are from 1½ to 2 kn greater than those of the in-going tidal streams, and are:

2 About 8 kn between Grand Mouton (47°33′·8N, 2°54′·7W) and Île Berder (1¼ miles NE).
6 kn off Pointe des Réchauds (47°36′·2N, 2°51′·2W), the NW point of Île aux Moines.
5 kn off Pointe du Trec'h (9 cables ENE of Pointe des Réchauds).

At the entrance to Rivière de Vannes (1½ miles ENE of Pointe du Trec'h) the maximum rates in both directions are 2½ kn at springs, 1½ kn at neaps.

5.249

1 North-east of the narrows between Île Berder and Île de la Jument:
The main in-going tidal stream sets towards Île Creïzig (1 mile ENE of the narrows), thence N along the W coast of Île aux Moines.
An eddy flows anti-clockwise round Kerdelan anchorage (8 cables NNE of the narrows) (5.263).
The tidal stream sets constantly S close to the E coast of Île Berder.

5.250

1 North of the narrows between Pointe des Réchauds (5.248) and the mainland WNW, it is reported that:
The main in-going tidal stream follows a curve along the mainland shore.
A clockwise eddy forms S of Île d'Irus (7 cables NE of the narrows).
The tidal stream off the NW foreshore of Île aux Moines sets SW almost continuously.

5.251

1 East of the narrows between Pointe du Trec'h and Pointe d'Arradon, the in-going tidal stream divides, setting E towards the entrance to Rivière de Vannes and S towards the passage (1¼ miles SSE of the narrows) between Île aux Moines and Île d'Arz.

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5.252

1 **Slack water** occurs progressively later up the channel. The in-going and out-going tidal streams begin at the following times relative to LW and HW, respectively, at Port Navalo:

+0145, S of Île Longue (47°34′·0N, 2°54′·4W).
+0200, S of Gavrinis (5 cables farther NE).
+0315, approximately, in Goulet de Conleau (47°37′·5N, 2°46′·7W).

Directions

(continued from 5.208)

5.253

1 Vessels proceeding directly from Morbihan entrance to Vannes should pass Port Navalo not later than 30 minutes before local HW in order to take advantage of the in-going tidal stream and arrive at Vannes at local HW, which occurs 1¼ hours later than at Port Navalo at neaps and 2 hours later at springs.

Passage through Morbihan

5.254

1 **Initial position** about 2 cables S of Grégan Light-beacon (S cardinal).

The channel leads ENE for 1½ miles, passing (positions given from Grégan):

2 NNW of Le Grand Mouton Light-beacon (starboard hand) (2 cables SE), thence:
SSE of Île Longue (4 cables ENE), and:
NNW of Pointe du Monteno (4 cables ESE), thence:
NNW of Les Tisserands (7 cables E), drying rocks marked by a beacon (starboard hand), thence:

3 SSE of the buoy (port hand) (7 cables ENE) marking a rock (drying 1·4 m) lying close to the S end of Gavrinis island, and:
NNW of Erlannig islet (8 cables E) thence:
NNW of the ledge extending nearly 1 cable NW from the N end of Île de la Jument (also called Er Gazeg), marked by Jument Buoy (starboard hand) (1 mile ENE), and:
SSE of Île Berder (1¼ miles ENE).

4 **Caution.** The out-going tidal stream divides S of Île Berder, the N part setting N between Île Berder and Gavrinis.

(Directions for the passage from Île de la Jument to Rivière Noyalo entrance are given at 5.283).

5.255

1 The principal channel continues NE, passing:
Either side of Banc de Creïzig (47°34′·7N, 2°52′·6W), marked at its SW end by Creïzic Sud Buoy (S cardinal), thence:
Either side of Roche de Creïzig (47°35′·0N, 2°52′·2W) with a depth of 0·2 m over it, marked by Creïzic Nord Buoy (N cardinal), and:
NW of the ledge extending ½ cable N from the N end of Île Creïzig (1½ cables SSE of Roche de Creïzig).

2 The in-going tidal stream is funnelled between Banc de Creïzig and Île Creïzig. It is reported that in these conditions the better route for small craft proceeding NE is the one in the main stream passing SE of Banc and Roche de Creïzig.

5.256

1 The channel then leads NNE, passing:
ESE of an isolated unmarked 2·5 m patch (3 cables NNE of Roche de Creïzig), and of Banc de Kergonan which extends from 1 to 4 cables farther NNE, thence:
Between Pointe des Réchauds (1¼ miles NNE of Roche de Creïzig) and the mainland 1½ cables WNW, thence:
WNW of Les Réchauds (1 cable N of Pointe des Réchauds) a reef marked by two beacons (both starboard hand).

5.257

1 The principal channel then leads generally ENE, passing:
Either side of an unmarked middle ground (2 cables NE of Les Réchauds) with a least charted depth of 1·2 m, thence:
NNE of the beacon (starboard hand) (7 cables ENE of Les Réchauds) marking the head of a landing slip at Pointe du Trec'h, thence:

2 SSE of La Truie d'Arradon (1½ cables NNE of Pointe du Trec'h), a reef marked by a beacon-tower (port hand) and a beacon (port hand), thence:
Between Pointe d'Arradon (1 cable NE of La Truie d'Arradon) and Logoden Buoy (starboard hand) (1¼ cables farther E), which marks the extremity of a rocky spit extending 5 cables W from Îles Logoden, thence:

3 NNW of the beacon (starboard hand) marking a drying reef lying 1 cable W of Îles Logoden, thence:
Close NNW of the N islet of Îles Logoden, thence:
N of Drenec Buoy (starboard hand) (3 cables E of Îles Logoden).

(Directions for the passage between Île aux Moines and Île d'Arz are given at 5.285)

Rivière de Vannes

5.258

1 **Initial position** 47°37′N, 2°48′W, about 1 cable S of the beacon (port hand) at the head of the landing slip at Pointe de Penboc'h.

The channel shoals, becomes tortuous and leads (positions given from the beacon off Pointe de Penboc'h):

2 NW of Bœdic Buoy (W cardinal) (4 cables ESE) marking the W end of the flat extending SW from Île de Boëdig, thence:
N of Roguédas Light-beacon (starboard hand; square tower 8 m in height) (5 cables ENE), thence:
E for 2½ cables, passing 1 cable N of Île de Boëdig (7 cables E), until the passage N through Goulet de Conleau, the narrows (9 cables ENE), is fully open.

5.259

1 From a position 47°37′·6N, 2°46′·5W between Pointe de Bararac'h and Île de Conleau, the channel is marked by beacons (lateral) and leads E then N through Vasières de Miarec, tidal mud flats, to the entrance of Vannes Avant-port (5.277), passing:
Close E of a beacon (port hand) marking the head of a ruined landing slip at Pointe des Émigrés (7 cables NE of Pointe de Bararac'h), thence:
Alongside an embankment on which there is a towpath.

Anchorages and small craft harbours

General information

5.260

1 The principal anchorages situated in or near the main channel through Morbihan to Vannes are described in the

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following paragraphs: some are suitable only for small craft, which may anchor in many other places provided care is taken to avoid areas where the tidal streams are strong.

Larmor-Baden

5.261

1 **General information.** Larmor-Baden (47°35′·0N, 2°53′·5W) lies on the N shore of the side channel that passes N of Grand Vézid, Île Radenec and Gavrinis and connects Rivière d'Auray with the main channel through Morbihan.

2 **Directions.** Several unmarked channels, for which the chart is the best guide, lead to Larmor-Baden from the main channels, passing between the off-lying islands: the channel passing W of Île Berder (2 cables SSE of Larmor-Baden) provides the easiest access.

3 **Anchorage:** in the main channel SW of Larmor-Baden and N of the middle ground that dries 1 m, in depths of 2 m or more; numerous small craft moorings; strong tidal stream sets E with rising, W with falling tide.

4 **Landing** places adjacent to the anchorage:

Cale de Pen Lannig (47°34′·9N, 2°53′·6W); slip, depth 1·5 m at S extremity, on E side of stone jetty.

Cale de Kerlogoden slip (2½ cables NW of Pen Lannig), marked by a beacon (port hand), dries 1·9 m muddy bottom.

Île de la Jument

5.262

1 **Anchorage** (47°34′·3N, 2°53′·0W) E of Île de la Jument, depth from 2 to 3 m, is a good place to await a fair tidal stream.

Kerdelan

5.263

1 **Anchorage** (47°35′·2N, 2°52′·8W): shown on the chart, depth from 5 to 7 m, mud and sand, good holding. Small craft may anchor NW of Creïzic Sud Buoy (S cardinal) (5 cables S) (5.255) close to Île Berder, depth 2 m. For details of tidal stream see 5.249.

Pointe de Toulindag

5.264

1 **Anchorage** (47°36′·0N, 2°51′·2W) off the S coast of the point in depths from 2 to 3 m; moorings for small craft; landing slip.

Port Blanc

5.265

1 **General information.** Port Blanc (47°36′·2N, 2°51′·5W), a small craft harbour, occupies the SE part of Anse du Moustran.

Anchorage: 50 moorings, some for visitors; anchor berths in deeper water are exposed to the tidal stream.

Facilities: Bureau du Port; landing slip, marked by a beacon (port hand).

Supplies: fuel from pontoon service station; fresh water.

Communications: ferry service to Île aux Moines (5.266).

Port de l'Île aux Moines

5.266

1 **General information.** Port de l'Île aux Moines (47°36′·2N, 2°51′·1W), situated on the N side of Pointe des Réchauds (5.256), consists of a marina and berths for commercial craft.

Anchorage: in the main channel in the position shown on the chart (3½ cables NE of Pointe des Réchauds), depth 6 to 9 m. Small craft anchor closer inshore, in depths from 3 to 6 m bottom sand and mud good holding, where the tidal streams are weaker; see 5.250 for further details.

2 **Moorings** for 60 small craft, some for visitors, in area E of Les Réchauds (1 cable N of Point des Réchauds) (5.256). The SE corner of Les Réchauds is marked by a buoy (S cardinal).

Berths:

Marina: pontoon; berths, some for visitors.

Jetty on E side of marina; two landing slips.

3 **Facilities:** Bureau du Port; yacht club; no repair facilities in 1988.

Supplies fresh water at jetty.

Communication: ferry services to Port Blanc (5.265) and Vannes (5.276).

Arradon

5.267

1 **General information.** Arradon (47°36′·9N, 2°49′·7W) is the principal yachting centre of Morbihan.

Tidal levels. See information in *Admiralty Tide Tables.* Mean spring range about 2·7 m; mean neap range about 1·7 m.

2 **Anchorage,** whose limits are marked by buoys , lies on N side of channel, E of the prohibited area (5.245) shown on the chart; 130 small craft moorings.

Berth: pier on piles, depth 2 m.

Repairs to small craft hulls and engines.

Other facilities: Bureau du Port; careening slip.

Supplies fresh water.

Penboc'h

5.268

1 **Anchorage:** in the channel E or W of the prohibited anchorage area (5.245) shown on the chart; exposed except from N.

Landing slip (47°37′·1N, 2°48′·0W) marked by a beacon (port hand) (5.258).

Pointe du Béluré

5.269

1 **General information.** Pointe du Béluré (47°36′·5N, 2°47′·5W) is the N point of Île d'Arz.

Anchorage: in the channel 1 cable E of Pointe du Béluré Jetty depth 1·4 m.

Berth: jetty with slip at N end; extremity, marked by beacon (starboard hand), depth 0·7 m.

Île de Boëdig

5.270

1 **Anchorage** (47°37′·1N, 2°46′·8W): NE of the NW end of the island; depth from 1 to 3 m. well sheltered.

Caution: the edge of the mud flat S and E of the anchorage is steep-to.

Conleau

5.271

1 **General information.** Conleau (47°37′·6N, 2°46′·7W) is a yachting centre at the N end of Goulet de Conleau (5.258).

Anchorage for small craft on the edge of the channel off the N-most bay on the W side of the narrows, where the holding is reported to be poor, or farther E. Numerous moorings in the inlet SW of Île de Conleau.

2 **Landing** slip at S end of Île de Conleau; depth at extremity 1 m.

Repairs to engines and hulls at boatyard.

Supplies: fuel.

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Port-Anna-en-Séné

5.272

1 **General information.** Port-Anna-en-Séné (47°37′·5N, 2°46′·7W;) is a small fishing and yacht harbour.

Repairs: repair yard; dry dock.

Supplies fuel for fishing vessels only.

Vannes

General information

5.273

1 **Description.** Vannes (47°39′N, 2°45′W), capital of Département du Morbihan, is a cathedral city with a population of 45 600 (2003). There are berths for small vessels and a marina.

Traffic: No accurate traffic figures were available for 2003.

Port Authority. Port Authority of Vannes, BP 400, Direction des Services Techniq, Rue St Tropez, F–56009 Vannes Cedex.

Limiting conditions

5.274

1 **Tidal levels.** See information in *Admiralty Tide Tables.* Mean spring range about 2·8 m; mean neap range about 1·7 m.

Density of water: 1·025 g/cm^3.

Maximum size of vessel handled: length 65 m; draught 4 m on average tide.

Berths

5.275

1 **At Le Pont-Vert** (47°38′·5N, 2°45′·6W) situated on the W bank of the channel opposite Pointe de Larmor (5.243):

Two concrete berthing dolphins; for vessels more than 50 m in length.

Wharf (1 cable farther N) 50 m long reported (1983) to dry 0·2 alongside; used by Golfe du Morbihan ferries.

Port services

5.276

1 **Repairs:** small workshop.

Other facilities: hospital; custom house.

Supplies fresh water; provisions; no bunkers.

Communications: ferry services to Port Navalo (5.223), Locmariaquer (5.233), Auray (5.242), Île aux Moines (5.266) and other points in the Morbihan.

Small craft

5.277

1 **General information.** The old port has been converted into a marina in a wet dock 750 m long and 48 m wide, crossed 300 m from its N end by a pontoon bridge for pedestrians which is broken when the dock gate is open. It is approached from Le Pont-Vert (5.275) by a canal, sometimes referred to as the Avant-port, spanned by a swing bridge (47°38′·6N, 2°45′·6W) near its S end.

Bureau du Port is situated on the W side of the wet dock near its N end.

2 **Limiting conditions:**

Channel in Avant-port dries 0·2 m.

Swing bridge: width 10 m.

Wet dock: gate 10 m wide, sill 1 m above chart datum; maximum draught admissible 2·4 m.

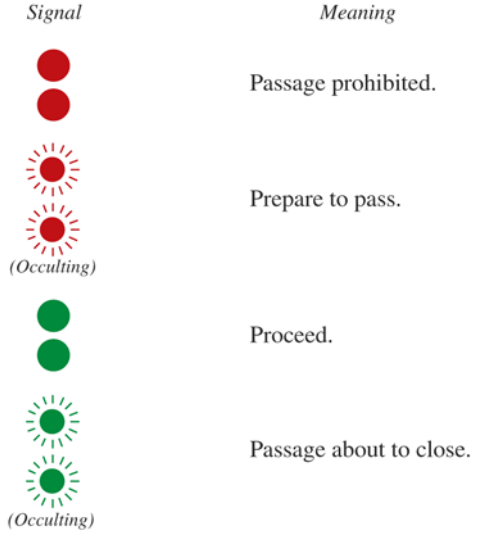
3 **Arrival information:**

Port radio (1.41). See *Admiralty List of Radio Signals Volume 6(2)* for further information.

Dock gate: open from about 2½ hours before to 2½ hours after HW by day only.

Berths in Avant-port, for vessels waiting to enter the wet dock, at pontoon and at three mooring buoys S and N respectively of the swing bridge.

4 **Traffic signals** (Diagram 5.277) are exhibited from the main pile of the swing bridge.



Traffic Signals (5.277)

Craft capable of passing beneath the swing bridge shall not do so unless an orange light is exhibited to the left of the upper light described above.

5 **Berths** for 250 small craft at pontoons in wet dock, 60 at S end reserved for visitors.

Repairs: boatyards on E side of Avant-port and at Pointe des Émigrés (5.259); the former has a 10-tonne crane and slip for craft up to 12 tonnes; careening slip at Pointe de Larmor (5.243).

Supplies: fuel from pontoon on E side of Avant-port; fresh water; provisions.

Side channels

General information

5.278

1 **Small craft channels** lead off E and S respectively from the main channel through Morbihan as follows:

From the vicinity (47°34′·5N, 2°53′·0W) of the N end of Île de la Jument; to the entrance of Rivière de Noyalo (7 miles E); passing S of Île aux Moines (1 mile E of the Île de la Jument) and of Île d'Arz (2 miles farther E).

From the vicinity of Île Holavre (47°36′·5N, 2°49′·8W); S for 2 miles to join the above channel; passing between Île aux Moines and Île d'Arz.

5.279

1 **Prohibited area.** Anchoring is prohibited, and navigation may be prohibited without previous warning, in the area SE of Île aux Moines shown on the chart (47°34′·2N, 2°49′·2W), where seaplanes scoop up water for fire-fighting.

5.280

1 **Prohibited anchorages.** Anchoring, trawling and dredging are prohibited in the following areas shown on the chart:

Between Pointe de Penhap (Nioul) (S point of Île aux Moines) and Pointe de Saint-Nicolas (3 cables WSW) due to a submarine power cable.

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Between Pointe de Brouel (E point of Île aux Moines) and the W coast of Île d'Arz (5 cables E) due to a submarine cable and pipeline.

5.281

1 **Nature reserves.** Landing is forbidden from 15th April to 31st August on the following islets (positions given from the first named): Pladic (47°34′·4N, 2°45′·2W); La Dervenn (5 cables E); Enezy (9 cables E); Île aux Oiseaux (1¼ miles SSE); Pen Blei (4 cables SW); Île des Œufs (1½ miles SW).

5.282

1 **Tidal streams** in the SE part of Golfe du Morbihan are weaker than elsewhere in the gulf: their maximum rate is about 2 kn.

In the channel passing between Île aux Moines and Île d'Arz the in-going tidal stream sets S.

Directions for Île de la Jument to Rivière de Noyalo

(continued from 5.254)

5.283

1 **Initial position** about 2 cables E of the N point of Île de la Jument.

The main channel is unmarked as far as its junction (3¼ miles farther E) with the channel leading S between Île aux Moines and Île d'Arz and leads generally E, passing:

2 Between Pointe de Kerners (4 cables SE of Île de la Jument) and Banc de Kerbouzec (2 cables NW), thence:

Between Pointe de Saint-Nicolas (5 cables SE of Pointe de Kerners) and the extremity of a rocky spit (1 cable NE) that extends 2 cables SW from Pointe de Penhap (Nioul), thence;

Between Pointe de Penhap and a drying shoal (1 cable SE), thence:

3 Between Île Brannec (3 cables E of Pointe de Penhap) and Pointe de Brannec (1½ cables N), thence:

S of L'Œuf Beacon-tower (port hand) (2½ cables ENE of Pointe de Brannec), thence:

Either side of an unmarked pinnacle rock (2 cables E of L'Œuf Beacon-tower) with a depth of 1·8 m over it.

5.284

1 From its junction (47°34′·4N, 2°48′·6W) with the channel leading S between Île-aux-Moines and Île d'Arz, the channel continues generally ENE to Passage de Saint-Armel (4 miles ENE) (5.289) at the mouth of Rivière de Noyalo. It is marked in the vicinity of the principal dangers by beacons and buoys which can best be seen on the chart.

Directions for passage between Île aux Moines and Île d'Arz

(continued from 5.257)

5.285

1 **Initial position** about 1 cable NE of Holavre Beacon-tower (starboard hand) marking the N extremity of the foreshore of Île Holavre (5.290).

The channel, for which the chart is the best guide, leads generally SSE for 2 miles to its junction with the channel from Île de la Jument to Rivière de Noyalo described previously at 5.283 and 5.284.

Direction of buoyage in the channel is S to N.

Small craft anchorages

5.286

1 **Anse de Kerners.** Anchorage in position 47°33′·8N, 2°52′·2W shown on the chart; depth 4 to 5 m; outside small craft moorings.

Supplies: fresh water and provisions from camp site near the landing slip on W shore.

5.287

1 **Anse de Pen Castel.** Anchorage in position 47°33′·4N, 2°51′·7W shown on the chart, depth about 3 m, or farther E in a depth of 6 m where the tidal stream is reported to be weaker.

5.288

1 **Anse de Penera.** Anchorage in the bay on SE side of Île d'Arz, in position 47°35′·3N, 2°47′·8W, ½ cable SE of the beacon (port hand) marking the head of Cale de Pen Raz a landing slip, in a depth of 1·2 m.

Supplies: provisions at Le Bourg, the village in the centre of the island.

5.289

1 **Passage de Saint-Armel.** Anchorage in the position (47°35′·4N, 2°43′·1W) shown on the chart, depth 3 to 4 m; the tidal streams are strong.

Landing slips on both shores of the passage, which is also called Chenal de Montsarrat, marked by beacons (lateral).

5.290

1 **Île Holavre.** Anchorage (47°36′·3N, 2°49′·8W) S of the islet in depth of 2½ m.

Landing slips marked by beacons (starboard hand) at Pointe du Trec'h, the N point of Île-aux-Moines.

5.291

1 **Île Pirenn.** Anchorage S of Île Pirenn in the position (47°35′·8N, 2°49′·3W) shown on the chart and its vicinity, N of the prohibited anchorage area (5.280), depth 2 to 6 m.

Landing slips at Pointe de Brouel, the E point of Île aux Moines, and on Île d'Arz opposite, each marked by a beacon (lateral).

LA VILAINE AND APPROACHES

GENERAL INFORMATION

Chart 2823

Topography

5.292

1 **La Vilaine estuary** (5.350) lies at the NE corner (47°30′N, 2°31′W) of a wide unnamed bay entered between Pointe du Grand Mont (47°30′N, 2°51′W) and Pointe du Castelli (14 miles ESE). It extends E to Barrage d'Arzal (47°30′N, 2°23′W) (5.372), a dam with a lock.

2 **Coastline.** Pointe du Grand Mont is formed of steep moderately high cliffs. Eastward of Pointe de Saint-Jacques (2½ miles ESE of Pointe du Grand Mont) the N coast of the wide bay is low and broken mid-way by the estuary of Rivière de Pénerf (47°30′N, 2°39′W) (5.331). The E shore of the wide bay is bordered by wooded hillocks and has few landmarks.

3 Several small harbours lying on both shores of the wide bay and of La Vilaine estuary all dry and are frequented only by small craft.

4 **La Vilaine river** (5.372) above Barrage d'Arzal is navigable, but rarely used, by coasters as far as Redon (25 miles farther upstream) (uncharted) (5.382), where small

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craft may enter the inland waterway system (5.383). There are several marinas on the river.

Caution

5.293

1 From Pointe du Grand Mont to Pointe du Castelli the coastline provides no shelter in winds from S through W to N, which raise steep seas in shoal water.

Rivière de Pénerf (5.331) is the only refuge that can be entered at LW and local knowledge is then required to do so.

LA VILAINE APPROACHES

General information

Chart 2823

Description

5.294

1 The approaches to La Vilaine estuary are entered between:

Plateau du Grand Mont, which extends 2¼ miles WSW from Pointe du Grand Mont (47°30′N, 2°51′W) (5.115), and:

Plateau de Piriac, which extends 1¾ miles NW from Pointe du Castelli (14 miles ESE of Pointe du Grand Mont).

2 The approaches are separated into three channels by the detached Plateau de la Recherche (4½ miles SE of Pointe du Grand Mont) and Plateau de l'Île Dumet (3½ miles NW of Pointe du Castelli). These channels and their adjacent harbours and anchorages are described hereafter in the following sequence:

3 The principal approach (5.298) passing between the two detached plateaux; Rade de Pénerf (47°28′N, 2°39′W) (5.300); Île Dumet (47°25′N, 2°37′W) (5.302).

The minor channel (5.304) passing N of Plateau de la Recherche; harbours and anchorage on its N shore.

The minor channel (5.315) passing SE of Île Dumet; harbours on its SE shore.

Rivière de Pénerf (5.331).

Rescue

5.295

1 **Lifeboat** (1.77) at Damgan (47°31′N, 2°35′W).

Tidal streams

5.296

1 In the main channel N of Île Dumet the tidal stream, spring rate a constant 1 kn, sets as follows:

Interval from HW Brest	*Direction*
–0620	E
–0320	NE
–0020	N
+0240	WSW

Principal marks

5.297

1 **Landmarks:**

La Lande water tower (inverted cone shape) (47°31′·0N, 2°43′·0W).

Penvins church (spire) (47°30′·5N, 2°41′·0W).

Tour des Anglais (47°30′·3N, 2°37′·8W) (5.301).

Piriac-sur-Mer Coastguard Station (white house) (47°22′·5N, 2°33′·4W) on Pointe du Castelli.

Major lights:

Penlan Light (47°31′N, 2°30′W) (5.358).

Le Four Light (47°18′N, 2°38′W) (5.111).

Directions for main approach

(continued from 5.112)

5.298

1 **Initial position** approximately 47°24′N, 2°45′W.

The white sector (052°–060°) of Penlan Light (47°31′N, 2°30′W) (5.358) leads NE in mid-channel, passing:

2 SE of Plateau de la Recherche, an extensive shoal marked at its SW extremity by Recherche Light-buoy (W cardinal) (47°26′N, 2°50′W) (5.113), on which the principal dangers are: Roche de Locmariaquer (47°26′·1N, 2°47′·6W) marked by Locmariaquer Buoy (isolated danger) moored 3 cables SE of the rock; Roche de Sarzeau (1 mile farther ENE), unmarked; a wreck with 5 m over it and a 3.9 m patch (close together another mile farther ENE), also unmarked. Thence:

3 NW of Plateau de l'Île Dumet, whose limits are best seen on the chart and extend up to 1½ miles from Île Dumet (3½ miles NW of Pointe du Castelli) (5.302).

5.299

1 **Useful marks:**

Saint-Jacques-en-Sarzeau Light (47°29′N, 2°47′W) (5.312).

Conspicuous chapel (47°29′·7N, 2°40′·8W) on the low-lying Pointe de Penvins.

Le Pignon Light-beacon (47°30′N, 2°39′W) (5.335).

Île Dumet Light (47°24′·7N, 2°37′·1W) (5.302).

(Directions continue for La Vilaine estuary at 5.359)

Rade de Pénerf

General information

5.300

1 **Position.** Rade de Pénerf (47°28′N, 2°39′W), a roadstead, lies S of Rivière de Pénerf estuary.

Anchorage: in the position shown on the chart 2 miles SSW of Tour des Anglais holding is very good.

Directions

5.301

1 **Initial position** 47°27′N, 2°41′W.

Entering Rade de Pénerf and approaching the entrances to Rivière de Pénerf (5.331).

Leading marks:

Front (Tour des Anglais, white disused lighthouse) (47°30′·2N, 2°37′·9W)

Rear (Pénerf church tower) (7 cables NNE)

The alignment (031½°) of these marks leads NNE passing (positions given from Tour des Anglais):

2 ESE of Penvins Buoy (port hand) (2 miles SW) moored about 2 cables ESE of the S extremity of Plateau de Penvins, thence:

ESE of the SE corner of Plateau de Penvins (1½ miles SW), thence:

3 Over an isolated 4 m patch (1 mile SSW), and:

ESE of the SE corner of Plateau des Passes (1 mile SW), and:

WNW of a reef (drying 1 m) (1 mile SSW) marked at its S extremity by Borénis Buoy (starboard hand).

(Directions for Rivière de Pénerf are given at 5.335)

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Île Dumet

General information

5.302

1 Île Dumet (47°25′N, 2°37′W) is a sea-bird sanctuary; persons landing on the island must report to the warden.

Useful marks:

Île Dumet Light (white column, green top; 6 m in height) on fort at E end of island.

Old whitened fort (1 cable NW of light).

Anchorage

5.303

1 **Small craft** may obtain temporary anchorage NE of Île Dumet, clear of the mussel beds with stakes shown on the chart and marked by buoys (special). A convenient berth has been reported (1982) to lie 1 cable offshore with Île Dumet Light (5.302) bearing 225°; depth 2 to 4 m, holding moderate as the bottom in places is shingle; exposed to swell and, at night, the *Vent Solaire* (1.135).

Minor channel passing north of Plateau de la Recherche

General information

5.304

1 **Description.** An unnamed channel leads about 10 miles E from the entrance of Baie de Quiberon (5.139) to Rade de Pénerf (47°28′N, 2°39′W) (5.300), passing:

N of Plateau de la Recherche (47°26′N, 2°47′W) (5.298) lying 3 miles offshore, and:

S of several rocky patches lying up to 2¼ miles offshore between Pointe du Grand Mont (47°30′N, 2°51′W) and Pointe de Penvins (7 miles E).

2 **Charted depths.** The S side of the channel is nearly 1 mile wide between the 10 m depth contours, but its S limit is steep-to and unmarked. The N side of the channel crosses Plateau de Saint-Jacques in charted depths of 4·8 m or more.

Tidal streams: see information on chart.

Directions

(continued from 5.117)

5.305

1 **Initial position** 47°27′N, 2°54′W.

The channel leads about 10 miles E to Rade de Pénerf (5.300), passing (positions given from Pointe du Grand Mont (47°30′N, 2°51′W) (5.115)):

S of Chimère Buoy (S cardinal) (5.150) marking Basse de la Chimère (2 miles WSW), thence:

S of Grand Mont Buoy (S cardinal) marking Basse du Grand Mont (8 cables S), thence:

2 N of Plateau de la Recherche whose W end is marked by Recherche Light-buoy (W cardinal) (4½ miles S) (5.113) and whose principal dangers are described at 5.298, thence:

S of the extremity of the coastal reef that extends 2 cables S of Le Bauzec Beacon-tower (S cardinal; 4 m high) (1½ miles SE), thence:

3 S of Saint-Jacques Buoy (S cardinal) marking Basse Rohaliguen (3 miles ESE), thence:

S of Basse de Saint-Jacques (3½ miles ESE), unmarked, thence:

S of Basse Suscinio (5¼ miles E), unmarked, thence:

S of Plateau de Penvins, whose S extremity (7¼ miles E) is marked by Penvins Buoy (port hand) (5.301) moored 2 cables farther E.

4 **Useful mark:**

Roh Béniguet Beacon-tower (S cardinal; 5 m high) (47°29′·4N, 2°45′·3W).

(Directions are given for Rade de Pénerf at 5.301, and for La Vilaine estuary at 5.359).

Port-aux-Moines

5.306

1 **General information.** Port-aux-Moines (47°29′·6N, 2°49′·9W), also called Saint-Gildas-de-Rhuys, is a small drying harbour. It is sheltered on its S and W sides by a mole and from SE by a breakwater and has been reported (1983) to dry from 0·1 m at the entrance to 1 m on the N side.

Port authority: Capitainerie de Port aux Moines, 56730 Saint-Gildas-de-Rhuys.

5.307

1 **Directions for west-south-western approach.** Initial position 1 mile WSW of the harbour entrance.

Leading marks:

Front mark: beacon (port hand) (2 cables WSW of the breakwater head) standing on a rock reported to dry 1·6 m.

Rear mark: beacon (starboard hand) (uncharted) on the breakwater head.

2 The alignment (reported in 1983 to be 070°) of these marks leads ENE to the vicinity of the front mark, passing:

N of Basse du Grand Mont (7 cables WSW of the front mark), marked at its SW corner by Grand Mont Buoy (S cardinal).

The route then leads to the entrance passing S of the beacon previously used as a front leading mark.

5.308

1 **Directions for south-south-eastern approach.** Initial position 1 mile SSE of the harbour entrance.

Leading marks:

Front mark: beacon (starboard hand) (5.307) on the breakwater head.

Rear mark: red square, white border, painted on the molehead (about 50 m NNW of the front mark).

2 The alignment (reported in 1983 to be 343°) of these marks leads to the harbour entrance, passing:

About 2 cables W of Le Bauzec Beacon-tower (S cardinal) (7 cables SSE of the front leading mark) (5.305).

5.309

1 **Berths:** boats of less than 10 tonnes can berth at HW alongside a slip on the E side of the inner section of the mole. A slip on the E side of the root of the breakwater has been reported (1983) to dry 1·5 m at its extremity.

Repairs: reported (1985) that no facilities exist.

Supplies reported (1985) none available.

Port de Saint-Jacques en Sarzeau

5.310

1 **General information.** Port de Saint-Jacques en Sarzeau (47°29′·3N, 2°47′·4W), a small fishing harbour situated on the E side of Pointe de Saint-Jacques, partly dries.

Limiting conditions:

Depth at molehead: 0·6 m.

Weather: exposed to winds from E.

Local knowledge is necessary as the approach between drying rocks is not well marked.

5.311

1 **Harbour layout.** A mole about 60 m long extends ENE then NE from the S side of the harbour; a slip which lies alongside the inner end of its N side has been reported (1985) to dry about 2 m alongside.

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A quay about 50 m long extends NW then W from the root of the mole; it has been reported (1985) to dry about 2·5 m alongside.

A jetty about 20 m long, which dries alongside, extends N from the W end of the quay.

5.312

1 **Directions.** Saint-Jacques en Sarzeau Light (white octagonal turret, red top; 5 m in height), standing on the molehead, has been reported (1983) to lead NW to the harbour entrance, passing (positions given from the light):

NE of Basse de Saint-Jacques (1 mile SE), thence:

SW of a group of three rocks (drying from 0 to 0·6 m) (from 7½ cables to 1 mile E), thence:

2 SW of a 0·6 m rocky patch (5 cables ESE), thence:

SW of No 3 Beacon (starboard hand; uncharted) (1½ cables ESE) marking an isolated rock (drying 1·2 m), and:

NE of a group of drying rocks (1½ cables S to 3 cables SSE), the highest (drying 1·1 m) (2 cables S) marked by a beacon (port hand).

5.313

1 **Repairs** to small craft hulls and engines by firms based at Sarzeau (5 km NNE).

Other facilities: four mooring buoys for visitors; yacht club.

Supplies fuel for fishing vessels only; fresh water.

Anse de Suscinio

5.314

1 **General information.** Anse de Suscinio, the bay lying between Beg Lann (47°30′·1N, 2°44′·3W) and Pointe de Penvins (2½ miles ESE) is encumbered with shoals and drying reefs.

2 **Directions.** The line of bearing 015° of La Lande water tower (1¼ miles NE of Beg Lann) (5.297) leads NNE in charted depths of more than 3 m, passing through a gap (1½ miles SSW of the water tower), about 1½ cables wide, between the shoals.

3 **Useful marks** (positions given from Beg Lann):

Beacon (S cardinal; 3·5 m high) (5 cables SSE) marking a rock.

Beacon (starboard hand) (1 mile ESE) marking a drying rock.

Le Vauguéran Beacon (starboard hand) (9½ cables E) marking a drying rock.

Château de Suscinio (ruins) (9 cables NE).



Château de Suscinio (ruins) (5.314)
(Original dated 1997)
(Photograph – Mr T S Plews, Yacht "Du Bleiz")

Remarkable chapel (2½ miles E) (5.299) on Pointe de Penvins.

Minor channel passing south-east of Île Dumet

General information

5.315

1 **Description.** An unnamed passage leading ENE and passing between the plateaux surrounding Île Dumet (47°25′N, 2°37′W) (5.302) and Pointe du Castelli (3¼ miles SE) provides the most direct route between Rade du Croisic (5.384) and La Vilaine estuary (5.350).

2 **Charted depths.** The deepest part of the channel is about 5 cables wide between the 10 m depth contours. However numerous unmarked shoals and rocky patches with less than 5 m over them lie close inside the edges of the plateaux on both sides of the channel.

3 **Tidal streams** in mid-channel (about 1 mile SE of Île Dumet) are reported to be rotary clockwise and to have the following maximum spring rates, which are thought to be exaggerated.

Interval from HW Brest	*Direction*	*Rate (kn)*
–0320	NE	2
+0240	SW	3

Directions

(continued from 5.112)

5.316

1 **Initial position** 47°24′·0N, 2°37′·5W, approximately 7 cables S of the SW extremity of Île Dumet (5.302).

The deepest part of the channel leads ENE for about 2½ miles, passing (positions given from Île Dumet Light (47°24′·7N, 2°37′·1W):

SSE of Plateau de l'Île Dumet, which extends 7½ cables E from the E extremity of the island, and:

NNW of several unmarked pinnacle rocks with depths of 4·5 m or less over them, whose positions are best seen on the chart and which lie up to 1¾ miles NW and N of Pointe du Castelli, on Plateau de Piriac, thence:

2 SSE of the detached shoal (1¼ miles E) marked at its NE end by Basse-Est Île Dumet Light-buoy (E cardinal).

Small craft may cross Plateau de Piriac in a least charted depth of 2·3 m (1 mile NNW of Pointe du Castelli), passing (positions given from Pointe du Castelli):

3 NW of Les Bayonnelles Light-buoy (W cardinal) marking the extremity of a reef extending 5 cables W from Les Bayonnelles (5 cables W), rocks 3 m high, thence:

NW of a 0·6 m patch lying 3 cables W of Le Rohtrès Beacon-tower (N cardinal; 4 m high) (1 mile N), thence:

NW of a shoal (least depth 0·3 m) extending 6 cables NNE of Le Rohtrès Beacon-tower.

5.317

1 **Useful marks** (positions given from Pointe du Castelli):

Piriac-sur-Mer church (tower) (7 cables NE).

Piriac-sur-Mer Main Light (8 cables NE) (5.321).

Grand Norven Light-beacon (N cardinal; 4 m high) (1¼ miles NNE).

Île Dumet Light (3¼ miles NW) (5.302).

(Directions continue for La Vilaine estuary at 5.359)

Piriac-sur-Mer

5.318

1 **General information.** Piriac-sur-Mer harbour (47°23′·0N, 2°32′·6W), which dries, is used by fishing

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boats and small craft. It is approached E of Plateau de Piriac and entered between two breakwaters.

Port Authority: Bureau du Port at Cercle Nautique de Piriac-sur-Mer, Quai de Verdun.

5.319

1 **Limiting conditions:**

Depths: harbour basin dries from 1·0 to 2·5 m; depth inside wet basin 1.8 m.

Maximum dimensions of small craft: length 12 m.

Tidal levels: no information; for data for Pénerf and Le Croisic see 5.333 and 5.405 respectively.

5.320

1 **Harbour layout**. The W part consists of a drying basin formed by an inner mole from which a breakwater, with a slip on its inner side, projects about 160 m NNE

The E part is a marina within a wet basin enclosed by an L-shaped breakwater. The water level is maintained by a lifting sill at the NW corner of the basin; two red lights are exhibited when the sill is raised, and two green lights when it is lowered.

5.321

1 **Directions.** Initial position 47°24′·0N, 2°32′·5W, about 8 cables NE of Le Rohtrès Beacon-tower (N cardinal) (5.316).

By day the line of bearing 197½° of Piriac-sur-Mer Main Light (white truncated tower, 8 m in height) situated on the head of the inner mole, or at night the white sector (194°–201°) of the light, leads to the harbour entrance, passing (positions given from front mark):

2 E of Le Grand Norven (rock drying 1·8 m) (6 cables N) marked by Grand Norven Light-beacon (N cardinal) (5.317) and covered by a green sector, thence:

E of Le Blousgui (reef drying 1·6 m) (2½ cables N), thence:

3 Close E of the W breakwater head (½ cable N) marked by a light-beacon (white pylon, green top; 2 m in height), thence:

W of the E breakwater head marked by a light-beacon (white pylon, red top; 2 m in height).

5.322

1 **Berths:**

E side of W breakwater; alongside slip beside outer section, depth of outer end reported (1983) to be 1·2 m; alongside inner section, depth alongside reported (1983) to be 0·5 m. Used by fishing vessels.

S side of inner mole; alongside quay, length about 100 m, depth alongside reported (1983) to decrease from drying 1·2 m at E end to drying 3 m at W end; used by fishing vessels.

Wetbasin: 500 pontoon berths for small craft.

5.323

1 **Repairs:** to hull and engines; careening slip.

Other facilities: yacht club.

Supplies fuel; fresh water; provisions.

Mesquer and approaches

5.324

1 **General information.** Mesquer harbour (47°25′N, 2°28′W), a small fishing port with some moorings for shallow draught small craft, lies on the W side of an inlet which mostly dries, sand and mud, and is surrounded by salt marshes. It is approached between reefs and shoals and entered between Pointe de Merquel (47°25′·3N, 2°28′·0W) and Pointe de Pen-Bé (4 cables farther ENE). It consists of an exposed anchorage (5.330) off Pointe de Merquel, and a drying quay at Kercabellec (7 cables S of Pointe de Merquel) (5.330). There are two small craft anchorages on the S side of the secondary approach.

5.325

1 **Limiting conditions:**

Controlling depths:

Approach: 0·3 m.

Channel to Kercabellec: reported (1983) to dry 3 m.

Deepest berths:

Anchorage off Merquel pier (5.330).

Quay at Kercabellec (5.330).

2 Tidal data: none available; see chart for adjacent ports. The tidal streams are strong.

Weather: entry should not be attempted in onshore winds.

5.326

1 **Directions for principal approach.** Initial position 47°26′N, 2°32′W, 3 miles WNW of Pointe de Merquel.

Leading marks:

Front mark: Mesquer Light (white column, green top; 7 m in height) standing, beside a white hut, 8 m from the head of Merquel pier which extends ½ cable N from Pointe de Merquel.

Rear mark: Saint-Joachim Church (spire) (11¾ miles ESE of the front mark) (uncharted).

2 By day the alignment (103°) of these marks, or at night a white sector (102°–118°) of Mesquer Light, leads to a position 3 cables WNW of the front mark, passing (with positions given from front mark):

SSW of Basse du Bile (2¼ miles WNW) (5.361), covered by a red sector, thence:

3 SSW of Laronesse (1¼ miles NW), a drying reef marked by a beacon (isolated danger; wooden post 5 m high), and:

NNE of Basse Normande Buoy (N cardinal), moored 1 cable NW of a 0·5 m patch (1¼ miles W) and covered by another red sector, thence:

NNE of Basse Normande (9 cables W).

(Directions continue for entering Mesquer Harbour at 5.328)

5.327

1 **Directions for secondary approach.** Initial position 47°24′·5N, 2°31′·0W, 5 cables N of the beacon (N cardinal; 5 m high) marking Roche de Kervairé.

Leading marks:

Front mark: Mesquer Light (2½ miles NE of Roche de Kervairé) (5.326).

Rear mark: white gable of house standing on Pointe de Pen-Bé (4 cables ENE of front mark).

2 By day the alignment (about 068°) of these marks is reported to lead, or at night a white sector (067°–072°) of Mesquer Light leads to a position 6 cables WSW of the front mark, passing (positions given from front mark):

SSE of Basse Beaulieu Buoy (S cardinal) moored ½ cable S of Basse de Beaulieu (9 cables WSW), covered by a red sector, thence:

3 N of the reef (drying 2·3 m) (7 cables SW) extending 1½ cables NNE from the shore and covered by the green sector.

The approach route then leads NE to join the inner end of the principal approach (5.326) 3 cables WNW of Mesquer Light. The alignment (068°) previously used as a leading line then becomes a clearing line for the extremity of the coastal reef lying 4 cables SW of the front mark.

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5.328

1 **To enter Mesquer Harbour.** The channel leads E, passing (positions given from Mesquer Light):

Close S of the spar buoy (port hand) (2½ cables NW) marking the SW corner of a mussel bed and stakes whose limits are shown on the chart, thence:

N of an unmarked rock (drying 1·3 m) (1½ cables WNW; uncharted), which lies ½ cable NNE of the 103° alignment described at 5.326.

2 The channel then turns SE and passes:

Close NE of Merquel pierhead (5.326), and:

SW of a beacon (port hand) (1½ cables NE of Merquel pierhead).

5.329

1 **To berth at Kercabellec.** The channel which dries, see 5.325 for controlling depth, has been reported (1983) to be marked by perches and to lead:

SE for about 4 cables, then:

SSW for a further 5 cables; the inner portion of this section being marked by port-hand beacons until it enters a short canal.

5.330

1 **Anchorages.** Lanseria anchorage (47°24′·5N, 2°29′·6W), used by fishing boats and small craft, lies on the S side of the WSW approach to Mesquer (5.327). The reef on the W side of its entrance is marked by a beacon (starboard hand).

Touru anchorage (6 cables NE), in the little Baie du Cabonnais, also used by fishing boats and small craft, is entered (47°24′·9N, 2°28′·9W) between a beacon (starboard hand) at the head of a small jetty and a beacon (port hand).

2 Off Merquel Pier (47°25′·3N, 2°27′·9W) (5.326), which dries but has a depth 10 m off its head of 1·6 m, there are a number of mooring buoys for small craft, 9 of them reserved for visitors (1988). Anchorage N of these moorings has been reported (1984) to dry 0 m and to be exposed to W and NW but otherwise well sheltered.

3 **Berths.** At Kercabellec the S-most 60 m of the E side of the canal is quayed; the basin off the quay has been reported (1983) to be about 15 m wide and to dry 3 m.

Repairs to hulls and engines by boatyard at Kercabellec.

Supplies: provisions at Mesquer (1·5m S of Kercabellec).

Rivière de Pénerf

Chart 2823 (see 1.18)

General information

5.331

1 Rivière de Pénerf is approached from Rade de Pénerf (47°28′N, 2°39′W) (5.300) and entered (2 miles N) by one of three passes through the reefs and shoals which encumber the estuary, namely:

Passe Centrale (5.335), the most direct but shallow (5.332);

Passe de l'Est (5.340), the deepest and best marked but narrow, tortuous and unlit.

Passe de l'Ouest; not recommended, see 5.344 for further details.

2 The river then leads between tidal flats:

1 mile ENE to an anchorage, used mainly by oyster boats and small craft, off Pénerf village (47°30′·8N, 2°37′·2W) (5.346), thence:

About 7 cables N to a similar anchorage off Pen Cadenic (5.347).

5.332

1 **Least charted depths** in the channels:

Passe Centrale: 0·2 m.

Passe de l'Est: 4·5 m.

Passe de l'Ouest: drying 0 m.

Rivière de Pénerf: 3 m as far as Pénerf; 2·7 m thence to anchorage off Pen Cadenic.

Tidal levels. See information in *Admiralty Tide Tables.* At Pénerf: mean spring range about 4·7 m; mean neap range about 2·3 m.

5.333

1 **Tidal streams.** In the passes the in-going and out-going tidal streams begin ½ hour before LW and HW Brest respectively. When the height of the tide is below MSL the tidal streams follow the direction of the channels; when it is above MSL the in-going tidal stream sets ENE maximum spring rate 2 kn, the out-going tidal stream WSW maximum spring rate 4 kn.

2 Off Pénerf, in the anchorage (5.346), the tidal streams begin ½ hour later. maximum rates at springs 2½ kn in-going, 3 kn out-going.

5.334

1 **Landmark:**

Le Tour du Parc water tower (47°31′·6N, 2°39′·0W).

Directions for Passe Centrale and Rivière de Pénerf

(continued from 5.301)

5.335

1 **Initial position** 47°29′·2N, 2°38′·8W, 1¼ miles SSW of Tour des Anglais (5.301).

Leading marks:

Front mark: Le Pignon Light-beacon (red tower; 14 m in height) (7 cables WSW of Tour des Anglais).

Middle mark: Petite-Bayonnelle Nord Beacon (uncharted; starboard hand; metal post) (1½ cables N of front mark).

Rear mark: Le Tour du Parc church spire (1½ miles N of front mark).

2 By day the alignment (000½°) of these marks and at night a white sector (349½°–028½°) of Le Pignon Light-beacon, leads N to a position ½ cable S of the light, passing (positions given from Le Pignon Light-beacon):

3 W of Borénis Buoy (starboard hand) (9 cables SSE) (5.301) covered by a red sector, thence:

Close E of depths of 0·7 m (5 cables S) and 0·2 m (2¾ cables S) (5.332) on Plateau des Passes, which lie within the white sector, thence:

W of La Traverse (1½ cables SSE), a reef drying 0·2 m marked by a beacon (starboard hand), thence:

W of an unmarked rock (drying 0·2 m) (1 cable SE).

5.336

1 The channel then leads NNE to a position midway between Le Pignon Light (5.335) and a beacon (starboard hand; post) (½ cable NE) where it is joined by Passe de l'Est (5.340), whence it leads NNW to a position 1 cable N of Le Pignon Light.

5.337

1 A white sector (167°–175°) of Le Pignon Light (5.335), astern, then leads N, passing (positions given from the light):

W of Petite-Bayonnelle Nord Beacon (starboard hand) (uncharted; 1½ cables N) (5.335), and:

E of the beacon (port hand; post) (uncharted; 1¾ cables NNW) marking the NE side of Men

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Drean, a reef drying 1·6 m, thence to a position 2¾ cables N of Le Pignon Light.

5.338

1 **Rivière de Pénerf** fairway then leads ENE between tidal flats for 1 mile: for the first 5 cables it is nearly 1 cable wide between the 5 m depth contours and steep-to on both sides; thereafter it shoals and narrows to ½ cable between 3 m depth contours. The centre of the channel passes (positions given from Le Pignon Light):

2 NNW of a beacon (starboard hand) (uncharted; 3 cables N), thence:

SSE of a beacon (port hand) (uncharted; 8 cables NE) marking a ledge lying ½ cable NNW of the channel, thence:

3 NNW of the N point at the W end of Pénerf peninsula (8½ cables NE), thence:

Over a shallow (1½ cable WSW of Pénerf slip), see 5.332 for least charted depth, thence:

NNW of the beacon (starboard hand) (uncharted; 1¼ miles NE) marking the head of Pénerf slip (5.346).

5.339

1 The fairway then leads 6 cables, NNE then N, to the N end of Pen Cadenic anchorage (5.347), passing (positions given from Tour des Anglais):

ESE of a beacon (isolated danger) (uncharted; 8½ cables NNE), thence:

E of the beacon (port hand) (uncharted) marking the extremity of the slip (1 mile NNE) at Pen Cadenic, thence:

2 W of a buoy (starboard hand) (uncharted; 1¼ miles NNE), and:

Over a shallow (1¼ miles NNE), see 5.332 for least charted depth.

Farther N the channel shoals to less than 0·5 m.

Directions for Passe de l'Est

(continued from 5.301)

5.340

1 **Caution.** Passe de l'Est is narrow in places and the sides of the channel are steep-to and not well marked. Small craft are reported to use the following directions.

5.341

1 **Initial position** 47°29′·5N, 2°38′·5W, 8½ cables SSW of Tour des Anglais (5.301).

Leading marks:

Front mark: Beacon (port hand) (2 cables SE of Le Pignon Light).

Rear mark: Le Tour du Parc church (1¼ miles N of front mark) (5.335).

2 The alignment (354°) of these marks leads N to a position ½ cable S of the front mark, passing (positions given from Le Pignon Light):

Very close W of an unmarked steep-to rock (depth 2·8 m) (5 cables SSE), thence:

Over the bar (3 cables SE), situated 1 cable S of the front mark, see 5.332 for least charted depth, and:

½ cable W of a rock (drying 0·3 m) (3 cables SE).

3 **Caution**. South of the initial position the alignment (354°) clears close W of the 3 m depth contour on the E side of Passe de l'Est and passes 1½ cables W of Borénis Buoy (starboard hand) (5.301).

5.342

1 The channel, only 50 m wide in places, then continues N passing close E of the beacon (port hand) (2 cables SE of Le Pignon Light) (5.341) previously used as the front leading mark. Thence the channel follows a curve to port for 1½ cables, to lead WNW passing close SSW of the beacon (starboard hand; post) (¾ cable E of Le Pignon Light) which marks the S extremity of Petite Bayonnelle, a drying reef.

2 The channel then leads NW for ½ cable to join Passe Centrale (5.335) midway between Le Pignon Light (5.335) and the beacon (starboard hand) (5.336) ½ cable farther NE.

5.343

1 **Clearing line** (positions given from Le Pignon Light). The line of bearing 320°of the port-hand beacon (1¾ cables NNW) (5.337), just open NE of the two starboard-hand beacons (½ cable NE (5.336) and ¾ cable E (5.342)), clears close NE of the shoal on the SW side of the channel between positions ½ cable and 1½ cables SE of the SE-most of the three beacons.

Directions for Passe de l'Ouest

(continued from 5.301)

5.344

1 **Caution.** Passe de l'Ouest, used by local craft only in strong W winds, is shallow (5.332), poorly marked and not recommended.

5.345

1 **Initial position** 47°29′·2N, 2°39′·2W, about 1 mile SSW of Le Pignon Light (5.335).

Passe de l'Ouest, whose location can best be seen on the chart, leads generally N, passing (positions given from Le Pignon Light):

E of the extremity of the unmarked reefs (drying 0 to 0·2 m) (9 cables SW) extending 7 cables ESE from Pointe de Penvins, thence:

2 W of Plateau des Passes, whose N part dries 1·3 m and is marked by two beacons (both starboard hand) (3 cables W and 3½ cables WNW), and:

E of L'Artimon (reef drying 2 m), whose E edge is unmarked, extending 8½ cables ENE of Pointe de Penvins.

3 The channel then dries (5.332) and leads ENE into Rivière de Pénerf (5.338) passing 1 cable NNW of the N-most of the two starboard-hand beacons (3½ cables WNW of Le Pignon Light) described above.

Anchorages

5.346

1 **Pénerf slip** extends about 100 m NNW from the point 7 cables NNE of Tour des Anglais: its extremity, marked by a beacon (starboard hand) (5.338), is accessible at all states of the tide. It has been reported (1983) that with care small craft can dry out alongside the slip.

Anchorage: on line of bearing 064° of beacon (starboard hand) at extremity of Pénerf slip; depth from 3 to 7 m bottom sand and mud moderate holding; not recommended during strong WNW and NW winds and an out-going tidal stream.

5.347

1 **Pen Cadenic** landing slip (3½ cables N of Pénerf slip) has been reported (1983) to dry 2 m at its extremity which is marked by a beacon (port hand) (5.339).

Anchorage: off Pen Cadenic slip in charted depths from 2·7 to 6·5 m; sheltered from W; tidal streams weaker than off Pénerf.

5.348

1 **Moorings** for small craft are laid in both anchorages; 30 reserved (1988) for visitors.

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Port services

5.349

1 **Repairs:** boatyard at Pénerf repairs engines and hulls; careening slip.

Supplies fuel and provisions available at Pénerf; provisions available at Le Tour du Parc (2 km WNW of Pen Cadenic slip).

LA VILAINE

General information

Chart 2823

Description of waterway

5.350

1 **Entrance.** La Vilaine is entered over a broad bar that extends about 1½ miles NE and SW of a line drawn from Pointe de Kervoyal (47°30′·7N, 2°32′·9W) to Pointe du Halguen (2¼ miles ESE), the outer limit of Embouchure de la Vilaine.

The following recommended routes, which were systematically searched for obstructions to a width of 400 m in 1977, lead across the bar:

2 NE through Passe de la Grande Accroche (5.359), passing NW of La Grande Accroche (1½ miles S of Pointe de Kervoyal), a rocky patch.

NNE through Passe de la Varlingue (5.361) passing either WNW or ESE of La Varlingue (5 cables WNW of Pointe du Halguen) (5.361), drying rocks.

E, from the inner ends of the three routes described above, through Embouchure de la Vilaine (5.363).

5.351

1 **Fairway.** A buoyed channel then leads 1½ miles ESE between extensive tidal flats to Tréhiguier (47°29′·8N, 2°26′·5W) (5.370) where the river narrows and thence continues generally E for 2½ miles to Barrage d'Arzal (5.372), the limit of tidal influence. The river is uncharted above Tréhiguier.

Depths

5.352

1 **Caution.** The construction of Barrage d'Arzal has resulted in the reduction of the previously strong tidal streams with consequent silting of La Vilaine estuary. The charted depths cannot be relied upon; mariners are advised to consult the Port Authorities for the latest information.

2 **Least charted depth** on the recommended tracks over the bar is 0·5 m (6 cables N and NNE of Pointe du Halguen) (5.363), based on surveys made between 1991 and 1999 .

Least depth in channel between Tréhiguier and Barrage d'Arzal was 1·1 m in 1999.

Prohibited anchorage

5.353

1 Anchoring is prohibited in La Vilaine fairway (5.364) upstream of a line drawn from Pointe du Scal (47°29′·7N, 2°26′·8W) to Pointe du Moustoir (3 cables NNE).

Pilotage

5.354

1 Pilotage is not compulsory but is strongly recommended, Requests for pilots should be sent 48 hours in advance. Pilots board in position 47°29′·1N, 2°34′·9W, near Les Mâts Buoy.

For further details see *Admiralty List of Radio Signals Volume 6(2).*

Rescue

5.355

1 **Lifeboat** (1.77) based at Pénestin, Pointe du Scal (47°29′·7N, 2°26′·8W).

Natural conditions

5.356

1 **Tidal streams.** The construction of Barrage d'Arzal (5.372) has affected the tidal streams in La Vilaine estuary but no details are available. The following table which lists the times when the in-going and out-going tidal streams begin, their direction and subsequent maximum rates, should be treated with caution. In particular the rates given for Rade de Tréhiguier are probably excessive.

Interval from HW Brest	*Direction*
Passe de la Grand Accroche	
–0450	NE
+0025	SW

Maximum rates at springs: NE-going 2 kn; SW-going 2½ kn

2 Passe de la Varlingue

–0535	NNE
–0020	SSW

Maximum rate at springs: 2½ kn in both directions

Rade de Tréhiguier

–0520	E
–0005	W

3 Maximum rate at springs: 3 kn in both directions.

Caution. The flow can change rapidly when Barrage d'Arzal sluices are operated, especially when La Vilaine is in spate; the effect is likely to be particularly noticeable E of 2°30′W.

5.357

1 **Tidal levels** at Tréhiguier (2 miles E of Pointe du Halguen) (5.370): see information in *Admiralty Tide Tables.* Mean spring range about 4·8 m; mean neap range about 2·1 m.

Winds from W quadrant raise very rough seas on the bar at the entrance to the estuary, especially during the out-going tidal stream. With strong SW winds Passe de la Varlingue is relatively more sheltered than Passe de la Grande Accroche.

Principal marks

5.358

1 **Landmarks:**

Damgan church (grey spire on white square tower) (47°31′N, 2°35′W) with a water tower close SW.

Penlan Lighthouse (white square tower, red bands; 18 m in height) (47°31′N, 2°30′W) standing amongst houses on Pointe de Penlan, a prominent bluff.

2 Billiers church tower (1 mile NNE of Penlan Light) (5.361).

Pénestin church (pointed spire) (47°29′N, 2°28′W).

Major light:

Penlan Light-see above.

Directions

(continued from 5.299, 5.305 or 5.317)

Passe de la Grande Accroche

5.359

1 **Initial position** 47°28′N, 2°36′W.

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Leading marks:

Front mark: Penlan Lighthouse (47°31′N, 2°30′W) (5.358).

Rear mark: Abbaye de Prières (grey square tower) (7 cables NE of front mark).

2 The alignment (052°) of these marks leads NE to a position 3¼ miles SW of the front mark, passing (positions given from Penlan Light):

SE of Basse des Mâts (4¾ miles WSW), an unmarked shoal, thence:

SE of Les Mâts Buoy (S cardinal) (3¾ miles WSW) marking the SE corner of Plateau des Mâts.

3 Then to a position 1 mile SW of Penlan Light the alignment (052°) indicates the SE side of the searched channel (5.350) and clears:

NW of La Grande Accroche (2½ miles SW).

The centre-line of the searched channel passes (positions given from Penlan Light):

4 SE of a rocky patch (depth 1·4 m) (2½ miles WSW), thence:

SE of Basse de Kervoyal, a drying reef marked near its SE extremity by Basse de Kervoyal Light-beacon (S cardinal) (1¾ miles WSW) (5.363).

5 **Useful marks:**

Tour des Anglais (47°30′N, 2°38′W) (5.301).

Les Mâts Beacon (E cardinal; iron; 4 m high) (2 miles ESE of the tower) marking the SE corner of the drying part of Plateau des Mâts.

5.360

1 **At night** the white sector (052°–060°) of Penlan Light (5.358) leads NE through Passe de la Grande Accroche between the dangers mentioned in the previous paragraph, but its 060° limit does not indicate the NW limit of the searched channel (5.350).

Useful mark:

Basse Bertrand Light-beacon (4 cables WNW of Penlan Light) (5.368).

(Directions continue for Embouchure de la Vilaine at 5.363).

Passe de la Varlingue, western recommended track

5.361

1 **Initial position** about 47°27′N, 2°33′W.

Leading marks:

Front mark: Penlan Lighthouse (47°31′N, 2°30′W) (5.358).

Rear mark: Billiers church tower (white cupola on grey tower) (1 mile NNE of front mark).

The alignment (025½°) of these marks leads to a position in Embouchure de la Vilaine 7 cables SSW of the front mark, passing (positions given from front mark):

2 WNW of Basse du Bile (4½ miles S), an unmarked isolated rocky patch, thence:

WNW of Basse de Loscolo (3¼ miles SSW), a similar patch, thence:

Along the centre line of the searched channel (3 miles to 7 cables WSW) (5.350), and:

3

WNW of La Varlingue (1¼ miles SSW), two rocks the S-most drying 0·3 m and the other awash.

The limit (025°) between adjacent red and green sectors of Penlan Light is nearly the same as the alignment (025½°) of the leading marks.

(Directions continue for Embouchure de la Vilaine at 5.363)

Passe de la Varlingue, eastern recommended track

5.362

1 **Initial position** about 47°27′N, 2°32′W.

Leading marks:

Front mark: Beacon (white wall about 5 m in height) (4 cables E of Penlan Light), which has been reported (1999) to be rather indistinct.

Rear mark: Abbaye de Prières tower (4 cables NNE of front mark) (5.359).

The alignment (023°) of these marks leads to a position in Embouchure de la Vilaine (5.363) 8 cables SSW of the front mark, passing (positions given from front mark):

2 WNW of Basse du Bile (4¾ miles SSW) (5.361), thence:

WNW of Basse de Loscolo (3½ miles SSW) (5.361), thence:

Along the centre line of the searched channel (3¼ miles to 8 cables SSW) (5.350), and:

3 WNW of Pointe de l'Île Beacon-tower (W cardinal; 6 m high) (1¾ miles SSW) which marks the edge of a drying ledge extending 2 cables offshore between Pointe de Cofreneau (1¾ miles S) and Pointe du Halguen (1¼ miles S), thence:

4 ESE of La Varlingue (1½ miles SSW) (5.361), and:

WNW of a 0·1 m patch (uncharted) lying 2 cables N of Pointe de l'Île Beacon-tower (W cardinal), where the channel narrows to about 300 m.

5 **Clearing marks:**

Front mark: Pointe de l'Île Beacon-tower (W cardinal).

Rear mark: Abbaye de Prières tower.

The alignment (020°) of these marks, described earlier in this paragraph, clears:

5 cables W of Basse du Bile, and:

Close W of Basse de Loscolo.

Embouchure de la Vilaine

5.363

1 **Caution.** The recommended track described in this paragraph is based on surveys made between 1991 and 1999, but Petit-Sécé mud flat on the S side of its inner end is advancing N.

Initial position: 47°30′·4N, 2°31′·2W, at the inner end of Passe de la Grande Accroche searched channel (5.359), 9 cables E of Basse de Kervoyal Light-beacon (S cardinal: tower 12 m in height).

2 The white sector (269°–271°) of Basse de Kervoyal Light-beacon, astern, leads 1¾ miles E through Embouchure de la Vilaine to the entrance of La Vilaine fairway, passing (positions given from the light-beacon).

SE of a beacon (S cardinal) (7 cables ENE).

The inner ends (1½ and 1¾ miles E) of Passe de la Varlingue recommended tracks (5.361 and 5.362), and:

3 Over the shallowest part of the bar (1¾ miles E), see 5.352 for least charted depth, thence:

N of the charted drying 0 m contour on the N edge of Petit-Sécé mud flat (2½ miles E) which is covered by the red sector.

La Vilaine fairway

5.364

1 **Initial position** 47°30′·4N, 2°28′·7W, 3 cables N of Sécé Beacon-tower (white; 4·5 m high).

The fairway, about 150 m wide, then leads 1½ miles SE then E to the vicinity of Tréhiguier (5.370). The channel is entered between No 1 Light-buoy (starboard hand) and

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No 2 light-buoy (port hand), moored 2½ cables NNE and 3½ cables N of Sécé Beacon-tower respectively, and marked by further light-buoys (lateral).

2 **Caution.** The mud flats on both sides of the fairway are steep-to and encumbered with lines of wooden posts used for the cultivation of mussels.

Useful mark:

Pointe du Scal Light (white square turret, green top; 3 m in height) (1½ miles ESE of Sécé Beacon-tower).

5.365

1 From the vicinity of Tréhiguier (5.370) the estuary leads generally E for 2½ miles to Barrage d'Arzal (5.372). Local knowledge is necessary to follow the deepest part of the channel, which has a shoal in mid-river, see 5.352 for least depth, about 1 mile E of Pointe du Scal Light (5.364), and leads round the outside of the bend about 3 cables farther upstream where the river turns NE.

(Directions continue at 5.376)

Small craft anchorages and harbours

Port de Kervoyal

5.366

1 **General information.** Port de Kervoyal (47°30′·9N, 2°33′·0W) is the name given to the small drying bay, well sheltered from winds between WSW and N, situated immediately N of Pointe de Kervoyal.

2 **Directions.** From the inner end of Passe de la Grande Accroche, the bay is entered passing (positions given from Pointe de Kervoyal):

N of Basse de Kervoyal, marked near its SE extremity (4 cables SE) by Kervoyal Light-beacon (S cardinal) (5.363), and:

S of the beacon (special) (7 cables ENE) marking the SW corner of an area reserved for fishing, whose limits are marked by another four beacons (special).

3 **Anchorage,** for small craft able to take the ground, lies N of Pointe de Kervoyal; depths drying from 1·5 to 2 m, sand.

Repairs to engines and hulls carried out by firm located at La Croix de Landrezac (about 1 km WNW).

Other facilities: slip; yacht club.

Port de Billiers

5.367

1 **General information.** Port de Billiers (47°31′·2N, 2°30′·0W), a small drying harbour, lies on the N side of Pointe de Penlan peninsula at the mouth of Ruisseau de Saint-Éloi, a stream. It is approached by a channel, reported (1984) to dry 1·5 m, passing N of the reefs extending 3½ cables W from Pointe de Penlan. Entry should not be attempted in strong on-shore winds.

5.368

1 **Directions.** Initial position 47°30′·0N, 2°32′·2W, 5 cables SSE of Basse de Kervoyal Light-beacon (S cardinal) (5.363).

Leading marks:

Front mark: Basse Bertrand Light-beacon (green tower; 14 m in height) (4 cables WNW of Penlan Light).

Rear mark: Billiers church tower (1¼ miles NE of front mark) (5.361).

2 By day the alignment (045°) of these marks or at night a white sector (040°–054°) of Basse Bertrand Light-beacon, lead to a position about 1 cable SW of the light, passing:

SE of the beacon (special) (4 cables WSW of Basse Bertrand Light-beacon) marking the SE corner of the reserved fishing area (5.366).

3 The channel then passes about 50 m NW of Basse Bertrand Light-beacon whence another white sector (227°–234°) of the same light, astern, leads NE, passing:

NW of La Pierre de la Croix Beacon (N cardinal) (2½ cables ENE of Basse Bertrand Light-beacon) standing close N of Roche Men-Toul, the above-water part of the reef extending 2 cables NW from Pointe de Penlan.

4 Then the channel leads E, then SE, to the harbour entrance and is marked on both sides by beacons (lateral).

5.369

1 **Anchorage:** upstream from the quay; moorings for 80 small craft dry at MLWS, the trot on the W side of the channel is reserved for larger craft.

Berth: quay 150 m in length prolonged by a short mole extending NW from W side of entrance; dries 1·8 m alongside and reported (1984) to be sheltered from winds from N through E to SW, but uncomfortable in strong W winds during the out-going tidal stream.

2 **Other facilities:** careening area; gridiron.

Supplies: fresh water at quay; provisions at Billiers (2 km NNE of quay).

Tréhiguier Harbour

5.370

1 **Anchorage:** close to the S bank above Tréhiguier (47°29′·8N, 2°26′·4W); moorings for 60 small craft.

Berths: slip, extending about 50 m N from shore 450 m E of Point du Scal Light, whose head dries only at MLWS and is marked by a beacon (starboard hand) (uncharted); quays extending about 100 m W and about 80 m ESE from root of slip reported (1983) to dry 2 m and 2·2 m alongside respectively, the W-most to be especially suitable for small craft.

2 **Facilities:** none.

Supplies: provisions in limited quantity.

La Vieille Roche

5.371

1 **Anchorage** (47°30′N, 2°23′W; uncharted) for small craft outside numerous small craft moorings laid off the S bank of the river below Barrage d'Arzal (5.372).

Supplies: reported (1984) none available.

La Vilaine from Barrage d'Arzal to Redon

General information

5.372

1 **Barrage d'Arzal** (47°30′N, 2°23′W), a dam built to improve the drainage and navigation of La Vilaine, now forms the head of the estuary and the beginning of a lake, entered through Arzal lock at the NE end of the dam, bordered by meadows or reed beds or in the lower reaches rocky cliffs and extending 25 miles up river to Redon (47°39′N, 2°04′W) (5.382), the limit of navigation for masted craft. This section of the river is uncharted.

2 **Bridges** spanning the river are:

Bascule bridge at Arzal lock (5.376).

Suspension bridge at La Roche-Bernard (47°31′N, 2°18′W) (5.380).

Swing bridge at Cran (47°35′N, 2°07′W) (5.378).

Limiting conditions

5.373

1 **Controlling depths** (positions given as approximate distance above Arzal lock):

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Lock



Arzal Lock from NW (5.374)
(Original dated 1997)
(Photograph – Mr T S Plews, Yacht "Du Bleiz")

Arzal lock approach: 1 m (reported 1981).
Arzal lock exit to La Roche Bernard (5 miles): 2·3 m.
La Roche-Bernard to Cran (5 to 19 miles): decreases gradually from 2·3 m to 0 m.
Cran to Redon (19 to 25 miles): 0 m.

2 **Water level** between Barrage d'Arzal and Redon is normally maintained at 4·5 m above chart datum, but may be reduced to 3·5 m when flood water is being released at the dam.

5.374

1 **Dimensions** of Arzal lock: length 85 m; width 13 m; depth over sill 2 m.

Vertical clearance of La Roche-Bernard suspension bridge: more than 30 m.

Lock and bridge working. Arzal lock is worked (1988):

2 From 1st May to 15th September: at hourly intervals from 0700 to 2200 on Saturdays, Sundays and public holidays and less frequently on weekdays from 0730 to 2030. By day only during the rest of the year.

Cran swing bridge (5.378): reported (1988) to work from 0630 to 1200 and from 1300 to 1930.

Prohibited anchorage

5.375

1 Anchoring is prohibited in the fairway between Barrage d'Arzal and Redon.

Directions

(continued from 5.365)

5.376

1 **Arzal lock** (47°30′·1N, 2°22′·8W) is approached from the NE side of the river; the inner end of the channel leading into the lock is marked by two starboard hand buoys.

The entrance to and exit from the lock are each marked by one beacon (starboard hand) standing on the molehead on the SE side of the approaches, and by two more beacons (one port, one starboard hand) standing on either side of the entrances.

The control tower standing on the SE side of the lock is prominent.

5.377

1 **From Arzal lock** the channel (uncharted) leads SE for about 3 cables, then NE for a similar distance, and is marked:

On the N side by port hand buoys moored off Port d'Arzal, and:
On the SW side by yellow conical buoys marking the NE side of an area that extends 3 cables SE from the barrage sluices, in which navigation is prohibited, thence:
On the SE side by starboard hand buoys.

5.378

1 **From Port d'Arzal to Redon** (5.382), 25 miles farther upstream, it has been reported (1981) that:

A mid-river track should be followed except at bends where the outer bank should be favoured.
Particular dangers are indicated by lateral system marks.

At Cran (47°35′N, 2°07′W), about 6 miles from Redon, the river is spanned by a bridge whose swinging section lies near the S bank. The signal to request its opening is three blasts on the siren.

Arzal-Camoël Marina

5.379

1 **General information.** Arzal-Camoël Marina (47°30′N, 2°23′W), situated immediately above Barrage d'Arzal (5.372), consists of Port d'Arzal on the N bank, and Port de Camoël on the S side of La Vilaine S of the navigation prohibited area (5.377).

Port Authority: Capitainerie, Le Vieux Château en Camoël, 56130 La Roche-Bernard; situated at the W end of Port de Camoël.

2 **Berths** for 640 small craft at ten pontoons (six at Camoël, four at Arzal), visitors berth at the W-most pontoon at Camoël; 180 moorings, 80 of them off the S bank E of Port de Camoël, used by fishing vessels and small craft.

Repairs of all kinds to craft up to 15 tonnes at 3 boatyards; 10-tonne crane; slip.

Other facility: yacht club at Arzal.

Supplies: fuel at quay on N shore at exit from Arzal lock; fresh water at pontoons; provisions.

La Roche-Bernard

5.380

1 **General information.** A high suspension bridge (47°31′·5N, 2°18′·2W), see 5.374 for vertical clearance, spans the river at La Roche-Bernard, a small town on the E bank.

Port du Rhodoir, a marina, occupies Saint-Antoine creek on the E bank 3½ cables S of the bridge.

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A r z a l L o c k



Barrage d'Arzal

Arzal-Camoël Marina from SW (5.379)

(Original dated 1994)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

Port Neuf, another marina, is situated on the E bank close S of the bridge.

Principal anchorage: in the middle of the river.

2 **Berths:**

At pontoons for a total of 225 small craft in the two marinas; in summer the maximum draught at Port du Rhodoir is 1·8 m.

Moorings for craft maximum length 20 m.

3 **Repairs** of all kinds to small craft by two boatyards at Port Neuf; slip; 8-tonne crane at Port du Rhodoir.

Other facilities: hospital; yacht club.

Supplies: fuel from service station at N end of quay at Port du Rhodoir; fresh water at pontoons; provisions from the town.

Port de Folleux

5.381

1 **General information.** Port de Folleux, a marina, lies on both sides of the river 4 miles above La Roche-Bernard.

Berths for 120 small craft at pontoons and 90 more on moorings.

Repairs of all kinds at boatyard.

Supplies: fresh water.

Redon

5.382

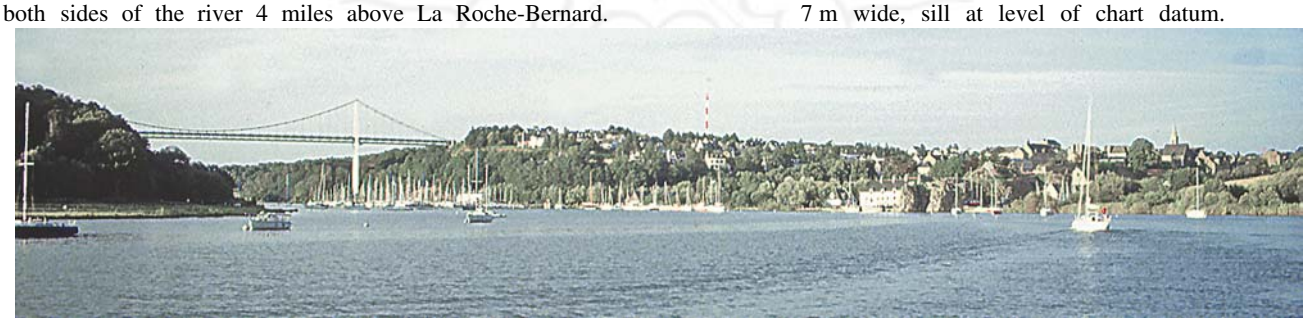
1 **General information.** Redon (47°39′N, 2°04′W), population 9300 (1990), lies at the limit of navigation for vessels that are too large for the inland waterways (5.365).

Port Authority: Bureau du Port, Quai Surcouf, 35600 Redon.

2 **Berths:**

Quay on N bank below the town; length 60 m; partially dredged to level of chart datum, depth alongside remainder 3 m above chart datum.

Basin, formerly a wet dock; 345 m long, 60 m wide, depth alongside 2 m above chart datum; entrance 7 m wide, sill at level of chart datum.



La Roche-Bernard from SW (5.380)

(Original dated 1997)

(Photograph – Mr T S Plews, Yacht "Du Bleiz")

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Marina within the basin provides more than 100 berths, some alongside quay.

3 **Repairs** of all kinds to small craft; slip.

Other facilities: crane for raising and lowering masts of small craft.

Supplies for small craft: fuel; fresh water; provisions.

Inland waterways

5.383

1 **Breton canals.** The Manche-Atlantique system of waterways is entered from the N end of the basin at Redon, which leads into the junction of Canal de Brest à Nantes with the canalised section of La Vilaine. These inland waterways lead:

N for 196 km to Saint-Malo (48°39′N, 2°01′W) *(Channel Pilot).*

S for 95 km to Nantes (47°13′N, 1°34′W) (6.176).

W for 184 km to Lorient (47°45′N, 3°21′W) (4.183).

RADE DU CROISIC AND APPROACHES

General information

Chart 2823

Description

5.384

1 **Rade du Croisic** (47°20′N, 2°33′W), an open roadstead, occupies the S part of the wide bay entered between Pointe du Castelli (47°22′·5N, 2°33′·5W) and Pointe du Croisic (5 miles S), two low-lying points.

Plateau du Four (4 miles W of Pointe du Croisic) lies on the S side of the W approach to the bay. The passage between the plateau and Pointe du Croisic, which forms the N entrance to Chenal du Nord (6.56), is described in the next chapter.

5.385

1 **Port Autonome de Nantes-Saint-Nazaire** (6.3) administers the surrounding waters within the area enclosed by a line joining the following points (positions given from Pointe du Castelli unless otherwise stated):

Pointe du Castelli (47°22′·5N, 2°33′·5W).
Île Dumet Light (3½ miles NW) (5.302).
Le Four Light (5½ miles SW) (5.111).
Jetée du Tréhic Light (4¼ miles SSE) (5.391).
Pointe de Pen-Bron (5 cables SE of Jetée du Tréhic Light).

2 The administrative area does not include the following harbours:

Lérat (1¼ miles SE) (5.394).
La Turballe (2½ miles SE) (5.395).
Le Croisic (5 miles SSE) (5.404).

Dumping ground

5.386

1 **Explosives** are dumped in the area (47°19′N, 2°32′W) E of Rade du Croisic.

Rescue

5.387

1 **Coastguard station** (1.75): Piriac-sur-Mer (47°22′·5N, 2°33′·4W) (5.297).

Lifeboats (1.77) stationed at:

Le Croisic (47°18′·1N, 2°31′·1W) (5.402).
La Turballe (47°21′N, 2°31′W) (5.395).

Natural conditions

5.388

1 **Tidal streams.** In position 47°19′·5N, 2°38′·5W, 1 mile N of Plateau du Four, the tidal stream sets as follows at neaps (data for springs is not available):

Interval from HW Brest	*Remarks*
–0600 to HW	Sets NE; rate ½ kn
+ 0100 to + 0400	Turns anti-clockwise to NNW; rate ¼ kn
+ 0400 to + 0600	Turns clockwise to NE; rate increases to ½ kn.

2 In Rade du Croisic (47°20′N, 2°33′W) the tidal stream, spring rate a constant 1 kn, is rotary clockwise and sets:

Interval from HW Brest	*Direction*
–0530	N
–0230	NE
HW	SE
+0300	WSW

5.389

1 **Flow.** When La Loire (6.1) is in spate, especially with E winds, muddy river water enters the bay between Pointe du Croisic and Plateau du Four and flows coastwise towards Pointe du Castelli. In these conditions there is no S-going flow except at springs.

Principal marks

5.390

1 **Landmarks:**

Le Four Lighthouse (47°18′N, 2°38′W) (5.111).
Piriac-sur-Mer Coastguard Station (47°22′·5N, 2°33′·4W) (5.297).
Trescalan church (octagonal tower) and water tower (47°21′N, 2°29′W).
Guérande church (spire) (47°20′N, 2°26′W).
Pen-Bron Beacon (white cairn) (47°19′·5N, 2°30′·0W) standing on the beach.

2 Le Croisic church (cupola on lantern on tower) (47°17′·7N, 2°30′·7W), which is similar to the conspicuous church at Batz-sur-Mer (1¾ miles SE) (6.68).

Le Croisic water tower (3½ cables SSW of Le Croisic church).

Major light:

Le Four Light—as above.

Directions

(continued from 5.112)

5.391

1 **Initial position** about 47°22′N, 2°42′W.

To approach Rade du Croisic. The white sector (093°–145°) of Jetée du Tréhic Light (grey tower, green top; 12 m in height) (47°18′·5N, 2°31′·3W) leads ESE

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between the outer dangers, which are covered by green sectors, passing (positions given from the light):

SSW of Île Dumet (7½ miles NW) (5.302), thence:

2 NNE of Bonen du Four Light-buoy (N cardinal) marking the NW corner of Plateau du Four (5¼ miles W), thence:

SSW of Les Bayonnelles Light-buoy (W cardinal) (4¾ miles NNW) (5.316) marking reefs extending 1 mile W from Pointe du Castelli, thence:

SSW of a white spar buoy (3½ miles NW) marking the end of a disused submarine pipeline, thence:

NNE of Basse Hikéric (3 miles W).

3 **Clearing marks.** The alignment (268°) of the following marks passes 1¼ miles N of Plateau du Four:

Les Grands Cardinaux Light (47°19′N, 2°50′W) (5.111) and:

Goulphar Light (16 miles farther W) (5.11)

5.392

1 **To enter Rade du Croisic.** The route leads E, passing:

N of the unmarked shoals that lie up to 1 mile offshore between Pointe du Croisic and Le Croisic, and in the white sector (093°–145° of Jetée du Tréhic Light, and:

S of Basse Bezou (2½ miles N of Jetée du Tréhic Light) and the unmarked coastal reefs in its vicinity.

5.393

1 **Useful marks** (positions given from Jetée du Tréhic Light):

Île Dumet Light (7½ miles NW) (5.302).

Jetée de Garlahy Light (5.400) at La Turballe (2¼ miles N).

Basse Hergo Light-beacon (starboard hand; truncated conical tower 12 m in height) (2½ cables NW).

(Directions are given for Chenal du Nord N approach at 6.65)

Small craft: Lérat

5.394

1 **General information.** Lérat Harbour (47°21′·9N, 2°32′·0W) consists of a small drying bay sheltered by a jetty extending about 70 m SW from its W entrance point and a short breakwater extending NE from the root of the jetty.

Directions. Initial position 47°21′·6N, 2°32′·7W, about 1 mile SSE of Pointe du Castelli. The entrance channel, for which local knowledge is necessary and the chart is the best guide, leads (positions given from Pointe du Castelli):

2 ENE, passing SSE of the rocky foreshore, to a position close N of a beacon (starboard hand, post) (1·1 miles SE), marking a detached reef (drying 2·1 m), thence:

NE, passing close SW of the head of the jetty (about 1·1 miles ESE), where the channel has been reported (1983) to dry 1 m, thence:

NW into the drying harbour, passing NE of the breakwater head.

La Turballe

Chart 2823 (*see 1.18*)

General information

5.395

1 **Description.** La Turballe (47°21′N, 2°31′W), population 3000 (2003), is a medium-sized fishing port and a small craft harbour, entered from the NE corner of Rade du Croisic.

Port Authority: Bureau de Port; office on Digue de Tourlandroux (5.398).

Limiting conditions

5.396

1 **Controlling depths:** Bassin de Garlahy entrance 1·9 m; Grand port entrance 1·5 m.

Deepest berths: NE and SE sides of Bassin de Garlahy (5.402).

Tidal levels: no information; see 5.405 for tidal data for Le Croisic (2½ miles S).

Arrival information

5.397

1 **Port radio:** see 1.41 for details.

Prohibited anchorage area, shown on the chart, extends 8 cables WSW from the harbour entrance; in force only when the buoys (special) marking its limits are in place during the period 1st June to 30th September.

Harbour

5.398

1 **General layout.** The central fish market quay divides the port into two basins:

Bassin de Garlahy, also called Nouveau Port, on its NW side.

Grand Port, also called Vieux Port, on its SE side.

The harbour is sheltered:

W by Jetée de Garlahy, a breakwater.

2 S by Digue de Tourlandroux, recently broadened SW to about 100 m, extending NW from the head of Jetée des Brebis, the inner part of the breakwater extending WSW from the shore.

5.399

1 **Tidal streams** off La Turballe set as follows:

Interval from HW Brest	*Direction (begins)*
–0530	NW
–0315	SE

Maximum rate at springs: 1 kn.

Directions

5.400

1 **Initial position** 47°20′·6N, 2°30′·8W, about 1 cable S of Jetée de Garlahy Light (white metal framework tower, red top; 11 m in height) standing on the breakwater head.

La Turballe Leading Lights:

Front light-beacon (metal mast, orange top; 5 m in height) (1¼ cables NNE of Jetée de Garlahy Light) standing on the SW corner of the quay surrounding the fish market.

2 Rear light-beacon (metal pylon, orange top; 12 m in height) (200 m N of front light-beacon) near the N corner of Bassin de Garlahy.

The alignment (006½°) of these leading lights leads into the harbour, passing (positions given from front light):

W of an unmarked rock (drying 0·9 m) (1½ cables S) lying about ½ cable W of Les Brebis Beacon (starboard hand; post) (uncharted; 1¾ cables SSE), thence:

3 Close E of the head of Jetée de Garlahy (1¾ cables SSW), and:

Close W of the edge of a rocky flat that dries 1·3 m and extends W from Digue de Tourlandroux. La Gamelle Beacon (starboard hand; post) (uncharted; 1 cable S) stands within the edge of the flat. Thence:

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Close W of the head of Digue de Tourlandroux marked by a light (white post, green top) (½ cable SSE).

5.401

1 **Useful mark:**

Les Espets Beacon-tower (port hand) (1 cable WNW of Jetée de Garlahy Light) standing close within the S edge of the drying rocky flat that extends 2 cables W from Jetée de Garlahy.

Berths

5.402

1 **Anchorage** for small craft: in fair weather, E of the harbour entrance leading line and S of the rocky flat marked by Les Brebis Beacon (5.400). Two landing slips: on foreshore E of anchorage.

2 **Grand Port** (5.398). Quai Sud and Cale de Pleine-Main, on the WSW and SE sides respectively of the central fish market quay, are used by fishing vessels.

Numerous pontoons provide 310 berths including 20 for visitors; the pontoon lying alongside the NE side of Digue de Tourlandroux has a depth of 2 m alongside, the remainder depths of 1·2 to 1·7 m.

3 The three pontoons extending WSW from the NE side of the basin are reserved for fishing vessels and the four pontoons extending NNW from Jetée de Brebis for small craft; visiting small craft berth at the head of the WSW-most.

4 **Bassin de Garlahy** (5.398) has quays on all sides; Quai Saint-Paul on the NE side and berths on the NW side of the central fish market quay are cleared of rocks to a depth of 2·5 m. The bottom alongside the SE side of Jetée de Garlahy is rocky.

Port services

5.403

1 **Repairs** of all kinds to small craft; 140-tonne ship lift.
Other facilities: yacht club; customs house.
Supplies: fuel; fresh water; provisions.

Le Croisic

Chart 2823 (see1.18)

General information

5.404

1 **Description.** Le Croisic (47°18′N, 2°31′W), population 4400 (2003), is a fishing port and holiday resort with a marina that dries. It is approached from the SE side of Rade du Croisic and entered by a dredged channel lying close E of Jetée du Tréhic, a long breakwater.

Port authorities:

Bureau de Port, Quai Mont-Lénigo (adjacent to Quai des Cannonières described at 5.415).

Bureau de Port de Plaisance, Place Boston, 44490 Le Croisic; situated on SE side of the marina (5.416).

Limiting conditions

5.405

1 **Least charted depth** in the approach: 0·3 m on the bar off the head of Jetée du Tréhic.

Controlling depths:

Entrance channel: cleared of rocks to depth 2 m as far as the lifeboat station at the root of Jetée du Tréhic, then 1·6 m reducing to 1·2 m off Jonchère de Lénigo (5.415).

Chenal des Vaux (5.413): cleared of rocks to depth 0·5 m.

2 **Deepest berths:**

Le Poul anchorage (5.414).

Alongside: see 5.415 and 5.416 for details.

Tidal levels. See information in *Admiralty Tide Tables.* Mean spring range about 4·6 m; mean neap range about 2·3 m.

Tidal streams in the entrance channel are very strong, see 5.407 for details. It is reported that entry is difficult during the out-going tidal stream at springs.

3 **Winds.** The entrance is exposed to W and NW winds; fresh onshore winds cause a rough sea in the entrance channel.

Pilotage

5.406

1 **La Loire Pilots** (6.5) are qualified to pilot vessels into Le Croisic.

Harbour

5.407

1 **General layout.** Quai des Cannonières (5.415) lies on the SW side of the channel, 2½ cables SE of the root of Jetée du Tréhic, the breakwater. A promenade on piles extends 1½ cables NW along the foreshore from the NW end of the quay.

Farther SE there are four quayed drying basins (5.415) known as "chambres" entered between a number of artificial islets called "jonchères", all but one connected to the shore by bridges. The islets have drying quays on their NE sides.

2 Le Poul (5.414), a pool, lies NE of La Jonchère de Lénigo, the NW-most islet. Chenal de Pen-Bron leads NNE from Le Poul, passing close E of Pointe de Pen-Bron.

3 **Tidal streams** in the channel are very strong. They attain a rate of 4 kn at springs, 3 hours before and 2½ hours after HW Brest, between Le Grand Mabon Light-beacon (1½ cables E of the root of Jetée du Tréhic (5.412) and Quai des Cannonières (1½ cables farther SE) and are reported to be even stronger W of the light-beacon. Farther up the harbour they set across the entrances to the "chambres".

4 **Tide gauges** at the head of Jetée du Tréhic and at the seaward end of Quai des Cannonières indicate the height of the tide above chart datum.

Directions

5.408

1 Local knowledge or the services of an unofficial pilot (1.30) are advisable for entering Le Croisic.

The best time to enter is at HW slack which occurs about ½ hour before local HW.

The entrance channel is indicated by a continuous succession of three leading lines.

5.409

1 **Initial position** 47°19′·5N, 2°31′·8W, about 1 mile NNW of Jetée du Tréhic Light (5.407).

Outer leading lights:

Front: (orange topmark on white metal framework tower; 12 m in height) (2 cables SE of root of Jetée du Tréhic).

Rear: (orange topmark on white metal framework tower; 15 m in height) (116 m SE of front light).

2 The alignment (155½°) of these lights leads into and through the outer part of the entrance channel, passing (positions given from the front leading light):

NE of Basse Tréjean (1 mile NW), thence:

NE of a 0·7 m rocky patch (8½ cables NW) on Basse de la Barre, thence:

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3 Over the bar (6¼ cables NW), see 5.405 for least charted depth, thence:
Close NE of the rocky flat, on which Jetée du Tréhic is built, that extends nearly ½ cable E from Jetée du Tréhic Light (6 cables NW) (5.391), and:
Through the entrance channel cleared of rocks to a depth of 2 m.

5.410

1 **Useful marks** (positions given from Jetée du Tréhic Light):
Basse Hergo Light-beacon (starboard hand) (2½ cables NW) (5.393).
Pen-Bron convalescent home (long grey building; chimney at N end; belfry at S end) (5 cables ESE).
Tower of l'Hôpital Saint-Jean-de-Dieu (spire) (4½ cables SSE).

2 Should the outer pair of leading light-beacons be difficult to see from Rade du Croisic by day, the alignment (168°) of Jetée du Tréhic Light and L'Hôpital Saint-Jean-de-Dieu tower can be used as an alternative approach route until it intersects the 155½° alignment (5.409) 2½ cables NNW of Jetée du Tréhic Light.

5.411

1 **Middle leading lights:**
Front light-beacon (yellow rectangular topmark, green stripe, on green and white structure; 5 m in height) (1 cable SE of the root of Jetée du Tréhic).
Rear light-beacon (similar structure; 9 m in height) (48 m S of front light).

2 The alignment (174°) of these light-beacons (visible sector 170½°–177½°) leads S from the vicinity of the elbow in Jetée du Tréhic for about 1½ cables, passing:
W of Les Rouzins (1 cable NNE of front light), a drying rocky patch marked by a light-buoy (port hand).

5.412

1 **Inner leading lights:**
Front light-beacon (red and white chequered rectangular topmark on white pylon, red top; 6 m in height) (3 cables ESE of the root of Jetée du Tréhic) standing on the NW corner of Jonchère de Lénigo (5.415).
Rear light-beacon (similar structure standing on roof of fish market; 10 m in height above ground level) (52 m SE of front light).

2 The alignment (134½°) of these lights leads nearly 3 cables SE through the inner part of the entrance channel, cleared of rocks to a depth of 1·6 m, passing:
SW of Le Grand Mabon Light-beacon (red pylon; 8 m in height) (1½ cables E of the root of Jetée du Tréhic), marking a reef that dries 4 m, and:
Close NE of Rocher de l'Olifant (1½ cables SW of Le Grand Mabon Light-beacon), a drying rock marked by a buoy (starboard hand).

5.413

1 **Inner channel.** From the vicinity of the front leading light of the inner (134½°) alignment, the channel, see 5.405 for depth, continues SE through Le Poul (5.414), passing:
Close NE of Jonchère de Lénigo (5.415), the NW-most islet extending 1 cable SE from the aforementioned front leading light.

2 **Chenal des Vaux,** see 5.405 for depth, then continues SE for a further 2½ cables to the entrance of Chambre des Vases (5.416), passing:
Close NE of La Grande Jonchère (1 cable NE of Le Croisic church) (5.415), thence:
midway between the remaining "jonchères" and a training wall, marked by beacons (port hand; posts), lying parallel to and ¼ cable NE of the islets.

Basins and berths

5.414

1 **Le Poul anchorage:** numerous private small craft moorings occupy the deeper parts of the pool off Jonchère de Lénigo; anchorage outside moorings reported (1984) to be unsuitable at springs for craft of more than 1·5 m draught; strong tidal streams.

5.415

1 Basins and berths used by fishing vessels, listed from NW to SE (positions given from the front inner leading light on NW corner of Jonchère de Lénigo):
Quai des Cannonières (½ cable NE); dries 1 m alongside, hard bottom.
Jonchère de Lénigo (extending 1 cable SE); quay, on NE side of islet, dries alongside at springs.

2 La Grande Chambre, the principal basin; reported (1983) to dry from 0·8 to 1 m; entrance (1 cable SE) between Jonchère de Lénigo and La Grande Jonchère.
La Grande Jonchère (1½ cables SE); quay, on NE side of islet, dries alongside at springs.
La Petite Chambre (2½ cables SE); reported (1983) to dry 1·5 m; fronted by La Petite Jonchère, a detached islet.

Small craft

5.416

1 **Chambre des Vases**, also known as Chambre Hervé Rielle (7 cables SE of the root of Jetée du Tréhic), the SE-most basin; dries 2 m; marina has 300 berths at pontoons and alongside quays, 15 berths for visitors.

Port services

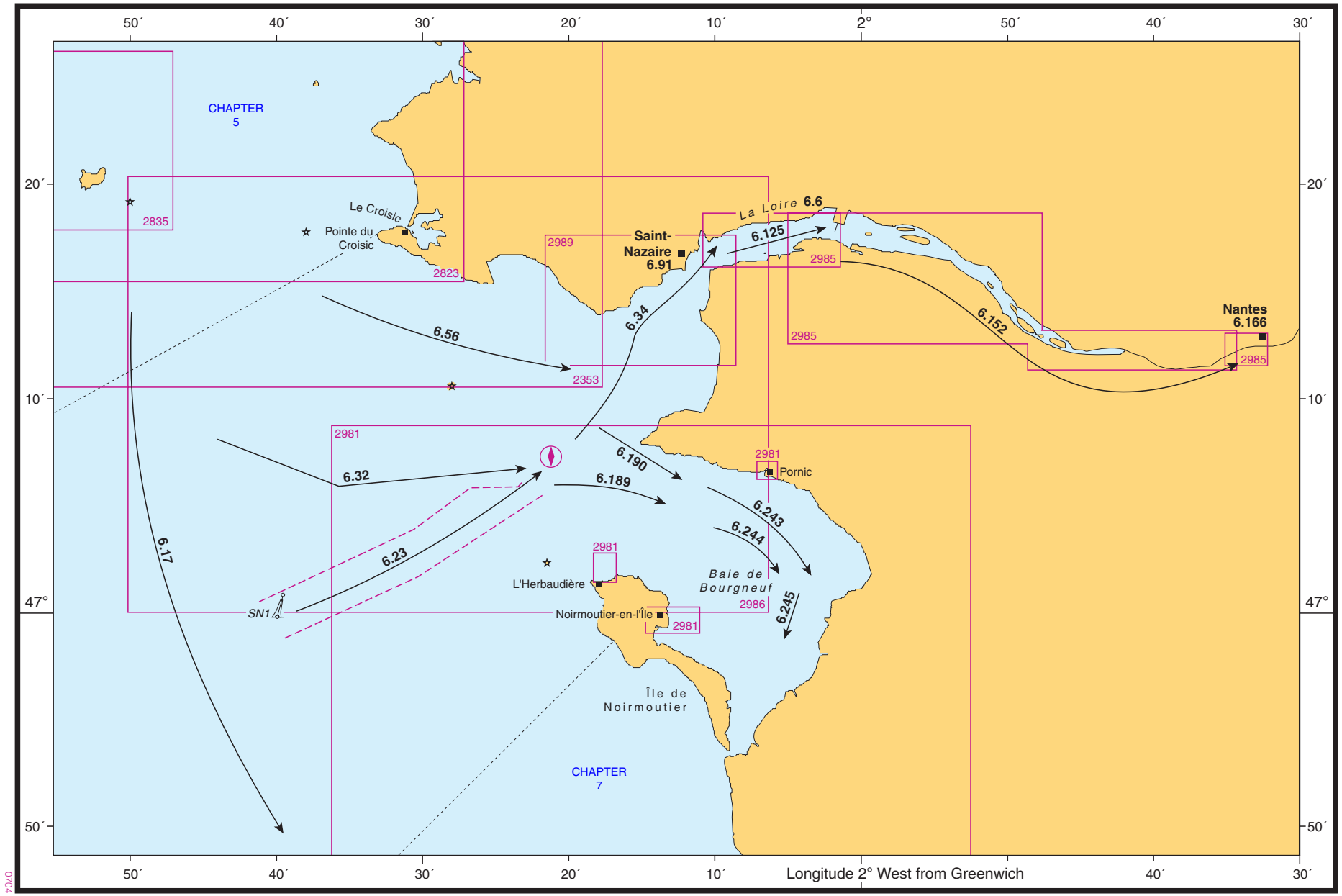
5.417

1 **Repairs** of all kinds to fishing vessels and small craft at several boatyards; 180-tonne ship lift in basin on S side of marina entrance; careening slip in La Grande Chambre.
Other facilities: hospital; seamen's hostel; yacht club at Chambre des Vases; customs house.
Supplies: fuel; fresh water; provisions.

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Chapter 6 - La Loire and approaches, Baie de Bourgneuf



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CHAPTER 6

LA LOIRE AND APPROACHES, BAIE DE BOURGNEUF

GENERAL INFORMATION

Charts 2985, 2986, 2981, 2646

Scope of the chapter

6.1

1 This chapter is divided into three sections which cover:

La Loire approaches between Pointe du Croisic (47°18′N, 2°33′W) and Île de Noirmoutier (20 miles SSE), estuary, and entrance through Grand Rade de Saint-Nazaire (47°16′N, 2°12′W) (6.53).

2 La Loire (6.125). The part of the river navigable by seagoing vessels from Grande Rade de Saint-Nazaire 30 miles upstream to Nantes (47°12′N, 1°34′W) (6.166).

Baie de Bourgneuf (6.179), the extensive basin lying between Île de Noirmoutier and the mainland N and E.

General description

6.2

1 **Landfall.** The low coastline and numerous offlying dangers make La Loire approaches a difficult landfall in poor visibility, which is quite prevalent especially inshore.

6.3

1 **Estuary and river ports.** La Loire estuary, one of the three principal maritime gateways to France, provides access to the major group of ports collectively managed and named Le Port Autonome de Nantes-Saint-Nazaire, consisting of (listed in sequence from the river entrance; distances given upstream from Saint-Nazaire):

2 Saint-Nazaire (47°16′N, 2°12′W) (6.91); premier French shipbuilding centre; docks for vessels up to about 25 000 dwt; mainly handles specialised cargoes and heavy lifts.

Montoir (2 miles) (6.141); LNG, coal, liquid chemicals, cattle feed, container and general terminals handle large vessels up to 12 to 15 m draught.

3 Donges (5 miles) (6.146); major oil port with ULCC berths.

Cordemais (15 miles) (6.160); berths for large vessels supplying fuel to major power-station.

Nantes (30 miles) (6.166); major river port; handles general and various special cargoes; berths for medium sized vessels, see 6.167 for maximum dimensions.

6.4

1 **Baie de Bourgneuf,** apart from the entrance, is mostly very shallow. It is frequented only by small craft and by boats working the extensive shellfish beds.

Pilotage

6.5

1 **La Loire Pilotage Service** covers the area between Presqu'île de Quiberon (47°30′N, 3°08′W) and Île de Noirmoutier (47°00′N, 2°15′W).

For details of pilotage in La Loire river and estuary see 6.40.

2 Elsewhere La Loire Pilots are qualified to pilot vessels:

As far as the small ports in the area, notably Le Palais (47°21′N, 3°09′W) (5.52), Le Croisic (47°18′N, 2°31′W) (5.406) and Pornic (47°07′N, 2°06′W) (6.206).

On speed and instrument calibration trials in the area.

LA LOIRE APPROACHES AND ESTUARY

GENERAL INFORMATION

Chart 2646

General description

6.6

1 **La Loire approaches** are partially obstructed by:

Plateau du Four (47°17′N, 2°39′W).

Banc de Guérande, an extensive shoal lying S of Plateau du Four.

Chaussée des Bœufs, reefs extending 7 miles WSW from Pointe de Devin (46°59′N, 2°18′W) the W-most point of Île de Noirmoutier.

6.7

1 **La Loire estuary** is entered between Pointe du Croisic (47°18′N, 2°33′W) and Île du Pilier (17 miles SSE).

The outer part is separated into two waterways by Plateau de la Banche (7 miles SSE of Pointe du Croisic), an extensive reef that dries in places, and Plateau de la Lambarde (4 miles farther E), another reef.

The inner part is encumbered by a broad bar.

Topography

6.8

1 The N shore of the estuary is low-lying; inland the high ground in the vicinity of Guérande (47°20′N, 2°26′W) is visible from the outer part of the approaches.

Île de Noirmoutier is flat and sandy with wooded dunes in places.

6.9

1 **Radar.** The coast on both sides of the estuary of La Loire has no features that can be readily identified on the radar display at a distance.

Waterways

6.10

1 Routes leading generally SSE or S past La Loire estuary are:

Offshore route (6.17), passing to seaward of all the dangers in the approaches (6.6).

Route passing inshore of Plateau du Four and Banc de Guérande, using the NW and SW approaches to Chenal du Nord (6.56).

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6.11

1 **Chenal du Sud,** the name loosely used to describe the principal route leading to Saint-Nazaire and the entrance to La Loire, consists of:

Chenal du Sud approaches (6.23), the SW and W approaches to La Loire estuary passing S and SE of Plateau de la Banche.

2 Chenal du Sud proper (6.34), the channel leading NNE across La Loire estuary, passing ESE of Plateau de la Lambarde, whence it is dredged through the bar.

Chenal de Bonne-Anse (6.35), the continuation of the dredged channel where it leads NE along the NW shore of the river mouth.

3 The dredged channel continues NE through Grande Rade de Saint-Nazaire (6.53) to the entrance of La Loire in the vicinity of Saint-Nazaire-Saint-Brévin Bridge (47°17′N, 2°10′W) (6.139).

6.12

1 **Chenal du Nord** (6.56), approached either side of Plateau du Four, leads ESE into the N part of Chenal du Sud proper, passing NNE of Plateau de la Banche and Plateau de la Lambarde. It is used mainly by coasters that call regularly at ports on La Loire and by small craft.

Flow

6.13

1 **Tidal streams** in the outer approaches are comparatively weak and rotary clockwise. While the tide at Brest is rising, they set generally NE towards the dangers in the approaches to La Loire estuary, see *Admiralty Tidal Stream Atlas France West Coast* for further details.

2 As the entrance to La Loire is approached the tidal streams become rectilinear and increase in strength, reaching a maximum rate of 4 kn at springs off Saint-Nazaire.

When La Loire is in spate the strength and duration of the outgoing tidal stream is increased.

Weather

6.14

1 **Fog or mist** often occur in the approaches and estuary of La Loire.

Visibility is reduced to about 3 miles with E winds; with NW winds it is good.

Chart 2986

Port limits

6.15

1 The outer limit of Le Port Autonome de Nantes-Saint-Nazaire (6.3) is a line joining the following points:

Pointe de Chémoulin (47°14′N, 2°18′W).
Pierre Percée (2 miles WSW) (6.71).
Position 47°08′·66N, 2°23′·85 W.
Position 47°09′·02N, 2°17′·90 W.
Les Jardinets (2½ miles SE of Pointe de Chémoulin) (6.113).
Pointe de Mindin (47°16′N, 2°10′W).

Vessel Traffic Service

6.16

1 A compulsory VTS scheme, which provides full radar coverage from SN1 Light-buoy (47°00′N, 2°40′W) (6.31) to Nante is maintained for the control of shipping. Vessels are required to give their ETA 48 hours before arrival at SN1 Light-buoy. For further information see *Admiralty List of Radio Signals Volume 6(2).*

OFFSHORE PASSAGE PAST LA LOIRE APPROACHES

General information

Charts 2986, 2981

Description

6.17

1 The offshore passage outside all the dangers in the approaches to La Loire estuary connects the SE entrance of Coureau de Belle-Île (5.27) and the entrance of Passage de l'Est (5.105) with the coastal passage (7.9) from Chaussée des Bœufs to Île d'Yeu.

Principal marks

6.18

1 **Landmarks:**

Le Four Lighthouse (47°18′N, 2°38′W) (5.111).
La Banche Lighthouse (47°11′N, 2°28′W) (6.29).
Île du Pilier Lighthouse (47°03′N, 2°21′W) (6.29).

Major lights.

Le Four Light—as above.
La Banche Light—as above.
Île du Pilier Light—as above.

Other aids to navigation

6.19

1 **Racon:**

SN 1 Light-buoy (47°00′N, 2°40′W).

For further details see *Admiralty List of Radio Signals Volume 2.*

Directions

(continued from 5.14 or 5.44)

6.20

1 **Initial position** approximately 47°15′N, 2°50′W.

The offshore route leads about 25 miles SE, passing:

SW of Ouest Basse Capella Light-buoy (W cardinal) (47°16′N, 2°45′W) (5.112), moored close W of Basse Capella the N end of Banc de Guérande, thence:

2 SW of Sud Banc Guérande Light-buoy (S cardinal) (47°09′N, 2°43′W) marking the SW corner of Banc de Guérande, thence:

SW of SN1 Light-buoy (safe water) (47°00′N, 2°40′W) (6.31), thence:

SW of Les Bœufs Light-buoy (W cardinal) (46°55′N, 2°28′W) moored nearly 1 mile SW of the SW extremity of the 10 m depth contour enclosing Chaussée des Bœufs (6.6).

6.21

1 Shallow-draught vessels may round Chaussée des Bœufs closer to Le Bavard (46°57′·5N, 2°22′·0W), the outermost drying reef, in a least charted depth of 4·5 m (2 miles W), passing (positions given from Le Bavard):

SW of Réaumur Light-buoy (W cardinal) (1½ miles W), thence:

SW of Le Bavard Light-buoy (S cardinal) (1 mile WSW).

6.22

1 **Useful marks:**

Goulphar Light (47°19′N, 3°14′W) (5.11).
Les Grands Cardinaux Light (47°19′N, 2°50′W) (5.111).
Pointe de Devin Light (white column and hut, green top; 7 m in height) (46°59′N, 2°17′W).
Île d'Yeu Main Light (46°43′N, 2°23′W) (7.17).

(Directions continue for the coastal passage at 7.18
Directions for Chenal du Sud approaches are given at 6.31)

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CHENAL DU SUD OUTER SECTION AND APPROACHES

General information

Chart 2646, 2986

Routes

6.23

1 The pilot boarding place (47°07′·5N, 2°21′·4W) (6.40) in Chenal du Sud is approached from:

WSW through the charted approach channel, passing NNW of the dangers extending W and NW from Île de Noirmoutier (47°00′N, 2°15′W).

W, passing S of Banc de Guérande (47°10′N, 2°40′W).

Least charted depths

6.24

1 Least charted depths are:

16·8 m in the charted approach channel, over a wreck (47°07′·0N, 2°22′·4W).

12·5 m in the fairway of the W approach (6.32) over a patch (47°07′·3N, 2°31′·9W).

Poor visibility

6.25

1 Owing to the frequency of poor visibility in the approaches it is advisable to take soundings when making a landfall even when the weather is clear at sea.

Caution. When the visibility is poor it is however unwise to attempt an approach using soundings alone as the depths are irregular. Note that the 20 m depth contour passes very close to the dangers lying NW of Île du Pilier (47°03′N, 2°21′W) and also to the S edge of Plateau de la Banche (47°10′N, 2°27′N).

Traffic regulations

6.26

1 **Approach channel and waiting area.** Vessels exceeding 1600 grt laden with hydrocarbons or hazardous cargo are required to use the approach channel shown on the charts, whose 2 miles wide entrance is marked by SN1 Light-buoy (safe water) (47°00′N, 2°40′W) (6.31), whence it leads 10 miles ENE to pass between Thérésia Light-buoy (port hand) (47°05′N, 2°27′W) (6.31) and Les Chevaux Light-buoy (starboard hand) (1½ miles SSE) (6.31) and thence 8 miles NE to the entrance of the dredged channel (47°10′N, 2°18′W) (6.45).

2 See 1.56 for details of the regulations which apply to all vessels entering or crossing the approach channel.

The designated signal station is Chémoulin Coastguard Station (6.71).

The designated waiting area (47°08′N, 2°24′W) (6.50) is shown on the charts.

Rescue

6.27

1 **Coastguard station** (1.75): Pointe de Chémoulin (47°14′N, 2°18′W) (6.71).

Lifeboat station (1.77): L'Herbaudière (47°01′N, 2°18′W) (6.218).

Tidal streams

6.28

1 See *Admiralty Tidal Stream Atlas France West Coast* and the charts for information on the tidal streams in Chenal du Sud approaches.

Principal marks

6.29

1 **Landmarks:**

La Banche Lighthouse (black tower, white bands; 30 m in height) (47°11′N, 2°28′W).

Île du Pilier Lighthouse (grey pyramidal tower; 34 m in height) (47°03′N, 2°21′W) standing close to the round tower of the former lighthouse and to a disused signal station (white building, red roof).

2 **Major lights:**

Le Four Light (47°18′N, 2°38′W) (5.111).

La Banche Light—as above.

Île du Pilier Light—as above.

Other navigational aids

6.30

1 **Racons.**

SN1 Light-buoy (47°00′N, 2°40′W) (6.31).

La Couronnée Light-buoy (47°08′N, 2°20′W) (6.45).

See *Admiralty List of Radio Signals Volume 2* for further details.

Directions

(continued from 6.22)

Charted approach channel

6.31

1 **Initial position** vicinity of SN1 Light-buoy (safe water) (47°00′N, 2°40′W).

The charted approach channel (6.26) leads 10 miles ENE, passing (positions given from Île du Pilier):

2 NNW of Chaussée des Bœufs (6.6) which is marked at its SW extremity by Les Bœufs Light-buoy (W cardinal) (9 miles SW) (6.20) and covered by Île du Pilier Auxiliary Light (6.29) whose arc of visibility is 321°–034°, and:

Either side of SN2 Light-buoy (safe water) (8 miles W), thence:

3 SSE of Thérésia Light-buoy (port hand) (4 miles NW) marking a wreck, and:

NNW of Les Chevaux Light-buoy (starboard hand) (3½ miles WNW) moored WNW of several rocky patches with depths of 10 m or less over them lying up to 2½ miles WNW of Île du Pilier.

4 Thence the charted approach channel leads 5 miles NE through the outer section of Chenal du Sud to the pilot boarding place (5 miles N of Île du Pilier) (6.40), passing SE of the charted waiting area (47°08′N, 2°24′W) (6.26).

Western approach

6.32

1 **Initial position** approximately 47°08′N, 2°44′W.

The line of bearing 110° of Île du Pilier Light (47°03′N, 2°21′W) (6.29) leads about 5 miles ESE, passing:

SSW of Sud Banc Guérande Light-buoy (S cardinal) (47°09′N, 2°43′W) (6.20), thence:

SSW of the extensive bank extending ESE from the S part of Banc de Guérande whose SSW edge is unmarked and can best be seen on the chart.

2 A white sector (078°–088°) of Pointe de Saint-Gildas Light (column on white house; 17 m in height) (47°08′N, 2°15′W) then leads E to the pilot boarding place (4½ miles W of the light), passing (positions given from the light):

S of Basse du Turc (10 miles W), thence:

N of a wreck marked by Thérésia Light-buoy (port hand) (9 miles WSW) (6.31), thence:

S of a dangerous wreck (8 miles WNW).

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Useful marks

6.33

1 Useful marks (positions given from Île du Pilier Light):
Pointe de Devin Light (4½ miles SE) (6.22).
Conspicuous water tower (4¼ miles ESE) (6.188).
Grand Sécé Beacon-tower (N cardinal; 6·5 m high) (1½ miles NE).
Le Grand Charpentier Light (47°13′N, 2°19′W) (6.43).
(Directions continue at 6.45. Directions for SW approach to Chenal du Nord are given at 6.68, for Baie de Bourgneuf principal channel at 6.189, for Chenal de la Grise at 6.215, and for L'Herbaudière NW approach at 6.216)

CHENAL DU SUD, CHENAL DE BONNE-ANSE AND GRANDE RADE DE SAINT-NAZAIRE

General information

Charts 2989, 2986

Route

6.34

1 **Chenal du Sud** continues NNE from the pilot boarding place (47°07′·5N, 2°21′·4W) (6.40) to a position 7 cables S of Pointe de l'Eve. The inner 4 miles consists of a dredged channel 300 m wide; the final mile where it is cut through La Loire bar is named Passe des Charpentiers.

6.35

1 **Chenal de Bonne-Anse,** the next section of the dredged channel, leads 2½ miles NE from the inner end of Passe des Charpentiers to the vicinity of Ville-es-Martin Light (47°15′·4N, 2°13′·5W) (6.49).

The dredged channel then continues NE passing through Grande Rade de Saint-Nazaire (6.53), a waiting anchorage within Saint-Nazaire port limits (6.41). Thence it is called Chenal de Donges and enters Le Loire (6.125).

Topography

6.36

1 **North shore.** From Pointe de Chémoulin (47°14′N, 2°18′W) to Ville-es-Martin (3 miles ESE) the coastline consists of broken cliffs; the ground behind them rises to an elevation of 45 m. Farther E lie the port and shipyards of Saint-Nazaire.

6.37

1 **East shore.** From Pointe de Saint-Gildas (47°08′N, 2°15′W) the coast N is low-lying. The built up areas of Saint-Brévin-les-Pins and Saint-Brévin-l'Océan extend S along the coast from Pointe de Mindin (9 miles NNE of Pointe de Saint-Gildas) for 4 miles.

Controlling depths

6.38

1 Depths in the dredged channels are:
13·2 m in Passe des Charpentiers (6.34).
12·4 m in Chenal de Bonne-Anse (6.35).

Caution. Owing to the continual silting less water may exist despite maintenance dredging.

Dredging

6.39

1 Sand is extracted from an area bordering the E side of the channel, 3 miles N of Île du Pilier.

Pilotage

6.40

1 **Compulsory pilotage:** for vessels over 75 m in length and vessels over 150 nrt carrying petroleum products, gas or dangerous substances, between the pilot boarding place (47°07′·5N, 2°21′·4W) and Nantes (47°12′N, 1°34′W) (6.166).

Vessels exempt from pilotage must advise the pilotage authority when entering the compulsory pilotage area.

Exempt from pilotage: vessels less than 75 m length over all, equipped with VHF radio or radar and not carrying dangerous cargo.

Authority: Service de Pilotage de la Loire; offices at Saint-Nazaire and Nantes.

2 **Requests for pilots.** Send ETA at Saint-Nazaire at least 18 hours in advance to Saint-Nazaire office or the pilot vessel. Amendments to ETA of more than 2 hours should be sent at least 4 hours in advance.

3 On departure or for movements between ports on La Loire the pilot should be ordered at least 3 hours in advance and before 1800 for movements between 2030 and 1000 the following day, to either Nantes or Saint-Nazaire offices.

See *Admiralty List of Radio Signals Volume 6(2)* for further details concerning communications.

Available at all hours; continuous radio watch is maintained; in bad weather information on any interruption to the service may be obtained from Saint-Nazaire Radio.

4 **Boarding place** (47°07′·5N, 2°21′·4W). The pilot vessel anchors on the alignment (083½°) of Pointe de Saint-Gildas Light (47°08′N, 2°15′W) (6.32) and La Couronnée Light-buoy (starboard hand) (3½ miles W) (6.45) where it intersects the meridian of Île du Pilier Light (47°03′N, 2°21′W) (6.29). If the weather in this position is too bad, vessels may be requested to follow the pilot-vessel into more sheltered waters. Pilots take vessels from the boarding place to their berth without changing.

5 **Waiting anchorages:** described at 6.50.

Pilot-vessel: see 1.31 for distinguishing marks.

Traffic regulations

6.41

1 **Vessel Traffic Service**. See 6.16

2 **Saint-Nazaire port limits** are described as a line joining the following points:
Villes-es-Martin Light (47°15′·4N, 2°13′·6W) (6.49).
Morées Light (5½ cables SE) (6.48).
Buoys marking the SE side of the channel as far as Saint-Nazaire-Saint-Brévin Bridge (47°17′N, 2°10′W) (6.139).
Mouth of Le Brevet river at the N end of the bridge.

3 **Anchorage** within these limits is:
Controlled by La Capitainerie du Port de Saint-Nazaire, whose permission may be requested by radio (6.94).
Prohibited to tankers either laden or not gas-free, except for those carrying out transhipment or lightening operations, and those being degassed and discharging the products into lighters.

Natural conditions

6.42

1 **Tidal streams:** see information on the charts.

Abnormal water levels in Rade de Saint-Nazaire due to the wind are covered at 6.132.

Water level reports broadcast by radio are described at 6.133.

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Local weather. In bad weather from SW, especially during the outgoing tidal stream, the sea breaks along the whole extent of the bar in the vicinity of Passe des Charpentiers (6.34), but it is sheltered from the ground swell from W by the rocky shoals lying in that direction.

Principal marks

6.43

1 **Landmarks:**

Le Grand Charpentier Lighthouse (grey tower, green lantern; 27 m in height) (47°13′N, 2°19′W).

Conspicuous water tower (83 m in height) (47°15′·5N, 2°16′·2W) and TV mast (125 m in height; red aircraft obstruction lights) (2 cables N).

2 Pointe de l'Aiguillon Lighthouse (white tower, 19 m in height) (47°14′·6N, 2°15′·7W).

Saint-Nazaire-Saint-Brévin Suspension Bridge (47°17′N, 2°10′W) (6.139).

Saint-Michel-Chef-Chef water tower (72 m in height) (47°12′N, 2°09′W).

Pointe de Saint-Gildas Lighthouse (47°08′N, 2°15′W) (6.32).

3 **Major lights:**

La Banche Light (47°11′N, 2°28′W) (6.29).

Le Grand Charpentier Light—as above.

Portcé Leading Lights (47°15′N, 2°15′W) (6.46).

Île du Pilier Light (47°03′N, 2°21′W) (6.29).

Other aids to navigation

6.44

1 **Racon:**

La Couronnée Light-buoy (47°08′N, 2°20′W) (6.45).

Directions

(continued from 6.33)

Chenal du Sud

6.45

1 **Initial position:** vicinity of the pilot boarding place (47°07′·5N, 2°21′·4W) (6.40).

The charted approach channel (6.26) leads 3 miles NNE to the entrance of the dredged channel (47°10′·0N, 2°18′·6W) marked by Nos 1 and 2 Light-buoys (lateral), passing:

2 WNW of La Couronnée Light-buoy (starboard hand) (47°08′N, 2°20′W), marking an 8·7 m patch, thence:

ESE of Lancastria Light-buoy (port hand) (47°09′N, 2°20′W) marking the wreck of SS *Lancastria*, a war grave, thence:

ESE of a light-buoy (special) (47°09′N, 2°20′W), thence:

ESE of Y Light-buoy (port hand) (47°10′N, 2°19′W) marking a wreck.

6.46

1 **Portcé Leading Lights.** The alignment (025½°) of the following lights (exhibited throughout 24 hours) leads into and through the 300 m wide dredged channel, see 6.38 for project depth:

Front (white column on dolphin; 23 m in height) (47°14′·6N, 2°15′·4W).

Rear (black square daymark, white stripe, on metal tower; 19 m in height) (1350 m NNE of front light).

The channel is also marked on both sides by light-buoys (lateral).

2 **Cautions.** The alignment does not always indicate the deepest part of the dredged channel. The buoyage may be moved and pilots may use different marks depending on the state of the dredged channel.

The in-going tidal stream in the vicinity of the charted pilot boarding place (47°07′·5N, 2°21′·4W) (6.40) is reported to set E towards La Couronnée at rates up to 2 kn.

The tidal streams set across the dredged channel, see information on the charts for details.

6.47

1 **Useful marks** (positions given from Portcé Rear Leading Light):

Tour du Commerce (white round tower) (2 cables N) formerly a lighthouse.

Kerlédé Old Lighthouse (white tower, black top; 43 m in height) (4 cables NNE) just visible (2000) above the surrounding trees.

(Directions for the approaches to harbours on the eastern shore of La Loire entrance are given at 6.113)

Chart 2989

Chenal de Bonne-Anse and Grande Rade de Saint-Nazaire

6.48

1 From a position 1 mile SSW of Portcé Front Leading Light (6.46) the dredged channel, marked on both sides by light-buoys (lateral), leads nearly 4½ miles NE to the entrance of Chenal de Donges, passing (positions given from Portcé Front Leading Light):

2 SE of the former middle ground (3 cables ESE) which separated the dredged channel from the old entrance channel that has now silted up completely, and:

NW of Banc des Morées, an extensive shoal that partly dries, marked at its NE end by Morées Light (green truncated tower, 17 m in height) (1¾ miles ENE), thence:

3 NW of Banc de Mindin, the continuation NE of the drying shoals on the SE side of the channel, thence:

SE of the entrances to Saint-Nazaire Port (47°16′N, 2°12′W) (6.91).

4 A secondary channel has been established adjacent to Chanel de Bonne-Anse on its NW side. This channel is for use by vessels when large vessels, particularly gas carriers, are navigating in the main channel upstream of Saint-Nazaire bridge.

6.49

1 **Useful marks:**

Ville-es-Martin Light (white tower, red top; 12 m in height) (9 cables E of Portcé Rear Leading Light) standing at the head of a jetty.

Lights (6.99) on the heads of both breakwaters at the entrance to Saint-Nazaire Avant-port (47°16′N, 2°12′W) and of Vieux Mole (4 cables NNE).

(Directions continue for Saint-Nazaire Port at 6.100 and for Grande Rade de Saint-Nazaire to Donges at 6.140)

Waiting anchorages

Chart 2986

La Grande Rade de la Loire

6.50

1 The limits of the designated waiting area (47°08′N, 2°24′W) (6.26) for vessels exceeding 1600 grt laden with hydrocarbons or dangerous cargo, situated at the inner end of the designated approach channel, are shown on the chart. Other vessels waiting to proceed to ports on La Loire

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may also anchor in the waiting area, but before doing so it is advisable to ask the pilot office (6.40) for an anchor berth. The holding is reported to be good.

6.51

1 In bad weather vessels, whose draught and cargo permit, may obtain a more sheltered anchorage E of Plateau de la Lambarde in depths of 11 to 13 m in the position shown on the chart (2½ miles S of Le Grand Charpentier Light).

6.52

1 **Caution.** Attention is drawn to the following dangers in or close to the anchorages (positions given from Le Grand Charpentier Light):

Unmarked wrecks lying in the S corner and 2 cables SE of the SE limit of the charted waiting area.

2 A dangerous wreck (5½ miles SW) NW of the waiting area.

Roche du Sud (3 miles SSW), the rock marked by SE Lambarde Light-buoy (S cardinal), and the spoil ground lying 7 cables farther S, which is unmarked.

3 Dangerous wrecks are marked by the following light-buoys:

Lancastria (port hand) (4 miles SSW) (6.45)

Y (port hand) (3 miles S) (6.45).

Euler (S cardinal) (1½ miles SE) (6.69).

Chart 2989

La Grande Rade de Saint-Nazaire

6.53

1 **General information.** La Grande Rade de Saint-Nazaire anchorage lies SW of the entrance to Saint-Nazaire Avant-port (47°16′N, 2°12′W) where the main channel has an average width of 450 m between the 10 m depth contours on each side. The anchorage is used principally by vessels waiting to enter the basins at Saint-Nazaire (6.91) and is sheltered from the swell.

2 Vessels of 180 m in length and 9 m draught or larger should have a tug in attendance when the tidal stream turns, at least at springs and even when moored with two anchors. In addition vessels of more than 200 m in length, or more than 150 m in length with a draught of 8 m or more, should have a pilot on board when the tidal stream turns at LW.

3 **Regulations:** see 6.41 for regulations concerning permission to use the anchorage.

Tidal streams: see information on the chart.

Landing places: in the Avant-port at one of the landing stages or at the quay on the E side.

Small craft

6.54

1 **Anchorages** for small craft, on the NW side of the dredged channel, are available:

In the area (47°15′N, 2°15′W) between Portcé Front and Rear Leading Lights (6.46), off Anse de Trébézy and Anse de Portcé.

At Port-Désiré (47°16′N, 2°13′W), the name given to part of Le Grand Traict, the bay E of Ville-es-Martin. The NE and SE corners of the anchorage are each marked by a buoy (special; uncharted).

6.55

1 **Harbours** on the E shore of La Loire entrance, between Pointe de Saint-Gildas (47°08′N, 2°15′W) (chart 2986) and Le Pointeau (47°14′N, 2°22′W), and their approaches are described at 6.110.

CHENAL DU NORD AND APPROACHES

General information

Charts 2989, 2986

Routes

6.56

1 **Approaches.** The W end of Chenal du Nord is approached from:

N (6.65), passing E of Plateau du Four (47°17′N, 2°38′W).

W (6.66), passing S of Plateau du Four.

SW (6.68), passing NW of Plateau de la Banche (8 miles SE of Plateau du Four).

2 **Chenal du Nord** leads about 15 miles ESE to the entrance of Passe des Charpentiers (47°12′·7N, 2°16′·7W) (6.34), passing:

NNE of Plateau de la Banche and of Plateau de la Lambarde (47°11′N, 2°22′W), and:

SSW of the dangers extending 5 miles ESE from Pointe de Penchâteau (47°15′N, 2°25′W) to Le Grand Charpentier.

Topography

6.57

1 Between Pointe du Croisic (47°18′N, 2°33′W) and Pointe de Chémoulin (11 miles ESE) the coast is low-lying and rocky except within Baie du Pouliguen (7 miles E of Pointe du Croisic), where a sandy beach fronts the seaside resort of La Baule.

Inland, from the vicinity of Guérande (5 miles NE of Pointe du Croisic) to a position about 1 mile NE of Pointe de Chémoulin, there are elevations of 40 to 55 m.

Least charted depths

6.58

1 Least charted depths in the fairway of Chenal du Nord (positions given from Le Grand Charpentier) are:

4·9 m over an unmarked wreck (3½ miles W), position approximate.

3·9 m over a marked wreck (1¼ miles SSE) (6.69).

Dredging

6.59

1 Sand is extracted from an area in the channel lying SSW of Le Grand Charpentier Light. Vessels approaching from W are advised to make radio contact with the Capitainerie Saint-Nazaire (6.94) on passing Pointe de Penchâteau (47°15′N, 2°25′W) to discover whether dredgers are at work in the channel; normally they do not operate at night.

Pilotage

6.60

1 **Boarding place.** If so requested La Loire Pilots will board vessels using Chenal du Nord about 6 cables ESE of Le Grand Charpentier. For further information on pilotage see 6.40.

Vessel Traffic Service

6.61

1 See 6.16

Rescue

6.62

1 **Coastguard station** (1.75): Pointe de Chémoulin (47°14′N, 2°18′W) (6.71).

Lifeboats (1.77) stationed at:

Le Croisic (47°18′N, 2°31′W) (5.387).

Pornichet Marina (47°15′N, 2°21′W) (6.88).

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Tidal streams

6.63

1 Between Plateau du Four and Pointe du Croisic the tidal stream has been reported to set as follows:

Interval from HW Brest	*Direction*	*Spring rate (kn)*
–0600	N	1
–0300	NE	2
–0010	SE	2
+0250	SW	2¾

2 Close SW of Plateau du Four during the rising tide at Brest at springs the tidal stream has been reported setting NE at a greater rate than that given above.

For tidal streams in the vicinity of Goué-Vas-du-Four (3 miles S of Le Four Light) see tidal stream station on the charts.

In Chenal du Nord in the fairway between parallels 2°31′W and 2°20′W the times when the tidal streams commence and their direction are:

Interval from HW Brest	*Direction*
–0545	E
+0015	WNW

3 Maximum rates at springs: 1¼ kn E-going; 1¾ kn WNW-going.

Principal marks

6.64

1 **Landmarks**

Le Four Lighthouse (47°18′N, 2°38′W) (5.111).

Le Croisic water tower (47°17′·4N, 2°31′·0W) (5.390) and church (4 cables NE) (5.390).

Batz-sur-Mer church (1¾ miles ESE of Le Croisic water tower) (6.68) and Kermoisan water tower (1 mile farther E) (6.73) which resemble and can be confused with Le Croisic church and water tower.

2 Conspicuous water tower (conical slate roof) (47°16′N, 2°26′W).

La Banche Lighthouse (47°11′N, 2°28′W) (6.29).

Le Grand Charpentier Lighthouse (47°13′N, 2°19′W) (6.43).

Conspicuous television mast (47°16′N, 2°16′W) (6.43) and water tower (2 cables S).

3 **Major lights:**

Le Four Light—as above.

La Banche Light—as above.

Directions

Chart 2986

Northern approach

(continued from 5.393)

6.65

1 **Initial position** 47°18′·7N, 2°36′·7W, at the point of intersection of:

Line of bearing 093° of Jetée du Tréhic Light (1¼ miles NE of Pointe du Croisic) (5.391) which is a limit between its white and a green sector, and:

Line of bearing 228° of Le Four Light (3½ miles W of Pointe du Croisic) (5.111).

2 The route through the N approach to Chenal du Nord between Plateau du Four and Pointe du Croisic leads SSE for 2¼ miles, passing (positions given from Le Four Light):

ENE of L'Inconnu (1 mile E), a shoal patch, and:

WSW of Basse Hikéric (1¾ miles E), a shoal.

3 Thence the line of bearing 300° of Le Four Light, astern, leads into Chenal du Nord.

Small craft for whom Basse Hikéric is not a danger should pass:

WSW of Basse Castouillet Light-buoy (W cardinal) moored 3 cables W of Basse Castouillet (1 mile NW of Pointe du Croisic).

(Directions continue for Chenal du Nord at 6.69)

Western approach

(continued from 5.44)

6.66

1 **Initial position** 47°14′N, 2°44′W, about 2 miles SSW of Ouest Basse Capella Light-buoy (W cardinal) (5.112).

The W approach to Chenal du Nord leads E over Banc de Guérande in charted depths of more than 10 m, passing (positions given from Le Croisic water tower):

2 S of Basse Capella (7½ miles WSW), thence:

S of Goué-Vas-du-Four Light-buoy (S cardinal) moored 3 cables S of Goué-Vas-du-Four (5 miles WSW), a detached shoal, thence:

Between Basse Michaud (5 miles SSW) and a dangerous wreck (3½ miles SW).

Caution. During and after SW gales the sea breaks over the whole of Banc de Guérande.

6.67

1 **Clearing marks.** The alignment (301°) of the following marks passes about 5 cables SSW of Plateau du Four:

Front: Les Grands Cardinaux Lighthouse (47°19′N, 2°50′W) (5.111).

Rear: fort on Île Hoëdic (2 miles WNW of front mark) (chart 2835).

2 **Clearing marks.** The alignment (060°) of the following marks clears about 2 cables SSE of Goué-Vas-du-Four:

Front: Le Croisic church (47°17′·7N, 2°30′·7W) (5.390).

Rear: Guérande church (4 miles ENE of front mark) (5.390).

(Directions continue for Chenal du Nord at 6.69)

South-western approach

(continued from 6.33)

6.68

1 **Initial position** about 47°10′N, 2°35′W.

Leading marks:

Front mark: Batz-sur-Mer church (cupola on lantern on tall square tower) (47°16′·7N, 2°28′·7W).

Rear mark: Guérande church (4 miles NE of front mark) (5.390).

2 The alignment (034½°) of these marks leads NE into Chenal du Nord, passing (positions given from front mark):

NW of Basse de l'Astrolabe (7 miles SSW), thence:

NW of Banche W Light-buoy (W cardinal) (5½ miles SSW) moored 1 mile W of Plateau de la Banche, and:

3 SE of Basse Michaud (5½ miles SW), thence:

NW of NW Banche Light-buoy (N cardinal) (4 miles SSW) moored 5 cables NW of Roche du Nord-Ouest, the NW extremity of Plateau de la Banche.

Charts 2989, 2986

Chenal du Nord

(continued from 6.65, 6.67 or 6.68)

6.69

1 **Initial position** 47°15′N, 2°31′W, mid-way between Pointe du Croisic (2½ miles NNW) and Roche du

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Nord-Ouest (2½ miles SSE), the NW extremity of Plateau de la Banche.

Chenal du Nord leads 10 miles ESE to the dredged channel leading NNE into Passe des Charpentiers (6.34), passing (positions given from La Banche Light):

2 SSW of Basse Lovre (5½ miles NNW), marked by a buoy (S cardinal), thence:

NNE of Plateau de la Banche, marked at its NW end by NW Banche Light-buoy (N cardinal) (3 miles NW) (6.68) and at its SE extremity by SE Banche Buoy (E cardinal) (1½ miles E), and:

SSW of Basse Noire (4½ miles NNE), thence:

3 SSW of the reefs, above water and drying rocks, that extend 5 miles SE from Pointe de Penchâteau (5¼ miles NNE) and include Le Grand Charpentier (6½ miles ENE) marked by Le Grand Charpentier Light (6.43), and:

4 NNE of Plateau de la Lambarde (4 miles E) marked by NW Lambarde Buoy (W cardinal) (3½ miles E) and SE Lambarde Light-buoy (S cardinal) (5 miles E), thence:

SSW of No 8 Light-buoy (port hand) (1½ miles E of Le Grand Charpentier Light) marking the entrance to Passe des Charpentiers (6.34) and moored off the SE corner of the 5 m depth contour surrounding Banc de la Barre.

5 **Caution.** Attention is drawn to the following dangers (positions given from Le Grand Charpentier Light) lying in mid-channel:

Unmarked wreck (3½ miles W) (6.58).

Wreck (1¼ miles SSE) (6.58) marked by Euler Light-buoy (S cardinal) moored 1½ cables SE.

6.70

1 **Clearing bearings:**

A limit (111°) of a white sector of Le Grand Charpentier Light (47°13′N, 2°19′W) (6.43) clears SSW of the dangers on the N side of Chenal du Nord, which lie in the red sector.

A limit (266°) of the white sector of La Banche Light (47°11′N, 2°28′W) (6.29) clears close N of a depth of 4.2 m on the N part of Plateau de la Lambarde (4 miles E of the light), which lies in the red sector.

6.71

1 **Useful marks** (positions given from Le Grand Charpentier Light):

Pornichet South Breakwater Light (3 miles NNW) (6.78).

Pierre Percée (1¼ miles NW), an above water rock with a hole through it.

Pointe de Chémoulin Coastguard Station (white building red tower) (1½ miles NE) standing on the cliff at the point.

(Directions for Chenal du Sud are given at 6.45)

Batz-sur-Mer

Chart 2986

6.72

1 **Description.** Batz-sur-Mer Harbour (47°16′·5N, 3°28′·9W), used only by a few small craft, dries. It is sheltered from S by a breakwater extending about 130 m WNW from the shore, then about 80 m WSW.

Directions

6.73

1 **Western approach.** Initial position 47°16′·3N, 2°30′·0W, about 7 cables WSW of the breakwater head. An unmarked passage about 1½ cables wide between the 3 m depth contours leads E, passing:

N of the NW end of Basse Lovre (5 cables WSW of the breakwater head) which is marked on its S side by a buoy (S cardinal), and:

S of the coastal shoal.

2 **Clearing marks.** The alignment (076°) of the following marks clears close NNW of Basse Lovre:

Front: the knuckle in the breakwater (47°16′·4N, 2°28′·9W).

Rear: Kermoisan water tower (1 mile ENE of front mark) (6.64).

6.74

1 **Southern approach.** Initial position 5 cables S of the breakwater head. The approach leads N passing E of Basse Lovre.

Clearing marks. The alignment (025°) of the following marks clears about 1 cable ESE of Basse Lovre:

Front: Breakwater head (47°16′·4N, 2°29′·0W).

Rear: Batz-sur-Mer church (3 cables NNE of front mark) (6.68).

Baie du Pouliguen

Charts 2989, 2986

General information

6.75

1 **Description.** Baie du Pouliguen, a shallow bay whose W end dries, lies between Pointe de Penchâteau (47°15′N, 2°25′W) and Pornichet Marina (3 miles E) (6.88). La Baule, a sophisticated holiday resort with a summer population of 150 000, occupies the whole of the N shore which consists of a sandy beach. Le Pouliguen Harbour (1 mile NNW of Pointe de Penchâteau) (6.81) is entered at the NW corner of the bay.

2 Although the bay is partially sheltered by the reefs which extend 5 miles ESE from Pointe de Penchâteau, strong S and SW winds produce a heavy sea.

6.76

1 **Routes.** The principal marked passage through the reefs which encumber the approaches to Baie du Pouliguen is the one between Pointe de Penchâteau and Les Guérandaises (7 cables SE), whence the route to Pornichet Marina continues E across the entrance of the bay. Le Pouliguen approach leads NNW passing inshore of Les Impairs, reefs lying 4 cables off the W shore of the bay.

2 A second passage lies between two groups of drying rocks, Les Evens (47°15′N, 2°23′W) and Les Troves, 1 mile SE. The entrance is marked by port and starboard hand buoys.

6.77

1 **Tidal streams** in the passage between Pointe de Penchâteau and Les Guérandaises attain a rate of 1½ to 2 kn at springs; their times of commencement and direction are:

Interval from HW Brest	*Direction*
–0615	NE
–0100	SW

Directions

6.78

1 **Initial position** about 5 cables S of Pointe de Penchâteau.

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To enter Baie de Pouliguen. The white sector (081°–084°) of Pornichet South Breakwater head Light (white truncated tower, green top; 10 m in height) (2½ miles E of Pointe de Penchâteau) leads E to the vicinity of Pornichet Marina entrance, passing (positions given from the light):

2 N of Les Guérandaises Light-buoy (starboard hand) (2¼ miles W), marking the W end of Les Guérandaises, below-water and drying rocks covered by a green sector, and:

S of Penchâteau Light-buoy (port hand) (2¼ miles W) marking the SE extremity of Basse Martineau, covered by another green sector, thence:

N of the buoy (starboard hand) (1¾ miles W) marking the N end of Les Guérandaises, thence:

Close S of a depth of 1·6 m (4½ cables W).

6.79

1 **Le Pouliguen approach** leads generally NNW from a position about 7 cables ESE of Pointe de Penchâteau, passing (positions given from the point):

ENE of the buoy (port hand) (4½ cables E) marking the E extremity of Basse Martineau, thence:

WSW of La Vieille Beacon (starboard hand, 6·5 m high) (5 cables NE), and:

2 ENE of a beacon (port hand) (3 cables NNE) marking a ledge, thence:

WSW of Les Petits Impairs Light-beacon (starboard hand; tower, 8 m in height) (6 cables NNE) marking the S end of the reef of the same name, thence:

ENE of a beacon (port hand) (6 cables N) marking a ledge.

(Directions for Le Pouliguen continue at 6.85)

Anchorages

6.80

1 Anchorages for vessels awaiting the tide to enter Le Pouliguen:

For small craft: about 8 cables E of Pointe de Penchâteau; depth 3 to 4 m, sandy bottom.

For boats: about 1½ cables SW of La Vieille Beacon (6.79); charted depth 0·9 m.

Le Pouliguen

Chart 2986

General information

6.81

1 **Description.** Le Pouliguen (47°16′·5N, 2°25′·5W) is a small fishing port and a popular small craft harbour with 620 berths alongside and 90 at moorings. There are 30 visitors berths but it has been reported (1983) that in the holiday season they are often all occupied.

Port Authority. Capitainerie, Terre-plein des Salinières, BP43, 44502, La Baule Cedex. Situated on E side of middle basin close N of the bridge.

Limiting conditions

6.82

1 **Controlling depth:** rocky bar in entrance (6.85) dries 1·5 m.

Vertical clearance of S-most bridge over harbour: 3 m.

Deepest berths: in pool in outer basin (6.86) which is dredged to a depth of 2 m but due to silting normally has a depth of only 0·7 to 1·0 m.

2 **Tidal levels.** See information in *Admiralty Tide Tables.* Mean spring range about 4·7 m; mean neap range about 2·3 m.

Owing to the bar in the entrance the minimum water level in the harbour is 1·5 m.

Weather: entrance exposed to S and SE; any swell from these directions breaks in the shallow waters.

Arrival information

6.83

1 **Port radio:** marina VHF channel (1.41).

Reception berth (6.86): S-most wharf on E side of harbour. It has been reported (1983) that the yacht club allocates the visitors berths.

Harbour

6.84

1 **Layout.** Within the entrance between two training walls, the harbour is separated into three sections by two low bridges: in the outermost basin the W side is used mainly by fishing craft, the E side by small craft. The inner basins are used by unmasted boats.

2 **Tidal streams** in the harbour entrance attain a rate of 4 kn at half tide.

Directions

(continued from 6.79)

6.85

1 **Entrance channel.** The line of bearing 302° of Le Pouliguen church spire (47°16′·7N, 2°25′·7W), seen midway between the two training walls at the harbour entrance, leads through the entrance channel which is marked by:

Beacons (metal columns; one port hand; several starboard hand) in its outer part.

Beacons (wooden posts; one port hand; one starboard hand), standing at the head of both training walls that cover at HW.

2 **Caution.** Near the harbour entrance the channel is narrow and the rocky bottom dries, see 6.82 for controlling depth: the sandbanks on both sides are steep-to. Unless local knowledge is available it is advisable to enter shortly before HW.

3 **Useful marks:**

Le Pouliguen Light (white column, red lantern; 15 m in height) standing on the S training wall.

Les Grands Impairs Beacon (white) (6 cables ESE of Le Pouliguen Light), marking the N side of Les Grands Impairs.

Basins and berths

6.86

1 **Outer basin** is about 500 m long and sheltered by a breakwater pontoon at its entrance.

Berths on E side, listed from S to N:

Small wharf; fuelling and reception berths for visiting small craft.

Longer wharf off which moorings are laid.

Several pontoons moored at right angles to harbour wall.

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2 West side: Careening slip; Quai Jules Sandeau, used mainly by fishing vessels, dries alongside, bottom hard sand.

Inner basins: berths for several hundred boats, mostly alongside pontoons where the general depth is about 0 m.

Port services

6.87

1 **Repairs** of all kinds at several boatyards.

Other facilities: cranes, one 18-tonne, one 15-tonne; yacht club on E side of harbour close N of S-most bridge; custom house.

Supplies: fuel; fresh water; provisions.

Pornichet Marina

Chart 2989

6.88

1 **General information.** Pornichet Marina (Port de Pornichet La Baule) (47°15′N, 2°21′W) is an artificial harbour protected by breakwaters and connected to the shore by a bridge 250 m long.

Port Authority: Capitainerie, Bureau du Port, BP67, 44380 Pornichet.

2 **Tidal levels.** See information in *Admiralty Tide Tables.* Mean spring range about 4·7 m; mean neap range about 2·3 m.

Maximum size of vessel handled: reported to be length 30·4 m, draught 4·5 m.

Port radio: see *Admiralty Maritime Communications* for details.

3 **Directions.** Entrance, facing N, is marked by light-beacons (black perches; red top on E side, green top on W side; 10 m in height) standing at the edge of the rock foundations of the breakwaters.

Berths: 1150 at pontoons; 150 at two E-most pontoons on S side, where depth is reported to be 2·8 m bottom soft mud, reserved for visitors.

Repairs of all kinds; careening slip.

Other facilities: 30-tonne mobile boat hoist; yacht club.

Supplies: fuel; fresh water; provisions.

Passage du Ronfle

General information

6.89

1 **Description.** Passage du Ronfle, a small craft channel, leads E from the NE side of Chenal du Nord (6.69) passing between Pierre Percée (47°13′·5N, 2°20′·6W) (6.71) and Baguenaud (6 cables NNW), a reef with an above-water rock nears its centre. Thence a marked channel leads 3 miles E to Chenal de Bonne Anse (6.35), passing N of Banc du Petit Charpentier (1 mile E of Pierre Percée).

2 **Controlling depth:** approximately 3 m, at the E end of the passage where it crosses the bar (2½ miles E of Pierre Percée) between Banc de la Barre and Banc de Chémoulin.

Prohibited anchorage. Anchoring and trawling are prohibited, in the area shown on the chart, between Le Grand Charpentier (1¼ miles SE of Pierre Percée) and the mainland NNE, owing to submarine cables.

Tidal streams: see information on the chart.

Directions

6.90

1 **Initial position:** 3 cables NW of Pierre Percée. Passage du Ronfle leads E, passing (positions given from Pierre Percée):

N of NNW Pierre Percée Buoy (N cardinal) (2 cables N) marking a 3·1 m patch, and:

S of Le Ronfle (rock drying 1·3 m) (3½ cables N).

The channel then continues E, passing (positions given from Le Grand Charpentier Light):

2 Either side of Basse de le Vieille (1 mile NNW) marked by Sud de la Vieille Buoy (isolated danger), and:

S of La Vieille (reef drying 2½ m) (1¼ miles NNW) marked by La Vieille Beacon-tower (S cardinal, 6·5 m high), thence:

N of Le Caillou Buoy (N cardinal) marking Le Caillou (8 cables N), an underwater reef, thence:

3 S of Banc de Chémoulin, which extends about 6 cables E from Pointe de Chémoulin (1½ miles NE), and:

N of the shallowest part of Banc de la Barre (1¼ miles ENE), thence:

S of Santiago de Bougado Light-buoy (S cardinal) moored 1 cable SSE of the stranded wreck of a sand-barge (2 miles ENE).

4 **Useful marks** (positions given from Le Grand Charpentier Light):

Le Petit Charpentier Beacon (S cardinal) (5 cables NNE).

Chémoulin Coastguard Station (1½ miles NE) (6.71).

(Directions for Chenal de Bonne Anse are given at 6.48)

SAINT-NAZAIRE

General information

Chart 2989

6.91

1 **Function.** Saint-Nazaire (47°16′N, 2°12′W), population 64 800 (2003), is the premier French ship building and repair centre. The port specialises in handling cereals, fertilisers, timber, metallurgical products and heavy loads.

Port limits include Grande Rade de Saint-Nazaire; see 6.41 for further details.

2 **Entry** from Grande Rade de Saint-Nazaire (6.53) into the non-tidal basins is made normally through Avant-port and Écluse du Sud, in exceptional circumstances through Forme-Écluse Joubert. Vessels 50 m or less in length may use Écluse de l'Est.

Traffic. In 2003 the port was used by 179 vessels totalling 809 957 dwt.

Port Authority: Capitainerie du Port, 1 Boulevard de Verdun, 44600 Saint-Nazaire.

Limiting conditions

6.92

1 **Tidal levels.** See information in *Admiralty Tide Tables.* Mean spring range about 5·0 m; mean neap range about 2·4 m. For abnormal water levels see 6.132.

Water level in the non-tidal basins is maintained at a sufficient height to enable vessels 180 m in length, 8·5 m draught to enter.

Density of water: reported (1990) to vary from 1·003 to 1·025 g/cm^3.

Small craft are only allowed brief visits for repairs or provisions.

Vessel traffic service

6.93

1 See 6.16

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Saint-Nazaire docks from SSW (6.91)
(Original dated 1994)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

Arrival information

6.94

1 **Port radio:** see *Admiralty List of Radio Signals Volume 6(2)* for details.

Anchorages: Grande Rade de la Loire and Grande Rade de Saint-Nazaire waiting anchorages are described at 6.50 and 6.53 respectively.

Pilotage: described at 6.40.

Tugs available, some ocean going; operated by Union des Remorquers de l'Océan.

Locking into basins: see 6.96 and 6.96 for details.

Harbour

General layout

6.95

1 **Avant-port,** at S end of docks, is entered from Grande Rade and sheltered by two breakwaters, the E being partly quayed.

2 **Bassin de Saint-Nazaire** lies N of Avant-port and is entered from:

Avant-port through Écluse du Sud (6.96).

Petite Rade through Écluse de l'Est (6.96).

3 **Bassin de Penhoët,** lying N of Bassin de Saint-Nazaire, is entered from:

Bassin de Saint-Nazaire through a passage 34 m wide, spanned by a swing bridge, which is closed to navigation for 30 minutes at the beginning and at the end of working hours at the shipyard.

Entrée Est through Forme-Écluse Joubert (6.107), if it is not in use as a dry dock.

Three dry docks are entered at the N end of the E side of the basin.

4 **Quais de Reparation Navale,** repair and de-ballasting berths, are situated NE of Entrée Est, the entrance to Écluse de l'Est and to Forme-Écluse Joubert.

Docks situated 5 and 8 cables NE of Entrée Est are shipbuilding berths.

Locks

6.96

1 **Écluse du Sud,** 211 m long, 30 m wide, 6 m deep, can also be closed in sections 116 or 77 m in length. It is spanned at its S end by a bascule bridge.

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Normally the gates can be worked from 2 hours before to 2 hours after HW, day or night, any day of the year. Use of the lock outside these times may be possible by prior arrangement.

2 **Écluse de l'Est,** 53 m long, 13 m wide, 2·15 m deep, can be used by vessels up to 50 m long. It can be worked at all states of the tide, day or night.

Traffic signals

6.97

1 Operation of the bascule bridge (6.96) is indicated by red and green lights.

Traffic lights are exhibited from the W side of the passage between Bassin de Saint-Nazaire and Bassin de Penhoët to control movements between the two basins.

Natural conditions

6.98

1 **Tidal streams:** see information on the chart.

Tide levels: see 6.133 for details of the radio broadcast of water level reports; the tide gauge is situated at the head of the E breakwater of the Avant-port.

Landmarks

6.99

1 Lighthouse (white tower, red top; 10 m in height) on Avant-port W breakwater head.

Lighthouse (white tower, green top; 10 m in height) on Avant-port E breakwater head.

Lighthouse (white tower, red top; 17 m in height) (3½ cables NNE of E breakwater head light) on head of Vieux Mole.

Directions

(continued from 6.49)

Entrée Sud

6.100

1 From Avant-port entrance, 124 m wide, a channel, depth 4·6 m maintained by periodical dredging, leads 2½ cables N to the entrance of Écluse du Sud.

Caution. The tidal streams set across the entrance to Avant-port; the best time for entry is at the slack water that occurs after HW or, if draught allows, that following LW.

The in-going stream sets onto Quai de Marée (6.103) and then circulates around the Avant-port; it is difficult to leave the berth during this period.

Entrée Est

6.101

1 From Chenal de Bonne Anse, the deepest approach channel leads NNE then N, passing (positions given from Vieux Mole Light):

ESE of Les Vignettes (2 cables SSW), a drying reef marked by a beacon-tower (port hand; 6·5 m high), thence:

2 ESE of SE Vieux Mole Light-buoy (port hand) (¾ cable ESE), and:

WNW of Basse Nazaire Sud Light-buoy (S cardinal) (1½ cables ESE), marking the SW end of Basse Nazaire, a shoal.

6.102

1 **Leading lights.** The axis (about 344°) of Forme-Écluse Joubert is indicated by leading lights (white masonry supports, red tops) occasionally exhibited from the quay on the W side of Bassin de Penhoët.

Basins and berths

Avant-port

6.103

1 **Quai de Marée** (E side of basin): berth 210 m long, 30 m wide, cleared of rock to a depth of 8 m but muddy bottom depth 4·5 m; used for handling dangerous cargoes; surging sometimes occurs during SW winds.

Bassin de Saint-Nazaire

6.104

1 **Berths,** from S to N:

On the E side: Quai Demange reserved for fishing vessels; Quai des Frégates situated N of Écluse de l'Est.

On the W side: Quai de Commerce, handles refrigerated cargoes; Base Sous-marins, disused submarine pens; Quai Péreire handles vegetable oils.

Bassin de Penhoët

6.105

1 **Berths,** from S to N:

On E side: Quai de la Prise-d'Eau, length 498 m, handles cargo; Quai de Penhoët and Quai de Formes, ship repair berths; 3 dry docks.

W side, overall length 1100 m, handles various cargoes at Quai des Grands Puits, Quai des Darses and Quai des Charbonnières equipped with 400-tonne derrick and as a Ro-Ro berth.

North-western side of Chenal de Donges

6.106

1 **Quai de Reparation Navale,** extending NE from E side of entrance to Forme-Écluse Joubert, consists of: quay 240 m long; waiting berth, on two dolphins, 360 m long; area alongside berths dredged to 8 m depth over a width of 60 m, length 720 m. Works in this area continue (2004).

Three ship-building berths are situated from 1 to 4 cables farther NE.

Port services

Repairs

6.107

1 Repairs of all kinds can be carried out.

Dry docks: Forme-Écluse Joubert, the largest of four dry docks, is 350 m long, 50 m wide, with a depth of 8 m over the sill, and can take vessels up to 240 000 dwt.

Divers: available from Port Authority.

Other facilities

6.108

1 Custom house at Quai Péreire (6.104).

De-ballasting station: for vessels berthed at Quai de la Prise-d'Eau or in Forme-Écluse Joubert.

De-gassing station: for vessels berthed in Forme-Écluse Joubert.

Deratting carried out; exemption certificates issued.

Hospital: municipal at Centre Hospitalier du Moulin-du-Pé.

Oily waste reception facilities.

Salvage tugs.

Supplies

6.109

1 Fuel: furnace fuel oil and marine diesel at Quai des Darses or by barge from Donges (6.146); marine diesel for fishing vessels at Quai Demange.

Fresh water: available at all berths.

Provisions: available.

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SMALL CRAFT — SOUTH – EASTERN PART OF LA LOIRE ESTUARY

Charts 2989, 2986

Description

6.110

1 The part of La Loire estuary lying NE of a line drawn from Pointe de Saint-Gildas (47°08′N, 2°15′W) to the entrance of the dredged channel (3 miles NW), and SE of the dredged channel, shoals gradually NE towards its inner end which is encumbered with unmarked drying sandbanks and tidal flats.

2 There are several small harbours (6.114), used only by small craft and fishing boats, on the E shore of the estuary between Pointe de Saint-Gildas and Le Pointeau (6½ miles NNE)

The coastline is described at 6.37.

Natural conditions

6.111

1 **Tidal streams:** see information on the charts.

Local weather: the estuary is exposed to bad weather from SW; for its effect in the vicinity of Passe des Charpentiers see 6.42.

Landmarks

6.112

1 Positions given from the first named:

Pointe de Saint-Gildas Lighthouse (47°08′N, 2°15′W) (6.32).

Préfailles water tower (1½ miles E).

La Treille water tower (3¼ miles E).

Saint-Michel-Chef-Chef water tower (5½ miles NE) (6.43).

Directions for approaching harbours on the eastern shore

(continued from 6.47)

6.113

1 **From Chenal du Sud** (6.34) the deepest approach to the harbours on the E shore of La Loire estuary leads E, passing (positions given from Pointe de Saint-Gildas Light):

N of La Couronnée Light-buoy (starboard hand) (2½ miles W) (6.45), moored 1½ miles WNW of La Couronnée (6.189), thence:

2 N of the rocky ledges, some marked by beacons (N cardinal) (2, 2½ and 2¾ miles NE), that extend up to 7 cables offshore between Pointe de Saint-Gildas and Le Pointeau (6½ miles NNE), and:

S of Les Jardinets (4 miles N), unmarked drying rocks that lie 4 cables S of Le Vert, a drying rock marked by a beacon (W cardinal; iron; 6·5 m high), thence:

3 S of La Truie (4 miles NNE), a drying rock marked by a beacon (isolated danger; wood; 6 m high).

Caution. Attention is drawn to the following dangers:

Wreck (3¾ miles NNW) that covers and uncovers marked by No 3 Light-buoy (starboard hand) moored 2½ cables farther W.

Unmarked 0·4 m patch (3 miles NNE).

Harbours

Chart 2986

Saint-Gildas

6.114

1 **General information.** Saint-Gildas Harbour (47°08′·4 N, 2°14′·6W), also called Port du Boucau, is sheltered from W by a breakwater extending about 3 cables N from Pointe de Saint-Gildas, but exposed to winds from N and NE. Two slips lie on the E side of the breakwater near its root, the S-most reported to dry 1·8 m at its head. A light (metal post, 6 m in height) is exhibited from the breakwater head.

6.115

1 **Directions.** Initial position about 1 mile N of Pointe de Saint-Gildas Light (6.32). By day the line of bearing 177° of the light just open E of the automatic tide gauge standing close S of the breakwater head, or at night a white sector (174°–180°) of the same light, leads towards the breakwater head, passing (positions given from the breakwater head):

2 W of L'Ilot, a rocky ledge (5 cables NNE) marked by a beacon (port hand), thence:

E of a light-buoy (starboard hand) (1½ cables NW) which is removed in the winter from 1st October to 15th May, and of a beacon (starboard hand) (1 cable NNW).

6.116

1 **Berths:** 216 moorings, some in the N part of the harbour in depths of 1½ m; small craft can dry out in the S part.

Repairs of all kinds can be carried out.

Other facilities: yacht club.

Supplies: fresh water from quay at root of breakwater; provisions.

Port de la Gravette

6.117

1 **General information.** Port de la Gravette (47°09′·5N, 2°12′·5W), used by fishing vessels and small craft, is sheltered from W by a breakwater extending 3½ cables N from the shore, then 1 cable ENE. There are reported to be depths from 1·1 to 1·2 m in the N half of the harbour.

6.118

1 **Directions.** By day the bearing 131° of Port de la Gravette Light (white structure, green top; 6 m in height) (47°09′·8N, 2°12′·6W) on the breakwater head, passing:

NE of a drying rock (3 cables WNW of front mark) marked by La Gravatte Light-buoy (N cardinal), thence:

2 W of the beacon (white beacon) (7 cables ENE of the breakwater light) (6.113) marking the NW extremity of Rocher de la Cormorane.

At night the white sectors (124°–138° and 183°–188°) of the light, lead to the harbour entrance.

6.119

1 **Berths:** 300 moorings for small craft.

Repairs of all kinds carried out.

Port de Comberge

6.120

1 **General information.** Port de Comberge (47°10′·5N, 2°09′·8W), the small artificial drying harbour for the nearby town of Saint-Michel-Chef-Chef, is accessible at half tide to craft with a draught of 1·5 m.

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Directions. Initial position about 1 mile NW of the harbour.

2 **Leading marks:**
Front: Port de Comberge Light (white turret, green top; 5 m in height) standing on S breakwater head.
Rear: disused lighthouse (conical topmark) (57 m SE of front mark) standing on the head of the spur on S breakwater.

3 By day the alignment (136°) of these marks or at night the white sector (123°–140°) of Port de Comberge Light, leads SE to the harbour entrance, passing:
Close NE of Les Moutons (7½ cables WNW of front mark), a drying rock.

6.121

1 **Berths:** numerous moorings; slip alongside S breakwater immediately E of spur, reported to dry 2 m alongside; quay on E side of harbour, reported to dry 3·2 m alongside.
Repairs: careening slip.
Other facility: yacht club.
Supplies: fresh water.

Chart 2989

Le Pointeau

6.122

1 **General information.** Le Pointeau boat harbour (47°14′·0N, 2°10′·8W) consists of a broad launching ramp sheltered from W by a breakwater extending 1 cable NNW from the shore. It is reported to dry from 1 m in the vicinity of the breakwater head to 1·8 m at the head of the ramp.

6.123

1 **Directions.** Initial position 47°12′N, 2°13′W, about 2 cables ESE of La Truie Beacon (isolated danger) (6.113) and clear of a dangerous wreck which lies 3 cables SE of the beacon.
The channel leads 2½ miles NNE, passing:

2 ESE of the beacon (E cardinal) (1¼ miles NNE of La Truie Beacon) marking the E corner of a mussel bed and also the E edge of a drying sandbank, and:
WNW of Banc du Pointeau, a tidal flat.

3 **Leading marks:**
Front: Le Pointeau Light (white round hut, green top; 4 m in height) on the breakwater head.
Rear: centre of a prominent block of flats (2 cables ESE of front mark: uncharted).
The alignment (118°) of these marks then leads ESE across the coastal shoal to the vicinity of the harbour entrance.

6.124

1 **Berths:** 15 small craft moorings.
Facility: yacht club.
Supplies: fuel, 200 m from harbour; fresh water.

LA LOIRE

GENERAL INFORMATION

Chart 2985

6.125

1 **La Loire Maritime**, the term for the part of the river navigable by seagoing vessels, leads generally E from Grande Rade de Saint-Nazaire (47°16′N, 2°12′W) (6.53) to Nantes (47°12′N, 1°34′W) (6.166) about 30 miles upstream: its lower limit is a line drawn from Pointe de Mindin (47°16′N, 2°10′W) to the entrance of Dock C (1 mile NW).

2 Chenal de Donges (6.136), the first reach, is:
Spanned by Saint-Nazaire-Saint-Brévin Bridge (47°17′N, 2°10′W) (6.139), then:
Bordered on the N bank by the deep water berths of the ports of Montoir (6.141) and Donges (6.146) for the next 4½ miles.

3 Thereafter the river narrows and passes a number of minor ports before reaching Nantes. Pont Haudaudine (47°12′·6N, 1°33′·2W) spanning Bras de la Madeleine, and Pont de Pornic (47°12′·0N, 1°32′·9W) spanning Bras de Pirmil, form the upper limit of La Loire Maritime.

Channel

6.126

1 The channel, minimum width 150 m, requires constant dredging and sounding due to:
The rapid formation of sand-waves about 100 m wide and several metres high that do not however extend right across the river.
Silting which is usually most pronounced during periods of low river levels.
The bottom, which varies from place to place, is mainly mud and/or sand, but rocky patches occur in a number of places.

Pilotage

6.127

1 See 6.40 for information on pilotage.

Vessel traffic service

6.128

1 See 6.16

Traffic regulations

6.129

1 **Shipping movements:**
Vessels must report by VHF radio: to Capitainerie Saint-Nazaire when they enter the channel; to Capitainerie Saint-Nazaire, Donges or Nantes when they sail or shift berth.
Large vessels: maximum cumulative dwt of vessels passing in opposite directions is limited to 200 000 tonnes by day and 175 000 tonnes at night, providing that the wind at Le Grand Charpentier Light is 35 kn or less when the pilot boards.

2 Gas tankers: other vessels must not pass a gas tanker proceeding in the opposite direction, nor sail within 2 miles ahead or astern of one proceeding in the same direction nor within 5 miles of one being swung round: small craft less than 20 m in length must keep close to the side of the channel when passing a gas tanker under way.

3 Dredgers working must be passed at slow speed; they are not allowed to obstruct the passage of other vessels.
Yachts and boats must not cross or tack ahead of other vessels.

6.130

1 **Prohibited anchorage.** Anchoring in the fairway and within 50 m of the commercial berths is in general prohibited except in an emergency. Vessels not equipped

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with radar that are forced to anchor due to fog must do so as close to the river bank as possible.

2 Small craft must anchor outside the fairway as close as possible to the shore in a place where they do not obstruct the passage of other ships and small craft.

Specific prohibited anchorage areas are described in the section of this chapter concerning the relevant stretch of the river.

6.131

1 **Radio.** Vessels, including ferry boats, dredgers and small craft, must be able to keep watch on VHF channel 16 and the working channel simultaneously.

Natural conditions

6.132

1 **Tidal levels:** see diagram on the chart.

Tidal streams: see information on the chart, but note that the pilots are the best source of up to date information on the tidal streams and the flow.

2 **Abnormal water levels:**

Freshets raise the level of LW more than that of HW; their effect decreases markedly downstream of Le Pellerin (47°12′N, 1°45′W); at Saint-Nazaire the increase in level is only 0·1 to 0·2 m.

Winds from E decrease, from W increase, the water level. The table below gives the average corrections to apply to the predicted times and heights of HW and LW to allow for the wind.

	HW		*LW*	
Wind	*Time (minutes)*	*Height (m)*	*Time (minutes)*	*Height (m)*
E	0 to +10	–0·1 to 0·3	–	–0·1 to 0·3
Moderate W	0 to –15	+0·1 to 0·3	0 to –15	+0·1 to 0·3
Strong W	0 to –15	+0·5 to 1·0	0 to –15	+0·5 to 1·0

6.133

1 **Tidal information** between Saint Nazaire and Nantes is broadcast on VHF from the VTS control centre. See *Admiralty List of Radio Signals Volume 6(2)* for further details:

Navigation

6.134

1 Navigation of La Loire is governed by the height of tide needed for the passage of whichever is the shoalest section of the river, see 6.137 and 6.153 for depths. The tidal wave moves up river at about 11 kn, somewhat faster than a vessel can proceed in normal conditions.

2 **To ascend** in the best conditions vessels should proceed with a rising tide and enter the shoalest section as soon as there is sufficient depth of water. At springs vessels of maximum permissible draught leave Saint-Nazaire 1 hour before local HW.

3 **Descending,** the time of departure from Nantes depends on draught and river level. By sailing at about 1 to 2 hours after LW at Nantes a vessel will transit the shoalest section at local HW.

6.135

1 **In fog** it is possible to navigate the river with the aid of radar and an associated blind pilotage organisation.

Anchoring is possible in an emergency, but it is a delicate operation for deep draught vessels.

Positions on La Loire may be described locally by their distance in kilometres downstream from the former Capitainerie du Port de Nantes (47°12′·7N, 1°33′·7W).

GRANDE RADE DE SAINT-NAZAIRE TO DONGES

General information

Chart 2985

Chenal de Donges

6.136

1 The dredged channel from Grande Rade de Saint-Nazaire (47°16′N, 2°12′W) to Donges (6.146), 6 miles up river, has a project width of 300 m and lies on the N side of the river.

Limiting conditions

6.137

1 **Maintained depths** of the dredged channel:

From Grande Rade de Saint-Nazaire to Arceau Light between Donges Berths No 5 and 6: 12·8 m.

From Arcuau Light to Donges Berth No 4: decreases progressively from 12·8 to 7·9 m.

Vertical clearance beneath Saint-Nazaire—Saint- Brévin Suspension Bridge (6.139): 55 m.

Density of water at Montoir and Donges: reported to vary between 1·000 and 1·025 g/cm^3.

Speed limit

6.138

1 Passing Terminal Méthanier at Montoir (47°18′N, 2°08′W) (6.144) speed over the ground is limited to 8 kn when any of the berths are occupied.

Landmarks

6.139

1 Two towers (125 m high) standing one at each end of the main span of Saint-Nazaire-Saint-Brévin Suspension Bridge (47°17′N, 2°10′W).

Directions

(continued from 6.49)

6.140

1 **Initial position:** Grande Rade de Saint-Nazaire (47°16′N, 2°12′W) (6.53).

The dredged channel is marked:

2 From Grande Rade de Saint-Nazaire to the vicinity of Montoir Ro-Ro terminal (7 cables upstream from the bridge) (6.144) by light-buoys(lateral) on both sides, thence:

To the vicinity of Donges No 4 Berth (6.150), 4 miles farther upstream, by light-buoys (starboard hand) and buoys (special) on the S side only.

3 **Useful marks:**

Several lights on jetties, whose positions are best seen on the chart, on N bank of river.

(Directions continue for: Montoir at 6.143; Donges at 6.149; Donges to Nantes at 6.158)

MONTOIR

General information

Chart 2985

6.141

1 **Position.** Montoir industrial port is built on reclaimed land on the N bank of La Loire and extends from 7 cables to 3 miles E of Saint-Nazaire-Saint-Brévin Bridge.

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Montoir from WSW (6.141)

(Original dated 1994)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

Function. The port consists of several separate terminals that specialise in handling specific commodities, namely: containers and general merchandise; LNG; agricultural products and heavy loads; liquid chemicals; coal.

Traffic. In 2003 the port was used by 937 vessels totalling 22 302 767 dwt.

Port Authority. Capitainerie du Port at Donges (6.146).

Arrival information

6.142

1 **Port radio:** at Capitainerie du Port, Donges: see *Admiralty List of Radio Signals Volume 6(2)* for further details.

Pilotage: described at 6.40.

Tugs: provided from Saint-Nazaire (6.94).

Directions for berthing

(continued from 6.140)

6.143

1 It has been reported (1980) that deep-draught vessels berth only at HW slack, bows E.

A turning area off Terminal Méthanier (6.144) is marked on the S side by MA and MB Light-buoys (starboard hand) at its lower and upper limits respectively, and by ZEM1 and ZEM2 Buoys (special) in between.

Berths

6.144

1 Berths, listed from W to E (positioned by distance upstream from Saint-Nazaire-Saint-Brévin Bridge), include:

Ro-Ro berth No 2 (4 cables): for vessels maximum length 180 m with bow or stern ramps.

2 Ro-Ro berth No 1 (7 cables): depth 7·5 m, for vessels maximum length 140 m with bow or stern ramps.

TMDC (9 cables), a terminal for general cargo and containers; quay length 610 m, for vessels up to 12·5 m draught.

Terminal Méthanier (1½ miles); two berths for LNG tankers up to 125 000 m^3, maximum draught 13·1 m.

3 Quai de Montoir (2¼ miles): length 822 m; handles agricultural products and heavy loads, vessels maximum dimensions 140 000 dwt, 280 m long, 13·5 m draught.

Gardiloire liquid chemicals berth (2½ miles): for tankers up to 40 000 dwt and 11 m draught.

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Coal terminal (3 miles): handles bulk carriers up to 140 000 dwt and 16 m draught.

Port services

6.145

1 **Repairs:** see 6.107 for facilities at Saint-Nazaire.

Other facilities: medical post at Montoir; hospital at Saint-Nazaire (6.108).

Supplies: fuel supplied by barge; fresh water; provisions.

DONGES

General information

Chart 2985

6.146

1 **Position and function.** Donges, population 6400 (2003), on the N bank of La Loire 4 miles upstream from Saint-Nazaire-Saint-Brévin Bridge, is a major oil port.

Traffic. In 2003 the port was used by 556 vessels totalling 18 083 863 dwt.

Port Authority: Capitainerie du Port; office close N of Poste de l'Arceau (6.150).

Limiting conditions

6.147

1 **Controlling depth:** see 6.137 for project depth of the channel.

Deepest berths: average depth alongside Berths Nos 6 & 7 is 15·6 m.

Tidal levels. See information in *Admiralty Tide Tables.* Mean spring range about 5·3 m; mean neap range about 2·5 m.

Arrival information

6.148

1 **Port radio:** operated from Capitainerie du Port (6.146), see *Admiralty List of Radio Signals Volume 6(2)* for further details.

Pilotage: described at 6.40.

Tugs: provided from Saint-Nazaire (6.94).

Vessel Traffic Service: described at 6.16

Directions for berthing

(continued from 6.140)

6.149

1 Coastal tankers may berth at all states of the tide.

Larger tankers arriving to discharge crude oil berth at HW: they may sail in ballast at LW. Vessels which call regularly may berth and unberth at night subject to a number of conditions.

Vessels berth bows E at Berths Nos 4 to 7 and, owing to the strong tidal streams, must use additional wire mooring lines provided by the Port Authority.

Berths

6.150

1 Berths consist of four piers, and, at the E end of the port, a wharf 640 m long. Details, with positions given from Berth No 6 (47°18′·4N, 2°05′·8W) are:

Berths Nos 6 and No 7 (2½ cables W); used by vessels up to 300 000 dwt partly loaded, 350 m in length, discharging crude oil.

2 Poste de l'Arceau (2¼ cables E); used by tankers carrying refined oils; depth alongside 10·1 m.

Berth No 5 (4 cables E); used by vessels up to 95 000 dwt and 255 m in length; handles crude and refined oils.

Berth No 4 (1¼ miles E) at SW end of wharf; used by vessels up to 36 000 dwt, 206 m in length, 8 to 9 m draught; handles LPG, crude and refined oils.

Port services

6.151

1 **Repairs:** minor repairs to machinery; larger repairs at Saint-Nazaire (6.107).

Other facilities: mobile crane for loading stores; de-ballasting; seamen's residential club; hospital at Saint-Nazaire (6.108).

Supplies: fuel oil by pipeline or barge; fresh water; provisions.

Harbour regulations: vessels berthed alongside must keep their main engines ready to manoeuvre at 15 minutes notice.

DONGES TO NANTES

General information

Chart 2985

Description

6.152

1 From Donges (47°18′N, 2°04′W) (6.146) La Loire leads generally ESE to Nantes (47°12′N, 1°34′W) (6.166), 23 miles farther upstream, passing minor ports or berths at the following places:

Paimbœuf (47°17′·5N, 2°01′·8W) (6.159).

Cordemais (47°16′·6N, 1°53′·0W) (6.160).

2 Couëron (47°12′·5N, 1°42′·5W) (6.162).

Basse Indre (47°12′·3N, 1°41′·6W) (6.163).

Indret (47°11′9N, 1°40′·7W) (6.164).

Haut Indre (47°11′6N, 1°39′·2W) (6.165).

Depths

6.153

1 **Off Paimbœuf** (47°18′N, 2°02′W) the maintained depth of the dredged channel varies between 7·9 to 5·6 m.

Farther up river there are charted depths of 5 m or more in the fairway, but see 6.126 concerning sand waves, silting and dredging.

Vertical clearance

6.154

1 **Power cables,** with a safe overhead clearance of 52 m, span the river at Le Pellerin (47°12′·3N, 1°44′·8W) and Basse Indre (47°11′·6N, 1°39′·7W).

Pont de Cheviré (47°11′·7N, 1°36′·7W), the bridge at Quai de Roche-Maurice (6.173) at Nantes, has a vertical clearance of 52 m.

Ferries

6.155

1 Ferries cross the river at:

Le Pellerin (47°12′·3N, 1°45′·1W).

Basse Indre (47°11′·8N, 1°40′·4W).

Traffic regulations require ferries to keep clear of other vessels navigating the channel.

2 Ferries do not exhibit bow and stern lights but they exhibit the following lights:

At the masthead: a white all-round light that is extinguished when the ferry starts to cross the river.

Not less than 6·5 m above the waterline:

Green above red when proceeding from N to S bank.

Red above green when proceeding from S to N bank.

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Quai de Roche-Maurice *Quai de Cheviré*

Pont de Cheviré from W (6.154)

(Photograph – Mr T S Plews, Yacht "Du Bleiz") *(Original dated 1996)*

Traffic regulations

6.156

1 **Vessel Traffic Service:** See 6.16

Prohibited anchorage. Anchoring is prohibited within 50 m of commercial berths and of submarine pipelines and cables laid across the river and marked on the river banks where they are landed.

2 Anchorage is also prohibited:

In the way of ferries (6.155) at Le Pellerin and Basse Indre.

Off the S bank between Indret Light (47°12′·1N, 1°41′·3W) and the ferry landing (6 cables ESE).

Either side of Pont de Cheviré (6.154) between 47°11′·6N, 1°38′·5W and 47°11′·7N, 1°35′·5W.

At Nantes in the charted turning area (47°11′·9N, 1°34′·7W).

6.157

1 **Vessels constrained by their draught** keep to the S side of the channel between Indret quay (47°11′·9N, 1°40′·6W) and the W-most berth at Quai Emile Cormerais 1¾ miles up-river. Such vessels are required to exhibit the additional lights or shape prescribed in Rule 28 of *International Regulations for Preventing Collisions at Sea, 1972*.

2 An arrow and a flashing orange light exhibited from boards standing on Indret quay and Berth No 3 at Quai Emile Cormerais indicate the presence of such vessels in this section of the channel. All other vessels must then keep to the N side of the channel and report to Capitainerie Nantes on VHF radio when they enter and leave this section of the river.

3 In the event of failure of the orange light or the illumination of the boards, the vessel constrained by her draught shall on entering the area sound four blasts on her whistle and warn other vessels on VHF radio.

Directions

(continued from 6.140)

6.158

1 The channel is marked by light-buoys (lateral) from the vicinity of Donges (47°18′N, 2°04′W) to that of Le Pellerin (47°12′N, 1°45′W).

In the vicinity of Cordemais (47°16′N, 1°52′W) it is indicated by leading lights where it leads towards the N bank, and where it leads back towards the S bank about 1 mile farther up-river.

Numerous lights are exhibited from both banks of the river.

(Directions continue at 6.172)

Minor ports

Paimbœuf

6.159

1 **General information.** Paimbœuf Harbour, on the S bank, consists of the old port (47°17′·5N, 02°01′·6W), now used as waiting berths for small vessels and oil barges, and a berth handling liquid chemicals 1¼ miles farther upstream.

Port Authority: Capitainerie du Port de Saint-Nazaire (6.91).

2 **Useful marks:**

Paimbœuf Light (white tower, green top; 9 m in height) (47°17′·5N, 2°01′·9W).

Île du Petit Carnet Light (white pylon, green top; 10 m in height) (1 mile E of Paimbœuf Light).

3 **Berths:**

Quai Vertical (2 cables ESE of Paimbœuf Light); public quay 183 m long; maximum permitted draught alongside at LW 3·0 m. Vessels berth on catamarans owing to rocks at the base of the quay.

Le Carnet (2½ cables E of Île du Petit Carnet Light): T-headed pier connected by pipeline with Établissements Kuhlmann chemical works; berths for tankers up to 160 m in length and 7·1 m draught.

4 **Repairs** of a minor nature can be carried out.

Supplies: fresh water at Quai Vertical; provisions.

Cordemais

6.160

1 **General information.** Cordemais berths are located on Île de la Nation (47°17′N, 1°53′W) on the N bank of the river 6 miles upstream from Paimbœuf. The E end of the island is occupied by an Électricité de France (EDF)

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generating station with three tall chimneys, the highest 224 m in height.

2 **Limiting conditions:**

Tidal levels: see information in *Admiralty Tide Tables.* Mean spring range about 5·6 m; mean neap range about 3·0 m.

Density of water: reported to vary from 1·025 to 1·000 g/cm^3.

Maximum size of vessel handled at EDF Berth: 30 000 dwt; 9 m draught subject to tidal variation; length over all 200 m.

3 **Arrival information**

Tugs normally provided from Nantes (6.169), otherwise from Saint-Nazaire (6.94).

Berthing at EDF Berth: only at HW; day or night; bows W.

4 **Berths:**

Coal berth (47°16′·7N, 1°53′·2W): pier with T-head 220 m long.

EDF private berth (3 cables ESE): T-headed pier with 4 breasting and 4 mooring dolphins; used by vessels supplying fuel to power station; tidal stream reported to attain 5 kn at springs.

5 **Repairs** carried out at Saint-Nazaire (6.107).

Supplies: fuel oil supplied by barge or road tanker; fresh water; provisions.

Le Pellerin

6.161

1 **General information.** Le Pellerin (47°12′N, 1°45′W) lies on the S bank, 12½ miles above Paimbœf.

Berths. In addition to the ferry berth there are several quays with depths of 2 to 2·5 m alongside, used by small cargo vessels. Fishing vessels and small craft berth at a mole and pontoon situated in a drying cove 1 cable upstream of the ferry berth.

Facilities. The port is equipped with a 1700-tonne floating dock and a 90-tonne crane barge.

Couëron

6.162

1 **General information.** Couëron berths (47°12′·5N, 1°42′·5W) are situated on the N bank 14 miles above Paimbœuf.

Berths. There are two berths: the larger, which is disused (2003), is 50 m in length and handles vessels up to 7 m draught. There is also a wharf belonging to the French Navy.

Basse Indre

6.163

1 **Berth** (47°12′·3N, 1°41′·6W) on N bank:

Établissement J J Carnaud private quay; length 125 m, maximum draught allowed 6 m; handles minerals.

Indret

6.164

1 **Berth** (47°11′·9N, 1°40′·7W) on S bank:

Quai d'Indret; belongs to French Navy; length 140 m, maximum draught allowed 5 m.

Haut Indre

6.165

1 **Berth** (47°11′·6N, 1°39′·2W) on N bank:

Compagnie Général des Engrais private berth; length 70 m, maximum draught allowed 6·4 m. handles phosphates, potash and acids.

NANTES

General information

Chart 2985

6.166

1 **Position and function.** Nantes (47°12′N, 1°34′W), population 245 000 (2003), is a major commercial centre. In addition to general cargoes the port handles large quantities of sawn timber, fresh vegetables and citrus fruits.

Topography. The port installations extend for about 4 miles along both banks of La Loire, and along the W end of Île Beaulieu which lies between them. Bras de la Madeleine and Bras de Pirmil are the two branches of the river flowing N and S respectively of the island.

2 The main part of the port begins at Quai Emile Cormerais (47°11′·6N, 1°38′·0W); subsidiary berths farther downstream have been described previously (6.159 to 6.165).

Traffic. In 2003 the port was used by 440 vessels totalling 2 926 837 dwt.

Port Authority: Port Autonome de Nantes-Saint-Nazaire, 18 Quai Ernest Renaud, BP 18609, F–44186 Nantes Cedex 4.

Website: www.nantes.port.fr.

Limiting conditions

6.167

1 **Deepest berths:** Roche-Maurice No1 and Port Cheviré (6.173).

Tidal levels. For further information and details of seasonal changes in mean level seen *Admiralty Tide Tables.* Mean spring range about 5·4 m; mean neap range about 3·3 m.

Abnormal water levels. Chart datum at Nantes is established at the lowest river level of La Loire at springs.

Density of water: reported to be 1·000 g/cm^3.

2 **Maximum size of vessel handled:**

Length: 205 m.

Draught:

Entry: varies from 8·95 m at neaps to 10·4 m at springs.

Departure: varies from 8·8 m at neaps to 9·7 m at springs.

Ice: drifting ice may occur in severe winters.

Vessel traffic service

6.168

1 See 6.16.

Arrival information

6.169

1 **Port radio:** see *Admiralty List of Radio Signals Volume 6(2)* for details.

Pilotage: pilots' office at 2 Rue Eugène Varlin; see 6.40 for other details.

Tugs available, operated by Compagnie des Abeilles.

Vessel Traffic Service: described at 6.16

Regulations. There are no regulations concerning time of arrival, turning and berthing. The use of tugs is optional

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unless the river is in spate and the water level at LW is 3 m or more.

Prohibited anchorages: described at 6.156.

Harbour

General layout

6.170

1 **Port Petrolier and Port Industriel** occupy the W and E parts, respectively, of the N bank of the river W of Bras de la Madeleine.

Chevire industrial zone lies on the S bank opposite the W end of Port Industriel. A power station occupies its central portion.

Port Public lies on both banks of Bras de la Madeleine and on the N bank of Bras de Pirmil. Only river craft can pass beneath the bridges spanning the E parts of both arms of the river.

Natural conditions

6.171

1 **Flow.** At Nantes the maximum rate of the out-going flow can vary between 2 kn when La Loire is at its lowest level and 6 kn when the river is in spate. The in-going flow can attain 3½ kn at springs when La Loire is at its lowest level: when the river is in spate the flow may be constantly out-going.

Climatic table: see 1.156 and 1.159.

Directions

(continued from 6.158)

6.172

1 **Berthing.** When the river is in spate vessels berth bows E: at other times they may berth pointing either upstream or downstream.

Caution. In the turning area W of Île Beaulieu the tidal stream sets strongly towards the island at about 2 hours before local HW.

Berths

6.173

1 **Principal berths** listed from W to E (positions given from the W point of Île Beaulieu):

Port Pétrolier: Quai Emile Cormerais (2½ miles W); Berth No 3 length 180 m and Berth No 1 length 120 m.

Port Cheviré (2 miles W) length 270 m, 2 berths, and Quai de Cheviré (1 mile WSW) length 300 m; handle containers and timber.

2 Port Industriel: Quai de Roche-Maurice (1½ miles W) length 747 m, 6 berths; handles bulk and general cargo, molasses.

Port Public: Quai du Président Wilson (E for 8 cables) length 1472 m, 12 berths; handles heavy loads, containers, bulk, refrigerated and general cargo.

3 The depth alongside these berths is shown on the chart: it may be reduced due to silting. See 6.167 concerning chart datum and seasonal changes in mean level.

Deepest berths: Roche-Maurice No 1 charted depth alongside 11 m and Port Cheviré charted depth alongside 10 m.

Port services

6.174

Repairs of all kinds can be carried out by small shipyards; divers available.

Other facilities: deratting carried out and certificates issued, deratting exemption certificates also issued; three hospitals; custom house. oily waste reception facilities.

Supplies: fuel oil by lighter or road tanker, marine diesel at Quai Emile Cormerais or by lighter from Donges (6.151); fresh water; provisions.

Inland waterways

6.175

1 **La Loire** is navigable by river craft as far as Angers (92 km upstream) whence its tributaries La Sarthe and La Mayenne are navigable by these craft as far as the industrial regions of Le Mans (134 km above Angers) and Laval (91 km above Angers) respectively.

6.176

1 **Nantes-Brest canal** is entered from Bras de la Madeleine through Saint-Felix Lock (47°12′·8N, 1°32′·3W), whence it leads through a tunnel to Ceineray Marina (500 m NW).

The canal leads to Redon (5.383) where it connects with La Vilaine river and the Breton canals, see 1.85 for further details. The W-most section is no longer connected with Brest.

Small craft

Trentemoult Marina

6.177

1 **General information.** Trentemoult Marina (47°11′·8N, 1°34′·7W) dries.

Berths: for 81 small craft at three pontoons; the N side of the outermost reserved for visitors.

Repairs to hulls carried out at boatyard.

Other facilities: careening slip; yacht club.

Supplies: fresh water; provisions.

Other berths

6.178

1 **Moorings** on S side of Bras de Pirmil (6.166).

Berths alongside Quai des Oranges beside Capitainerie du Port (47°12′·4N, 1°34′·4W).

BAIE DE BOURGNEUF

GENERAL INFORMATION

Chart 2981

Description

6.179

1 **Baie de Bourgneuf** lies between Île de Noirmoutier (47°00′N, 2°15′W) and the mainland N and E.

The NW part of the bay is frequented mainly by fishing vessels and small craft using the harbours of Pornic (47°07′N, 2°06′W) (6.198) on the N shore and L'Herbaudière (47°01′N, 2°18′W), (6.218) at the NW end of the island, and in summer the anchorages off Bois de la Chaise (3½ miles ESE of L'Herbaudière) (6.226).

2 Farther SE towards the head of the bay navigation becomes difficult owing to the numerous dangers and lack of marks; all the harbours dry at LW and are used principally by craft that work the extensive oyster beds.

6.180

1 **Route du Gois** (46°56′N, 2°08′W) (6.261), a causeway near the S end of the bay, connects Île de Noirmoutier to

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the mainland. The causeway dries 3 m; local knowledge is required to use the boat passage (6.262) leading over it.

Goulet de Fromentine (2½ miles farther S), the S entrance to the bay, is described in the next chapter (7.22).

Weather

6.181

1 Baie de Bourgneuf is sheltered from winds from N through E to S, but W winds produce a very rough sea especially during the out-going tidal stream.

Caution

6.182

1 **Depths** in Baie de Bourgneuf are gradually decreasing and the mud flats extending owing to silting.

BAIE DE BOURGNEUF-WESTERN PART

General information

Chart 2981

Routes

6.183

1 The principal channel (6.189) through the W part of Baie du Bourgneuf leads E from the inner end of Chenal de Sud approach, passing midway between Pointe de Saint-Gildas (47°08′N, 2°15′W) and the N end of Île de Noirmoutier (6 miles S).

6.184

1 Other routes leading into Baie de Bourgneuf from the W are: the N entrance channel (6.190) leading ESE between Pointe de Saint-Gildas and Banc de Kerouars (1½ miles farther S); the S entry route leading ENE between Île du Pilier (47°03′N, 2°22′W) and Île de Noirmoutier, passing through Chenal de la Grise (6.215) then through the NE approach to L'Herbaudière (6.217).

Topography

6.185

1 The N shore of the bay, from Pointe de Saint-Gildas to Pornic (6 miles ESE), consists mostly of steep cliffs.

Île de Noirmoutier is low-lying: its highest part at the NE end is covered by Bois de la Chaise, a wood.

Rescue

6.186

1 **Lifeboats** (1.77) stationed at:
L'Herbaudière (47°01′N, 2°18′W) (6.218).
Pornic (47°06′·6N, 2°06′·8W) (6.198).

Tidal streams

6.187

1 Tidal streams in the middle of the entrance of Baie de Bourgneuf are rotary clockwise; in a position 2½ miles SSW of Pointe de Saint-Gildas they set us follows:

Interval from HW Brest	*Direction*	*Spring rate (kn)*
–0530	WNW	¼
–0500	N	1
–0230	E	1
0000	S	¼
+0300	W	1½

2 Near the shore the tidal streams become more linear and stronger; the out-going tidal stream begins earlier off the coast of Île de Noirmoutier; further details are given in the appropriate place in the text.

Principal marks

6.188

1 **Landmarks:** on N shore (positions given from first named):
Pointe de Saint-Gildas Lighthouse (47′08′N, 2°15′W) (6.32).
Préfailles water tower (1½ miles E) (6.112).
La Treille water tower (3¼ miles E) (6.112).
Sainte-Marie Church (5 miles ESE).

2 On the S side of the principal channel (positions given from the first named):
Île du Pilier Lighthouse (47°02′N, 2°21′W) (6.29).
Pierre Moine Light-beacon (isolated danger; truncated conical tower 18 m in height) (6¼ miles E).
Conspicuous chimney (2¾ miles ESE) at L'Herbaudière.
Conspicuous water tower (4¼ miles ESE).
Noirmoutier-en-l'Île church (5½ miles ESE) (6.216).

3 **Major lights:**
Île du Pilier Light—as above.
Pointe des Dames Light (47°01′N, 2°13′W) (6.227).

Directions for principal channel

(continued from 6.33)

6.189

1 **Initial position** 47°06′N, 2°21′W, about 3 miles N of Île du Pilier Light (6.29).

The principal channel through the W part of Baie de Bourgneuf leads about 7 miles E, passing:

2 S of La Couronnée Light-buoy (starboard hand) (47°08′N, 2°20′W) (6.45), thence:
N of rocky patches with depths of 2·8 m and 0·3 m over them lying respectively 5 cables NW and 3 cables NE of Grand Sécé (1½ miles NE of Île du Pilier), a drying rock marked by Grand Sécé Beacon-tower (N cardinal) (6.33), and:

3 S of La Couronnée (47°07′N, 2°18′W) a drying reef marked, on the N side, by Nord Couronnée Light-buoy (N cardinal) (6.192), thence:
S of Banc de Kerouars, an unmarked reef on which the sea breaks heavily in bad weather, which extends 5 miles ESE from La Couronnée, and:

4 N of Banc de la Blanche Buoy (N cardinal) (2½ miles ENE of Grand Sécé Beacon-tower) moored 6 cables N of the NE end of Banc de la Blanche, thence:
N of an unmarked rock (1½ miles NW of Pierre Moine Light-beacon) with a depth of 4·1 m over it, thence:
N of Pierre Moine Light-beacon (isolated danger) (6.188).

(Directions continue for Chenal de la Pierre at 6.243, and for Chenal du Centre at 6.244)

Northern entrance to Baie de Bourgneuf

General information

6.190

1 **Description.** The inshore channel leading ESE between Pointe de Saint-Gildas and Banc de Kerouars has a least charted depth of 5·7 m and a least width of 8 cables between the 5 m depth contours on each side, but is unmarked.

6.191

1 **Tidal streams** in a position 8 cables S of Pointe de Saint-Gildas set as follows:

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Interval from HW Brest	*Direction*	*Spring rate (kn)*
–0500	ENE	½
–0200	ESE	1¼
0000	Slack	
+0400	WNW	1
+0600	NW	½

Directions

6.192

1 **Initial position** 47°09′N, 2°19′W, approximately midway between La Couronnée Light-buoy (starboard hand) (3½ miles W of Pointe de Saint-Gildas) (6.45) and Chenal du Sud No 1 Light-buoy (starboard hand) (2½ miles farther NNE).

The channel leads about 7 miles ESE, passing (positions given from Pointe de Saint-Gildas Light):

2 NNE of the 3·5 m patch (2½ miles WSW) lying 4 cables NNW of La Couronnée, marked by Nord Couronnée Buoy (N cardinal) thence:
NNE of Banc de Kerouars (6.189) which extends 5 miles ESE from La Couronnée, and:
SSW of the rocky flat extending 5 cables W from Pointe de Saint-Gildas, thence:
SSW of the 2·9 m rocky patch (1¼ miles SE) lying 5 cables offshore.

(Directions for Chenal de la Pierre are given at 6.243)

Pornic approaches

General information

6.193

1 **Description.** The approach from the E end of the principal channel through the W part of Baie de Bourgneuf (6.183) leads generally ENE to the entrances (47°06′·5N, 2°06′·5W) of Noëveillard Marina (6.198) and Pornic Harbour (6.204).

After passing the E end of Banc de Kerouars (6.189), the WSW approach is joined from WNW by the N-most entrance channel to Baie de Bourgneuf (6.190): it then passes NNW of Plateau de Notre-Dame, the W-most of a line of reefs on the N side of Chenal de la Pierre (6.243).

6.194

1 **Tidal streams.** In a position 1 mile WSW of the harbour entrance the times of commencement and direction of the tidal streams are:

Interval from HW Brest	*Direction*
–0515	E
+0015	W

Maximum rates at springs are: 1½ kn E-going; 2 kn W-going.

Directions

6.195

1 **Initial position** 47°05′N, 2°11′W, about 3 miles WSW of the harbour entrances.

Leading marks:

Front: Pointe de Noëveillard Lighthouse (green and white square tower, white dwelling; 15 m in height) (47°06′·7N,2°06′·8W).
Rear: Pornic church spire (6 cables NE of front mark).

2 **By day** the alignment (055°) of these marks leads to a position about 1 mile WSW of the harbour entrances, passing (positions given from front mark):

SE of the E end of Banc de Kerouars (3½ miles W) (6.189), thence:
SE of an isolated unmarked 2·4 m rocky patch (3 miles WSW), thence:

3 NW of Plateau de Notre-Dame, a reef that extends 3 cables NNW of Notre-Dame Lighted beacon-tower (W cardinal; 11 m high) (1½ miles SW), which marks a part that dries 1·3 m, thence:
NW of a light-buoy (special) (7 cables SW) marking the end of a submarine pipeline.

4 **At night** the white sector (051°–079°) of Pointe de Noëveillard Light leads between Banc de Kerouars and Plateau de Notre-Dame, but the 2·4 m patch, see above, lies within the sector.

The approach route then leads ENE to No 1 Light-buoy (safe water) (2½ cables SE of Pointe de Noëveillard Light) moored ½ cable SE of Noëveillard Marina SW breakwater head.

6.196

1 **Useful marks** (positions given from Pointe de Noëveillard Light):

Sainte-Marie Church (7 cables WNW).
Conspicuous water tower (8 cables N).
Light (grey structure 1 m in height) (1¾ cables S) exhibited from SW corner of Noëveillard Marina breakwater.

Anchorage

6.197

1 Waiting anchorage off Pornic: on the alignment (055°) for the approach described at 6.195, in depths from 3 to 5 m, bottom sand and mud.

Noëveillard Marina

Chart 2981 plan Pornic

General information

6.198

1 **Description.** Noëveillard Marina (47°06′·6N, 2°06′·7W), an artificial harbour protected by breakwaters, lies on the W side of the entrance to Pornic harbour (6.204).

Port Authority: Bureau du Port, La Noëveillard BP22, 44210 Pornic. Situated at NE corner of the marina.

Limiting conditions

6.199

1 **Controlling depth** in entrance: 1.6 m (charted) but liable to silting.

Tidal levels: given at 6.205.

Weather: entrance dangerous in winds more than force 7 from E through S to W.

Arrival information

6.200

1 **Port radio:** see *Admiralty Maritime Communications,* for details.

Regulations. Entry is controlled by traffic signals.

Directions

6.201

1 **Initial position** 47°06′·5N, 2°06′·6W, close to No 1 Light-buoy (safe water) (6.195).

The marina entrance (½ cable NW) is marked on both sides by a light-beacon (black column, with red or green top, 9 m in height) standing close off the two breakwater heads.

Due to silting, entry should not be attempted from 1 hour before to 1 hour after LW.

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Noëveillard Marina from SW (6.198)

(Original dated 1994)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

Berths

6.202

1 Berths for 919 small craft, 165 for visitors, at ten pontoons. The three E-most pontoons are reserved for visitors.

Port services

6.203

1 **Repairs** of all kinds carried out.

Other facilities: 40-tonne boat hoist; yacht club; custom house.

Supplies: fuel; fresh water; provisions.

Pornic Harbour

General information

6.204

1 **Description.** Pornic (47°07′N, 2°06′W), population 11 500 (2003), lies on the N shore of Baie de Bourgneuf: the harbour occupies a drying inlet entered E of Noëveillard Marina (6.198).

Port Authority: Capitainerie, Place du Château.

Limiting conditions

6.205

1 **Controlling depths:**

Entrance channel: dries 1·3 m.

Tidal basin: berths dry about 2·1 m, see 6.211 for further details.

Tidal levels. See information in *Admiralty Tide Tables.* Mean spring range about 5·0 m; mean neap range about 2·4 m.

Maximum size of vessel handled: length 50 m; beam 8 m; draught 3·4 m at springs, 2·1 m at neaps.

Arrival information

6.206

1 **Port radio:** operated by Noëveillard Marina (6.200).

Pilotage is provided by La Loire Pilots, see 6.40 for further details.

Harbour

6.207

1 **Entrance:** between Noëveillard Marina E breakwater (6.198) and Pointe de Gourmalon (1¼ cables E).

Avant-port: sheltered by a breakwater extending ½ cable NW from Pointe de Gourmalon; extends 3 cables NW; drying anchorages for small craft on both sides of channel.

2 **Tidal basin:** entered from NE end of Avant-port; used mainly by fishing vessels and local small craft.

Écluse de Haute Perche, a lock at the NE corner of tidal basin, gives access to Étier de Haute Perche a canal leading 5 miles inland to Haute Perche village.

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6.208

1 **Natural conditions:**

Tidal streams are weak.

Flood water is released from Étier de Haute Perche through a sluice gate near the lock; its effect is felt in the entrance to the basin and at berths on N side.

Directions

6.209

1 **Initial position:** No 1 Light-buoy (safe water) (½ cable SSE of Noëveillard Marina E breakwater head) (6.195)

Pornic entrance channel, which is liable to silting and dries from 0 to 1·3 m, leads N then NE, passing (positions given from marina E breakwater head):

2 W of the ledge extending ¾ cable W from Pointe de Gourmalon and marked by a beacon (starboard hand) (1 cable ENE), thence:

NW of Pointe de Gourmalon Breakwater head (2 cables NE) marked by a light-beacon (white mast, green top; 5 m in height).

3 The channel continues NE through the Avant-port as shown on the chart and is marked:

On the SE side by a light-buoy and a beacon (starboard hand), and:

On the NW side by two light-buoys and three beacons (port hand).

At the entrance to the tidal basin by lights (white metal post 1 m in height), one on each side.

Basin and berths

6.210

1 **Avant-port.** Anchorages for small craft that can take the ground:

Anse aux Lapins, on SE side of channel NE of Pointe de Gourmalon breakwater; visitors moorings reported to dry from 1 to 2½ m; slip.

Anse du Château and Petit-Nice, on NW side of channel SW and E, respectively, of the castle (2 cables NE of Pointe de Gourmalon breakwater head).

6.211

1 **Tidal basin** 240 m long, average width 70 m, is used by ferry, fishing vessels and local small craft.

Berths dry about 2·1 m; bottom mud, but in places it is only a thin layer over rock.

The basin is dredged at irregular intervals; between times about 0·4 m of silt accumulates.

A tide gauge situated close to Étier de Haute Perche sluice gate indicates height above chart datum.

Port services

6.212

1 **Repairs** of all kinds to fishing vessels and small craft.

Other facilities: yacht club at Gourmalon.

Supplies: fuel; fresh water; provisions.

Communications: ferry service to Bois de la Chaise (6.230), Île de Noirmoutier, from 1st July to 30th September.

L'Herbaudière approaches

General information

6.213

1 **Description.** Three separate routes converge on Basse du Martroger Light-beacon (N cardinal) (47°03′N, 2°17′W) (6.216) from the directions indicated (positions given from the light-beacon):

WSW through Chenal de la Grise (2 miles WSW) (6.215).

2 NW approach (6.216), passing between Grand Sécé (2 miles WNW) and Banc de la Blanche (1 mile N).

NE approach (6.217), passing between Banc de la Blanche and Roche des Pères (1 mile ENE).

3 **Least charted depth** in each approach is:

Chenal de la Grise: 3·0 m.

NW approach: 3·4 m.

NE approach: 3·3 m.

6.214

1 **Tidal streams.** In Chenal de la Grise the times of commencement and direction are:

Interval from HW Brest	*Direction*
–0615	NE
–0145	SW

2 Maximum rates at springs are: NE-going 2 kn; SW-going 3 kn.

Directions for Chenal de la Grise

(continued from 6.33)

6.215

1 **Initial position** about 2 miles S of Île du Pilier Light (6.29).

Leading marks:

Front mark: Basse du Martroger Light-beacon (N cardinal) (47°03′N, 2°17′W) (6.216).

Rear mark: Sainte-Marie Church (47°07′N, 2°08′W) (6.196).

2 By day the alignment (056½°) of these marks, or at night a white sector (055°–060°) of Basse du Martroger Light-beacon, leads ENE through Chenal de la Grise, passing (positions given from front mark):

3 SSE of Passe de la Grise Light-buoy (S cardinal) (2 miles WSW) marking the S extremity of the reef extending 1 mile SE from Île du Pilier, thence:

NNW of the beacon (W cardinal; 5 m high) (1½ miles SW) standing on the W side of Rocher Patou situated at the edge of the rocky flats extending 3½ cables WNW from Pointe de l'Herbaudière.

4 **Caution.** Farther ENE the deepest part of the channel lies on the NNW side of the 056½° alignment, which then cuts the 3 m depth contour surrounding the coastal shoal that extends 4 cables NW and 6 cables NNE from Pointe de l'Herbaudière.

Directions for L'Herbaudière north-western approach

(continued from 6.33)

6.216

1 **Initial position** 47°06′N, 2°21′W, about 3 miles N of the Île du Pilier Light (6.29).

Leading marks:

Front mark: Basse du Martroger Light-beacon (N cardinal; tower 16 m in height) (47°03′N, 2°17′W).

Rear mark: Noirmoutier-en-l'Île church (spire) (3¼ miles SE of front mark).

2 By day the alignment (145°) of these marks or at night a white sector (124°–153°) of Basse du Martroger Light-beacon, leads SE to the vicinity of the light-beacon, passing (positions given from front mark):

3 NE of rocky patches with depths of 2·8 m and 0·3 m over them lying respectively 5 cables NW and 3 cables NE of Grande Sécé Beacon-tower (N cardinal) (2 miles WNW) (6.33), thence:

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SW of Banc de la Blanche (1 mile N), and:
NE of a shoal (depth 1·7 m) (1 mile WNW).

Directions for L'Herbaudière north-eastern approach

(continued from 6.189)

6.217

1 **Initial position** approximately 47°05′N, 2°15′W.

Leading marks:

Front mark: Basse du Martroger Light-beacon (N cardinal) (47°03′N, 2°17′W) (6.216).

Rear mark: Radio mast (red and white; 40 m in height) (1·4 miles SSW of front mark).

2 By day the alignment (215°) of these marks, or at night a white sector (201°–240°) of Basse du Martroger Light-beacon, leads to the vicinity of the light-beacon, passing (positions given from front mark):

3 SE of Banc de la Blanche Buoy (N cardinal) (2 miles NNE) (6.189), thence:

NW of Basse des Pères (2 miles ENE), marked 2½ cables SE by a buoy (E cardinal), thence:

SE of the E end of Banc de la Blanche (1¼ miles NNE), thence:

4 NW of Roche des Pères (1 mile ENE) a reef whose N end is unmarked but whose S edge is marked by a beacon (white; masonry) (1 mile E) standing on a rock drying 3·5 m, thence:

SE of an unmarked isolated rock (6 cables N) with a depth of 1·1 m over it.

The channel then continues SW passing NW of Basse du Martroger Light-beacon (N cardinal) (6.23.9).

L'Herbaudière

Chart 2981 plan of L'Herbaudière

General information

6.218

1 **Description.** L'Herbaudière (47°01′N, 2°18′W), a fishing port and marina situated at the W end of the N coast of Île de Noirmoutier, is entered from N through a dredged channel.

Port authority: Capitainerie, Bureau du Port, BP 80, 85330 Noirmoutier; situated at the SE corner of the harbour.

Limiting conditions

6.219

1 **Controlling depth:** 0·3 m over bar 1½ cables N of harbour entrance.

Deepest berth: 3 m.

Tidal levels. See information in *Admiralty Tide Tables.* Mean spring range about 4·7 m; mean neap range about 2·3 m.

Arrival information

6.220

1 **Port radio.** See 1.41 for further details.

Harbour

6.221

1 **General layout.** The entrance facing NE is 30 m wide between the head of the W breakwater and the outer head of the E breakwater.

A central mole extending N from the shore separates the marina in the SE part of the harbour from the fishing port in the NW part.

Directions

6.222

1 **Initial position** 5 cables SW of Basse du Martroger Light-beacon (N cardinal) (6.216).

Leading lights:

Front: E breakwater Light-beacon (grey mast, red top; 3 m in height) (47°01′·7N, 2°17′·8W).

Rear: (grey mast 15 m in height) (310 m S of front mark).

2 The alignment (187½°) of these lights leads about 6 cables S, passing (positions given from W breakwater head):

Over a rock (depth 1·8 m), and;

W of an unmarked 0·3 m patch (5½ cables NNE), thence:

3 W of an unmarked rock (depth 0·3 m) (4½ cables NNE), thence:

W of the W end (2½ cables NNE) of La Potée de Beurre, a reef that dries in places, and;

Close E of a light-buoy (starboard hand) (2 cables N) thence:

Over a bar (1½ cables N), see 6.219 for depth.

4 A dredged channel 320 m long, 25 m wide and 1·3 m deep then continues S to the harbour entrance and is marked by:

A pair of light buoys (lateral) (1 cable N of W breakwater head), thence:

Beacon (port hand) standing close N of the outer head of the E breakwater.

5 **Cautions:**

The following beacons (positions given from W breakwater head) stand ¼ cable E and ¾ cable W of the dredged channel respectively: beacon (port hand) (1 cable NNE); beacon (starboard hand) (1 cable NW).

Tidal streams set strongly across the entrance channel; see 6.214 for details of tidal streams in Chenal de la Grise.

Vessels coming out through the harbour entrance are hidden by the W breakwater.

6.223

1 **Useful marks:**

Jetée Ouest Light (white metal column and hut, green top; 7 m in height) standing on the head of the W breakwater.

Light-beacon (red tripod mast; 6 m in height) standing on the outer head of the E breakwater.

Light-beacon (red box) standing on the inner head of the E breakwater.

Basins and berths

6.224

1 **Marina:** dredged to depths from 2 to 3 m; 500 berths, 50 for visitors, at pontoons; on arrival visitors berth at pontoon extending NE from the head of the central mole.

Fishing port: depths from 2 to 3 m except within 10 m of W breakwater and central mole, and in the S end of the basin, where they vary from 0·5 to drying 2 m; pontoons extend SE from W breakwater; landing slip W side central mole.

Port services

6.225

1 **Repairs** of all kinds carried out; careening slip.

Other facilities: two 20-tonne cranes; yacht club; custom house at Noirmoutier-en-l'Île (5 km ESE) (6.237).

Supplies: fuel; fresh water; provisions.

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Bois de la Chaise

Chart 2981

General information

6.226

1 Bois de la Chaise anchorages in the vicinity of Pointe des Dames (47°01′N, 2°13′W) are frequented in summer by small craft and fishing boats.

Tidal streams. The time of commencement and direction are:

Interval from HW Brest	*Direction*
–0515	SE
–0045	NW

The maximum rate at springs is 2 kn.

Directions

6.227

1 **Initial position** 3 miles N of Pointe des Dames.

To approach the anchorages. A white sector (165°–191°) of Pointe des Dames Light (white square tower 19 m in height) (47°01′N, 2°13′W), whose top only is visible above the surrounding trees, leads 2 miles S, in a least charted depth of 2·6 m, passing (positions given from the light):

2 E of Basse des Pères Buoy (E cardinal) (2¾ miles NNW) (6.217), and:
W of Pierre Moine Light-beacon (isolated danger) (2¾ miles NNE) (6.188), thence:
E of Basse de la Kacouy (1½ miles NNW) which lies 2 cables E of La Teignouse, a rock drying 2·1 m marked by a beacon (starboard hand), thence:
E of an unmarked 0·5 m patch (1¼ miles NNW), and:
W of a 1·4 m depth on Banc de la Chaise (1 mile NNE).

3 The route then leads SE to the vicinity of La Chaise Buoy (safe water) (7 cables NE) in Rade du Bois de la Chaise.

6.228

1 **Clearing marks:**
Front mark: Le Cobe (47°01′·2N, 2°13′·5W) a rock 7 m high.
Rear mark: Pointe des Dames Light (5 cables SSE of front mark) (6.227).

The alignment (160°) of the highest part of Le Cobe with the rear mark clears close E of a charted 0·5 m patch (6 cables NNW of front mark) (6.227).

6.229

1 **Clearing marks:**
Front mark: Light-beacon (white column, red top; 7 m in height) (46°59′N, 2°13′W) standing on the head of Jetée des Îleux (6.233).
Rear mark: E-most of a group of four disused windmills (1¼ miles S of front mark;

The alignment (184°) of these marks clears close W of a charted depth of 1·4 m (1 mile NNE of Pointe des Dames Light) near the W end of the shoalest part of Banc de la Chaise.

Anchorages

6.230

1 **Rade du Bois de la Chaise** (about 8 cables NE of Pointe des Dames): anchorage in depths from 4 to 7 m, sand and mud, good holding.

Small craft: numerous moorings, some for visitors, are laid off the beaches in the vicinity of Pointe des Dames from June to September.

Pier extending ESE from Pointe des Dames; pierhead berth reserved for ferries from Pornic (6.212); landing steps half-way along pier.

Noirmoutier-en-l'Île and approaches

Chart 2981 plan of Noirmoutier-en-l'île

General information

6.231

1 **Description.** Noirmoutier-en-l'Île Harbour (47°00′N, 2°14′W), used mainly by fishing vessels,

The entrance is approached from N or from NE from the vicinity of Rade du Bois de la Chaise (6.230).

Limiting conditions: maximum draught 2·5 m at springs, 1·5 m at neaps.

Local knowledge is necessary to keep in the channel where it crosses the drying sand-bar off the entrance.

6.232

1 **Tidal streams** off the entrance to the channel set:

Interval from HW Brest	*Remarks*
–0330	S-going stream begins
–0230	Attains maximum rate; 3 kn at springs, 1½ kn at neaps
–0100	Slack water
–0030	N-going stream begins (maximum spring rate 2 kn).

Directions

6.233

1 **Northern approach.** Initial position: near La Chaise Buoy (safe water) (7 cables NE of Pointe des Dames) (6.227).

2 The line of bearing 191° of the W-most of a group of four disused windmills (47°58′·0N, 2°13′·4W), just open E of the head of Jetée des Ileux (1¼ miles N), has been reported (1983) to lead S in a least depth of drying 1 m to a position close to the head of Jetée des Ileux, passing:
W of the W edge of a mussel bed (8 cables NNE of Jetée des Ileux head), thence:
Close E of the sand-bar extending SE from the N entrance point of the canal.

6.234

1 **North-eastern approach.** Initial position about 5 cables NW of La Vendette Beacon (port hand) (47°00′·0N, 2°10′·3W) which marks the NW corner of La Vendette, an extensive reef.

The deepest channel leads SSW, passing (positions given from La Vendette Beacon):

2 WNW of an isolated rock (drying 3·1 m) (3 cables WNW), thence:
WNW of the beacon (port hand) (8 cables SW) marking La Chausse (small reef drying 3·1 m).

3 The channel then narrows and leads in a gradual curve to starboard passing S of an extensive drying sandbank and close N of the following port hand beacons (positions given from Jetée des Ileux head):
Goemonhour (7 cables E).
Atelier (3 cables SE).
Mariolle (1 cable ESE).

Caution: from the vicinity of Atelier Beacon the channel leads over a drying bar (6.231).

6.235

1 **Entrance.** From a position close N of the head of Jetée des Ileux (6.231), the channel follows the line of the breakwater and of the pier extending NW from a position 1½ cables from the breakwater head. Thence the channel

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marked by beacons (port hand) on its S side, leads 9 cables WNW alongside Digue Jacobson, the embankment on the N shore, to the entrance of Étier du Moulin. The deepest water is reported to lie on the S side of the channel which dries 3 m at its inner end.

Berths

6.236

1 **Quai Gassard,** 320 m long, lines the N side of Étier du Moulin which has a maximum width of 20 m and dries from 1·5 to 2·5 m, bottom soft mud.

Port services

6.237

1 **Repairs** of all kinds to small craft carried out.
Other facilities: careening slip; custom house.
Supplies: fuel; fresh water; provisions.

BAIE DE BOURGNEUF-EASTERN PART

General information

Chart 2981

Description

6.238

1 **Baie de Bourgneuf,** E of a line drawn from the entrance to Pornic (47°07′N, 2°06′W) (6.204) to Noirmoutier-en-l'Île (8 miles SSW) (6.231), is encumbered with shoals and reefs; most of the E corner and S part of the bay consists of tidal flats.

2 **Three waterways** meet in position 47°02′N, 2°05′W, namely:

Chenal de la Pierre (6.243) which leads 4 miles SE, from the NE corner of the principal channel through the W part of the bay (6.189), to the meeting point.

Chenal du Centre (6.244) which leads 4 miles ESE to the meeting point from the SE corner of the same principal channel.

Le Fain (6.245) which leads 3 miles S from the meeting point.

3 **Approach routes** to several small harbours on the E shore of the bay lead off from Chenal de la Pierre and Le Fain; they all dry for some distance offshore.

Caution. Much of the area outside these waterways and approach routes is devoted to shell-fish culture and obstructed by wooden posts and iron frames.

Topography

6.239

1 The shores of the E part of Baie de Bourgneuf are flat and low everywhere except between Pornic and Les Moutiers (5 miles farther SE).

Dumping ground

6.240

1 Explosives are dumped in the E part of Baie de Bourgneuf in 47°04′N, 2°08′W.

Rescue

6.241

1 **Lifeboat** (1.77) based at Pornic (47°06′·6N, 2°06′·8W) (6.186).

Principal marks

6.242

1 **Landmarks:**

Conspicuous water tower (47°06′·6N, 2°04′·9W) (6.196) at Pornic.

Pierre Moine Light-beacon (isolated danger) (47°03′N, 2°12′W) (6.188).

Barbâtre church (spire) (46°57′N, 2°11′W).

2 **Major light:**

Pointe des Dames Light (47°01′N, 2°13′W) (6.227).

Directions

(continued from 6.189 or 6.192)

Chart 2981

Chenal de la Pierre

6.243

1 **Initial position** 47°05′N, 2°09′W, approximately 6 cables SW of Notre-Dame Lighted beacon-tower (W cardinal) (6.195).

Chenal de la Pierre leads 4 miles SE, passing (positions given from Notre-Dame Light-beacon):

2 SW of the buoy (isolated danger) moored 1 cable SW of Pierre du Chenal (1 mile SE), a drying rock, thence:

NE of an extensive shoal with depths of less than 5 m and a least charted depth of 1·3 m (2¼ miles S), and:

SW of La Mauvaise (2¼ miles SE), a reef.

3 **Useful mark:**

Le Caillou Beacon-tower (white) (1¼ miles ESE).

Chenal du Centre

6.244

1 **Initial position** about 1 mile E of Pierre Moine Light-beacon (isolated danger) (6.188).

Chenal du Centre, which is unmarked, leads 4 miles ESE, passing (positions given from Pierre Moine Light-beacon):

SSW of the extensive shoal with a least charted depth of 1·3 m (2¾ miles E), and:

NNE of Banc de Bourgneuf which has a least charted depth of 0·2 m (4¾ miles ESE).

Le Fain

6.245

1 **Initial position** 47°02′N, 2°05′W, at the junction of Chenal de la Pierre and Chenal du Centre approximately 3 miles NW of Étier des Brochets Light (6.255).

Le Fain marked channel leads 3 miles S, passing (positions given from Étier des Brochets Light (47°00′N, 2°02′W)):

2 E of a rock (depth 0·9 m) (2½ miles WNW) lying at the SE end of Banc de Bourgneuf, thence:

W of the W edge of Roches de Bouin, an extensive drying reef lying up to 1½ miles offshore, and:

E of Le Goéland (2½ miles W), a rock marked by a beacon (starboard hand), thence:

3 Close E of the buoy (starboard hand) (2 miles W) marking a 0·3 m patch on the NE edge of a middle ground which dries (2¼ miles WSW), thence:

W of La Perche (rock drying 3 m) (2 miles WSW) marked by a beacon (port hand).

Thence the waterway becomes very shallow and is unmarked.

La Bernerie-en-Retz

General information

6.246

1 **Description.** La Bernerie-en-Retz harbour (47°04′·8N, 2°02′·3W), used by small craft and fishing boats, is sheltered from W by a breakwater extending 200 m S from the shore. It dries 2·8 to 3·8 m.

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Directions

6.247

1 **Initial position** 47°03′N, 2°03′W.

Leading marks:

Front mark: Beacon (port hand) (47°04′·4N, 2°02′·4W).

Rear mark: Church (spire) (6 cables NNE of front mark).

The alignment (022°) of these marks leads from Chenal de la Pierre (6.243) NNE to a position 2 cables SSW of the front mark, passing (positions given from front mark):

2 WNW of Les Bœufs Ouest (1¼ miles SSW), a rock dries 0·3, thence:

ESE of Champezeau (1 mile SW) and of Champezière (8 cables WSW), isolated drying rocks, and:

WNW of Les Barillets (5 cables SSW), a drying reef.

6.248

1 **Leading marks:**

Front mark: Large warehouse (uncharted; about 1¼ cables ENE of breakwater head light).

Rear mark: Church spire; same rear mark as previous alignment (6.247).

The alignment (reported to be 024°) of these marks then leads through the entrance channel, which has been reported (1983) to dry from 0 m to 2 m near its inner end, passing (positions given from breakwater head light):

2 E of Les Grands Rochers marked by the beacon (port hand) (4 cables SSW) used as the front mark of the previous alignment (6.247), and:

W of Jaulin, a reef whose W side is marked by two beacons (starboard hand) (5 cables S and 2 cables SSE).

The channel then leads N into harbour.

3 **Useful mark:**

La Bernerie-en-Retz Light (white post, red top; 2 m in height) standing on the breakwater head.

Port services

6.249

1 **Facilities:** careening slip at root of breakwater; yacht club.

Supplies: fresh water.

Le Collet

General information

6.250

1 **Description.** Le Collet Harbour (47°01′·7N, 1°58′·6W), situated at the entrance to Étier du Sud, is used by local oyster boats. The entrance channel dries 1·7 m.

Directions

6.251

1 **Initial position** 47°02′N, 2°04′W.

Leading lights:

Front light (white square daymark green stripe, on white pylon, green top; 8 m in height) (47°01′·4N, 1°59′·1W).

Rear light (green square daymark white stripe, on similar structure; 15 m in height) (550 m ESE of front mark).

2 The alignment (118½°) of these lights leads from Chenal de la Pierre (6.243) to the entrance of the marked channel, passing (positions given from front light):

SSW of Les Bœufs (3 miles NW), two rocks awash, thence:

Close NNE of Le Rochas (2½ miles WNW), a drying rock, thence:

3 SSW of La Nor (2 miles NW), a rock drying 2·5 m marked by a beacon (port hand), thence:

NNE of Le Fiol Beacon (starboard hand) (1½ miles WNW), thence:

Between Baranger Beacon (port hand) (9 cables WNW) and Mouillepied Beacon (starboard hand) (1 cable farther S).

4 The channel then leads 1 mile E to the harbour entrance and is marked on its S side by numerous perches and on its N side by a beacon (port hand) (4 cables N).

Useful mark:

Le Collet Light (white hut, red top; 6 m in height) (4 cables NNE of front leading light) on N side of harbour entrance.

Port des Brochets

General information

6.252

1 **Description.** Port des Brochets (47°00′N, 2°02′W), a small drying harbour at the entrance to Étier des Brochets, provides 1000 m of berthing space used mainly by oyster boats.

Limiting conditions: maximum size of vessel handled; length 12 m; beam 4 m; draught 3 m at springs, 1 m at neaps.

Directions

6.253

1 **Approach, outer leg.** Initial position: 47°00′·5N, 2°04′·8W, in Le Fain (6.245).

The line of bearing 121° of Bouin church (46°58′·6N, 1°59′·8W) leads 1 mile ESE in a passage through Roches de Bouin (6.245) passing:

SSW of Le Ringeau Beacon (port hand) (3 miles WNW of Bouin church), thence:

NNE of Le Petit Ogé Beacon (starboard hand) (2½ cables S of Le Ringeau Beacon).

6.254

1 **Approach,** inner leg. The line of bearing 057° of Bourgneuf-en-Retz church (47°02′·6N, 1°57′·1W) just open NNW of Pointe des Polou (7 cables N of Port des Brochets) then leads 6 cables ENE, in a least charted depth of drying 3·8 m, to a position about 1½ cables WNW of the beacon (port hand) (5 cables WNW of Port des Brochets) marking the outer end of the entrance channel.

6.255

1 **Entrance channel.** A white sector (116½°–119½°) of Étier des Brochets Light (green tower, white band; 7 m in height), situated on the S side of the harbour, then leads into the entrance channel which is marked on both sides by numerous posts and has been reported (1983) to dry 2·5 m at its inner end.

Port services

6.256

1 **Supplies:** fuel.

Port des Champs

6.257

1 **General information.** Port des Champs (46°58′·2N, 2°02′·2W), a small drying harbour at the entrance to Étier des Champs, provides 500 m of berthing space used mainly by oyster boats.

Limiting conditions: maximum size of vessel handled; length 10 m; beam 4 m; draught 4 m at springs, 2 m at neaps.

Directions. The approach from W is marked by a beacon (starboard hand) and numerous posts on its S side.

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Port de l'Époids

General information

6.258

1 **Description.** Port de l'Époids (47°56′·4N, 2°04′·4W), a small harbour at the mouth of Étier du Dain, provides 530 m of berthing space used mainly by oyster boats. It is approached from the S end of Le Fain and entered W of Bec de l'Époids.

Limiting conditions: maximum size of vessel handled; length 25 m; beam 4 m; draught 5 m at springs, 3·5 m at neaps.

Directions

6.259

1 **Initial position** approximately 46°58′·0N, 2°05′·3W.

Leading marks:

Front mark: Beacon (port hand) (46°57′·0N, 2°04′·7W).

Rear mark: Bec de l'Époids Direction Light (white square tower, red top; 7 m in height) (5 cables SSE of front mark).

2 By day the alignment (158°) of these marks, or at night a white sector (157½°–158½°) of Bec de l'Époids Direction Light, leads SSE from Le Fain (6.245) to the outer end of the entrance channel, marked by the front mark.

Thence the channel has been reported (1983) to be marked by posts on its ENE side.

Port services

6.260

1 **Repairs** to small craft engines.

Supplies: fuel.

Route du Gois

6.261

1 Route du Gois, a causeway drying 3 m connecting the SE coast of Île de Noirmoutier (46°56′N, 2°09′W) with the mainland 2 miles ESE, was formerly the principal means of access to the island before the construction of Pont de Fromentine (7.28). The causeway is marked by:

2 A light (red building, 4 m in height) at the E end and a light (white tripod, green lantern; 7 m in height) at the W end.

Two light-beacons (grey pyramid structures, 8 m in height) situated at the elbows 6 cables from the E end and 5 cables from the W end of the causeway.

Five beacons.

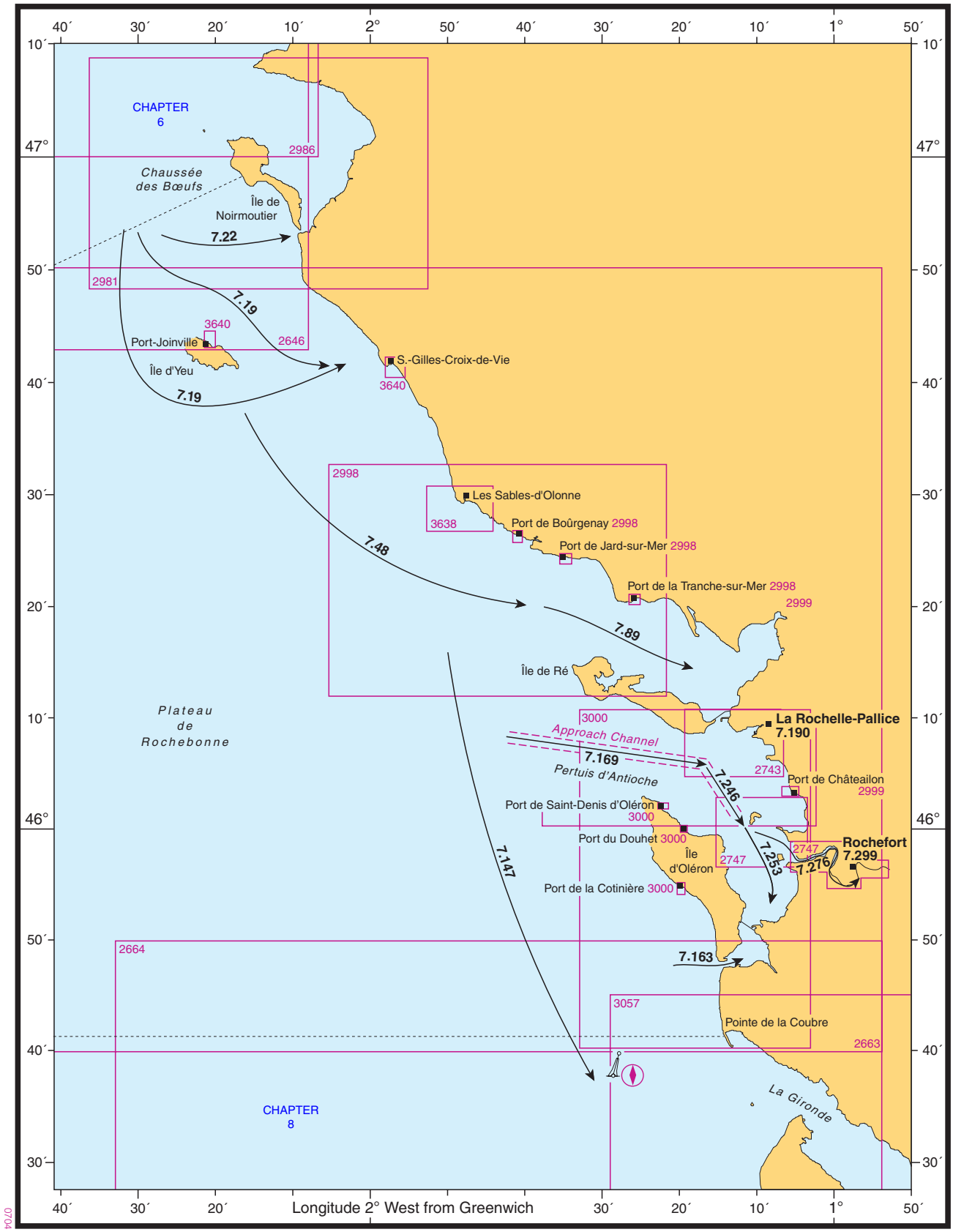
3 The two light-beacons and the beacon standing mid-way between them are fitted with refuge platforms for travellers overtaken by the tide.

6.262

1 A boat passage over the causeway at the E elbow (47°55′·8N, 2°06′·8W) is marked by a beacon (W cardinal) standing close SW of the light-beacon.

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Chapter 7 - Chausée des Bœufs to Pointe de la Coubre



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CHAPTER 7

CHAUSSÉE DES BŒUFS TO POINTE DE LA COUBRE

GENERAL INFORMATION

Chart 20

Scope of the chapter

7.1

1 This chapter covers the coastal and inshore waters between the estuaries of La Loire and La Gironde from Chaussée des Bœufs (46°57′N, 2°23′W), the reefs extending W from the N part of Île de Noirmoutier, to Pointe de la Coubre (45°42′N, 1°14′W) about 85 miles SSE. It includes the S-most part of Baie de Bourgneuf that lies between the S end of Île de Noirmoutier and the mainland.

Topography

7.2

1 The coastline throughout the area is low-lying and lacks distinctive features. The off-lying Île d'Yeu (46°42′N, 2°20′W) (7.10) is a convenient landfall to make on approaching La Loire from S or if bound SE for La Gironde or for ports farther N.

2 The mainland in the SE part of the area is indented by Pertuis Breton (7.89) and Pertuis d'Antioche (7.169) lying N and S, respectively, of Île de Ré (46°12′N, 1°25′W). Pertuis de Maumusson (7.163), the passage between the S end of Île d'Oléron (45°48′N, 1°14′W) and the mainland, is connected E of the island with the inner end of Pertuis d'Antioche by Coureau d'Oléron (7.317).

Harbours

7.3

1 La Rochelle-Pallice (46°09′N, 1°14′W) (7.190) is the only major commercial port in the area. Pertuis d'Antioche provides the only approach that can be used by the larger vessels visiting the port. Minor commercial ports in the area are Les Sables-d'Olonne (46°30′N, 1°47′W), (7.65) and the river ports of Rochefort (45°56′N, 0°58′W) (7.299) and Tonnay-Charente (45°56′N, 0°53′W) (7.310) on La Charente, which flows into the SE corner of Pertuis-d'Antioche.

Outlying danger

7.4

1 **Plateau de Rochebonne** (46°10′N, 2°26′W) and its associated IMO-adopted area to be avoided by vessels carrying hydrocarbons are described at 2.18 and 2.15 respectively.

CHAUSSÉE DES BŒUFS TO POINTE DES BALEINES INCLUDING ÎLE D'YEU AND PERTUIS BRETON

GENERAL INFORMATION

Chart 20

Description

7.5

1 Île d'Yeu (46°42′N, 2°20′W) (7.10) is the most prominent feature in the coastal passage from Chaussée des Bœufs (14 miles N) to Pointe des Baleines (46°17′N, 1°36′W) off the NW extremity of Île de Ré and the SW entrance point of Pertuis Breton (7.89). The passage between Île d'Yeu and the mainland is shallow and suitable only for small vessels.

2 The mainland coast, sometimes called Côte de la Vendée after the Département that it borders, is generally clear of dangers outside a distance of 1½ miles from the shore except NE and E of Île d'Yeu and in the vicinity of Les Sables-d'Olonne (46°30′N, 1°47′W).

7.6

1 **Caution.** Côte de la Vendée affords no shelter in bad weather from SE through SW to NW and in these conditions the entrances to Saint-Gilles-Croix-de-Vie (46°42′N, 1°56′W) (7.56) and Les Sables-d'Olonne (7.65) are obstructed by breakers. There is no shelter in the vicinity of Île d'Yeu during NW gales, but there is a relatively calm area, in which anchorage is prohibited (7.12), about 2 miles NE of Pointe des Corbeaux, the SE point of the island.

Fishing

7.7

1 Drift-net fishing is carried out in the vicinity of Île d'Yeu. In summer fishing activity is intense in the area from Saint-Gilles-Croix-de-Vie to Les Sables-d'Olonne.

Pilotage

7.8

1 Les Sables-d'Olonne Pilots (7.68) are qualified to take vessels to Île d'Yeu, Saint-Gilles-Croix-de-Vie roads and the limits of La Rochelle-Pallice Pilotage District.

CHAUSSÉE DES BŒUFS TO POINTE DE GROSSE TERRE INCLUDING ÎLE D'YEU

General information

Charts 2981, 2646, 2663

Routes

7.9

1 In the passage from the vicinity of Les Bœufs Light-buoy (W cardinal) (46°55′N, 2°28′W) (6.20) to that of Pointe de Grosse Terre (46°42′N, 1°58′W), about 25 miles SE, the coastal route passes between Île d'Yeu (46°42′N, 2°20′W) and the mainland NE, which are joined by Pont d'Yeu, a bank of sand and rock whose NE part

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dries in places. The offshore route passes SW of Île d'Yeu which is steep-to on that side.

Topography

7.10

1 **Île d'Yeu** rises to an elevation of 30 m along its SW side where the coast is very rocky and indented with little bays. The SE extremity of the island is flat and low.

Île de Noirmoutier (46°58′N, 2°15′W) (6.8): the SW coast is low-lying, sandy and bordered by low sand dunes wooded in places. The S extremity of the island is connected to the mainland by Pont de Noirmoutier (7.22).

2 The mainland coast from Pointe de Notre-Dame-de-Monts (46°53′N, 2°09′W) to the vicinity of Pointe de Grosse Terre (14 miles SE) (7.49) consists of a sandy beach backed by wooded sand dunes of uniform elevation, amongst which numerous villas and blocks of flats are visible especially in the vicinity of Saint-Jean-de-Monts midway between the two points.

Depths

7.11

1 **Caution.** Charted depths in the area N of Île d'Yeu are from lead line surveys made between 1819 and 1865.

2 **Coastal route.** The channel NE of Île d'Yeu is 4 miles wide between 5 m depth contours at its narrowest place where it crosses Pont d'Yeu. The deepest part of the channel is 3 cables wide between 7 m depth contours shown on the French chart, but local knowledge is required to avoid shallower depths.

Prohibited anchorage

7.12

1 Anchoring, dredging and trawling are prohibited, due to a submarine water pipeline and submarine cables and power cables, in the area shown on the chart extending NE from the SE part of Île d'Yeu to the mainland. The landing place of these cables on the mainland (46°48′N, 2°07′W) is marked by the alignment (040°) of beacons:

Front (red triangular topmark on yellow support).
Rear (square topmark on yellow support).

Dumping ground

7.13

1 Explosives are dumped E of the SE part of île d'Yeu in 46°42′N, 2°13′W.

Rescue

7.14

1 **Coastguard station** (1.75): Saint-Sauveur (46°42′N, 2°20′W) (7.18) near the S coast of Île d'Yeu.

Lifeboat station (1.77): Port-Joinville (46°44′N, 2°21′W) (7.31).

Tidal streams

7.15

1 The tidal streams are rotary clockwise; between about 5 hours and 1 hour before HW Brest they set between N and E towards the coastal shoals of the mainland. Offshore their rate seldom exceeds 1½ kn. Strong winds have a very great effect on both the direction and rate of the resultant flow. For further details see *Admiralty Tidal Stream Atlas: France West Coast* and information on the charts.

7.16

1 Inshore in the vicinity of the NW and SE ends of Île d'Yeu the times of commencement, direction and rate of the tidal streams are:

Interval from HW Brest	*Direction*
At Les Chiens Perrins (46°44′N, 2°25′W)	
–0545	ENE
–0015	WSW
Maximum rate 3 kn	
Off Pointe des Corbeaux (46°41′N, 2°17′W)	
–0545	E
–0015	W
Maximum rate 2 kn.	

2 It has been reported that with a SE wind the rate of the WSW and W-going streams reaches 4 kn.

The tidal streams setting around the above two ends of Île d'Yeu divide and meet, on the SW coast in the bay E of Pointe du Châtelet (46°42′N, 2°23′W), on the NE coast in the vicinity of Pointe Gauthier (46°43′N, 2°19′W).

Principal marks

7.17

1 **Landmarks** (positions given from the first listed in each group):

On Île d'Yeu

White water tower (50 m in height) (46°43′N, 2°21′W) at Port-Joinville, the most conspicuous mark on the island.

2 Île d'Yeu Main Lighthouse (white square tower, green lantern; 38 m in height) (1 mile WSW), formerly named Petite Foule Lighthouse.

Pointe des Corbeaux Lighthouse (white square tower, red top; 19 m in height) (3 miles ESE).

3 On Île de Noirmoutier:

Conspicuous water tower (47°01′N, 2°16′W) (6.188) standing 1½ miles WNW of Noirmoutier-en-l'Île church.

Conspicuous water tower (7½ miles SSE) at La Fosse standing 2½ miles SSE of Barbâtre church (6.242).

4 On Côte de la Vendée, the mainland coast:

Conspicuous water tower of La Grande-Croix (46°50′·4N, 2°05′·9W).

Conspicuous water tower of Saint-Jean-de-Monts (46°47′N, 2°03′W).

5 **Major lights:**

Île du Pilier Light (47°03′N, 2°21′W) (6.29).

Pont de Noirmoutier Light (46°53′·5N, 2°09′·0W) (7.28).

Île d'Yeu Main Light—as above.

Pointe des Corbeaux Light—as above.

Pointe de Grosse Terre Light (46°42′N, 1°58′W) (7.53).

Directions

(continued from 6.22)

Offshore route

7.18

1 **Initial position:** SW of Les Bœufs Light-buoy (W cardinal) (46°55′N, 2°28′W) (6.20).

The offshore route leads about 10 miles S, passing:

W of two dangerous wrecks (46°52′N, 2°28′W and 46°46′N, 2°31′W respectively), thence:

W of Les Chiens Perrins (46°44′N, 2°25′W), a group of rocks 1 m high marked by Les Chiens Perrins Light-beacon (W cardinal; truncated conical tower 19 m in height), whose outer edge lies nearly 6 cables W and NW of Pointe du But, the NW point of Île d'Yeu.

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2 A wreck (46°40′·5N, 2°25′·0W) with a least depth of 18 m over it lies about 3½ miles S of the point.

Two light-buoys (special) are moored about 3 and 3½ miles SSE of the point.

Thence the route continues SE, passing:

3 SW of Île d'Yeu: the 40 m depth contour passes 1½ miles or more SW of all charted dangers off the SW coast of the island.

Caution: at times the tidal stream sets strongly onto Les Chiens Perrins, see 7.16 for further details.

4 **Useful marks** on Île d'Yeu:

La Meule Light (46°42′N, 2°21′W) (7.42).

Saint-Sauveur Coastguard Station (white tower) (6 cables E) with a white house with a red roof adjoining, and a radio mast close N.

Coastal route

7.19

1 **Initial position:** vicinity of Les Bœufs Light-buoy (W cardinal) (46°55′N, 2°28′W) (6.20).

The route passing between Île d'Yeu and the mainland leads about 12 miles SE to the passage across Pont d'Yeu (7.11), passing (positions given from Île d'Yeu Main Light):

NE of a dangerous wreck (9½ miles NNW), thence:

SW of L'Aigle Buoy (S cardinal) moored 1 mile SW of Basse de l'Aigle (9 miles NNE), thence:

NE of Mayence Buoy (N cardinal) (3 miles ESE) (7.36) marking Basse Mayence.

2 **Useful marks:**

Pointe de Devin Light (46°59′N, 2°17′W) (6.22).

Pointe des Dames Light (47°01′N, 2°13′W) (6.227).

Pointe de Notre-Dame-de-Monts Light (46°53′N, 2°08′W) (7.27).

7.20

1 **Crossing Pont d'Yeu** the deepest water lies between 1½ and 2 miles NE of the coast of Île d'Yeu and, where it crosses the shallowest part, in a white sector (279°–285°) of Port-Joinville Jetée Nord-Ouest Light (46°43′·8N, 2°20′·7W) (7.38), see 7.11 for depths. The channel between the 5 m depth contours passes (positions given from Pointe des Corbeaux Light):

2 SW of the buoy (S cardinal) (5 miles NNE) marking the SW edge of the 5 m depth contour enclosing Récif du Pont d'Yeu, the reef extending 5 miles SW from the mainland coast in the vicinity of Notre-Dame-de-Monts (10 miles NE), and:

3 NE of Basse de la Conche, the sandbank extending 9 cables NE from the coast of Île d'Yeu (3 cables N). A heavy sea occurs over the sandbank when SW winds are opposed to the tidal stream. Thence:

Either side of a wreck with a depth of 5·6 m over it (2½ miles NE). Cables Île d'Yeu Light-buoy (special) (7.12) is moored 3 cables E of the wreck.

4 **Useful mark:**

Les Corbeaux Beacon-tower (E cardinal; 6 m high) (3 cables ENE of Les Corbeaux Light) standing on a rock that dries 4 m.

(Directions continue at 7.55)

Small craft

Chart 2981

Morin

7.21

1 **General information.** Morin harbour and anchorage (46°58′·6N, 2°17′·7W) on the W side of Île de Noirmoutier 1 mile S of Pointe de Devin is used regularly by fishing boats and in summer by small craft.

Directions. Initial position 46°56′N, 2°20′W, about 2¼ miles ESE of Le Bavard Light-buoy (S cardinal) (6.21).

The white sector (028°–035°) of Pointe de Devin Light (46°59′N, 2°17′W) (6.22) leads NNE towards the anchorage, passing (positions given from the light):

2 ESE of the light-buoy (port hand) moored about 1 cable SE of the stranded wreck of the vessel *Giglio* (2 miles SW) which is covered by the red sector, thence:

WNW of the buoy (starboard hand) (1½ miles SSW) marking the W-most of Les Trois-Noures, a group of three rocks drying from 2·0 to 2·3 m, lying at the W end of Les Peignes, a reef, all of which are covered by the green sector.

3 Once clear of Les Peignes course can be altered NE towards the anchorage or continued to the harbour, passing:

Between a buoy (starboard hand) and a light-buoy (port hand).

The track then turns E before rounding the breakwater head, marked by a light (red triangle on red structure), and entering the harbour.

4 **Anchorage** can be obtained in a position 6 cables S of Pointe de Devin Light in 1 m of water, bottom sand.

Berths: at the entrance to the harbour two mooring buoys, V1 and V2, for visiting craft; moorings for 180 boats, without keels, within the harbour; berths for 21 boats on pontoons near the root of the breakwater.

Repairs: lifting cradle**.**

Other facilities: water; electricity.

Fromentine and approaches

General information

7.22

1 **Description.** Fromentine (46°53′N, 2°08′W), a small holiday resort and the terminus for the ferry service to Île d'Yeu (7.40), is situated on the mainland at the S end of Baie de Bourgneuf (6.179). The anchorage is used by fishing boats and small craft.

2 Fromentine is approached from W by a buoyed channel that crosses the bar. It is entered through Goulet de Fromentine, the narrow channel between Pointe de la Fosse, the S point of Île de Noirmoutier, and Pointe de Notre-Dame-de-Monts on the mainland opposite, which is spanned by Pont de Noirmoutier, a conspicuous cantilever road bridge.

The N approach from Baie de Bourgneuf is obstructed by Route du Gois, see 6.261 for further details.

Limiting conditions

7.23

1 **Depths.** The sand-bar extending 1½ miles W of Goulet de Fromentine is unstable and contains several drying rocky patches. The channel through the bar dries about 1 m but it subject to major changes. There is a depth of 2·5 m in the anchorage off Fromentine (7.29).

Vertical clearance beneath Pont de Noirmoutier: 24 m.

Tidal levels. See information in *Admiralty Tide Tables*. Mean spring range about 5·3 m; mean neap range about 3·5 m.

Arrival information

7.24

1 **Local knowledge** is necessary to enter Goulet de Fromentine, especially in bad weather; it is essential at night.

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It has been reported that the best time to enter is 1 hour before HW at Saint-Nazaire and that entry should not be attempted in fresh onshore winds or if a swell is breaking on the bar.

7.25

1 **Prohibited anchorage.** Anchoring, dredging and trawling are prohibited, due to submarine cables, in Goulet de Fromentine in an area whose outer and inner limits, orientated SE/NW, lie about 3 cables apart and pass respectively:

½ cable SW of the centre span of Pont de Noirmoutier.

1 cable SW of the ferry terminus pier at Fromentine and ½ cable NE of the pier on the E side of Pointe de la Fosse.

Tidal streams

7.26

1 **Approach.** In a position 6 miles W of Goulet de Fromentine the tidal stream is rotary clockwise and sets:

Interval from HW Brest	*Direction*	*Spring rate (kn)*
–0500 to –0400	NE	¾
–0300 to +0200	Changing from E to SW	Decreasing to ¼ at –0130 then increasing to 1½
+0300 to +0500	WSW	1½ until +0400; ¾ at +0500

2 **Goulet de Fromentine.** In the narrows off Pointe de la Fosse the tidal streams are very strong, maximum spring rate: 4 kn in-going; 5½ kn out-going.

Their times of commencement and direction are:

Interval from HW Brest	*Direction*
–0530	ENE
–0200	WSW

The direction and rate of the tidal stream varies considerably between points not far apart in Goulet de Fromentine.

Directions

7.27

1 **Initial position** 46°52′N, 2°28′W, approximately 3 miles S of Les Bœufs Light-buoy (W cardinal) (6.20).

Approaching Goulet de Fromentine, a white sector (073°–094°) of Pointe de Notre-Dame-de-Monts Light (white tower, black top; 10 m in height) (46°53′·3N, 3°08′·5W), which is difficult to distinguish by day, leads 11 miles E to the vicinity of Fromentine Light-buoy (safe water) (2 miles W of the light), passing (positions given from the light):

2 S of Le Bavard Light-buoy (S cardinal) (10 miles WNW) (6.21), which is covered by a green sector, and:

N of Basse de l'Aigle (6 miles WSW) (7.19), which is covered by a red sector, thence:

S of several dangerous unmarked rocks lying up to 2½ miles S and SW of Pointe de la Loire (6½ miles NW), the SW point of Île de Noirmoutier.

7.28

1 The entrance channel then leads 1½ miles ENE across the bar. It is marked by buoys (lateral marks) that are moved to conform with the major changes in the channel that occur at intervals of several years.

A scoured channel then leads E from a position close S of Tourelle Milieu Light-beacon (red square topmark on red tower, 12 m in height) (46°53′·7N, 2°09′·5W) to Fromentine ferry terminus (8 cables E), passing (positions given from Tourelle Milieu):

2 N of Boisvinet Beacon (white masonry tower) (1½ cables S) marking Boisvinet, a group of rocks, thence:

3 Beneath the central span of Pont de Noirmoutier (4 cables E) where the channel is 85 m wide and marked on both the E and W sides of the bridge by: a light exhibited throughout 24 hours from the middle of the span; a red rectangle and a green triangle painted on the span on the N and S sides, respectively, of the channel; beacons (lateral marks) standing 20 m E and W of the piers of the bridge on each side of the central span, thence:

4 S of a light-buoy (port hand) (6 cables E) marking two drying wrecks.

Fromentine

7.29

1 **Anchorage** is available in Fosse de Fromentine in an area radius 150 m, depth given at 7.23, that lies: NE of the prohibited anchorage area (7.25); ESE of the pier on Pointe de la Fosse; NNW of the ferry terminal at Fromentine. There are 40 moorings for small craft; the tidal stream in the fairway is strong. It has been reported (1987) that a convenient anchorage for small craft lies E of the ferry terminus outside the moorings laid off the S shore or farther E in deeper water N of the buoys marking an oyster bed.

2 **Prohibited anchorage:** anchoring SW of the ferry terminus is prohibited from 15th June until 15th September.

Berth: the pierhead at Fromentine is reserved for the ferry.

Repairs of all kinds to small craft.

Supplies: provisions.

Port du Pont-Neuf

7.30

1 Port du Pont-Neuf (46°54′N, 2°07′W; uncharted) is situated in Étier de la Barre-de-Monts, a canal entered about 1 mile ENE of Fromentine ferry terminal. Maximum dimensions of vessels using the harbour are: length 25 m; beam 3·5 m; draught 2 m at springs, 1·5 m at neaps.

Port-Joinville and approaches

Charts 3640 plan of Port-Joinville, 2663

General information

7.31

1 **Position and function.** Port-Joinville (46°43′·6N, 2°20′·8W), situated on the N coast of Île d'Yeu, is the only sheltered harbour on the island. It is a fishing port and small craft harbour also used by coasters and ferries to the mainland.

Approach and entry. The harbour is approached from W keeping at least 1 mile offshore, or from the E passing either N or S of La Sablaire (1 mile E), a shoal, and entered through the Avant-port.

Port Authority: Capitainerie, situated at the NE corner of the Bassin à Flot (7.34).

Limiting conditions

7.32

1 **Controlling depth:** entrance channel and central part of the harbour dredged to 1·5 m (entrance channel charted as 1·2 m).

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Deepest berths: in Bassin à Flot; see 7.39.

Tidal levels. See information in *Admiralty Tide Tables*. Mean spring range about 5·3 m; mean neap range about 3·5 m.

Swell enters the harbour in winds from NE to NW and in bad weather a scend occurs; the marina however is reported to be completely sheltered.

Arrival information

7.33

1 **Port radio:** See *Admiralty Maritime Communications* for further details

Outer anchorages, tenable in fine weather only, are located (positions given from the harbour entrance):

Between the alignment (219°) of the leading lights (7.36) and La Sablaire (7 cables E) (7.38), depth 5 to 7 m, bottom sand and gravel good holding.

In Anse de Ker Châlon (6 cables ESE), depth 3·3 m, bottom sand and mud.

Visiting craft may anchor in an area centered 4 cables ESE as shown on the chart.

2 **Prohibited anchorage:** in the Avant-port.

Pilotage. There are no pilots; advice or the services of a local skipper can be obtained from the offices of either Affaires Maritimes or Comité Local des Pêches Maritimes at Port-Joinville.

Harbour

7.34

1 **General layout.** The Avant-port, which has no alongside berths, lies between: Jetée Nord-Ouest the breakwater on its NW side; the warping piers extending ENE and SSW from the NW corner of Jetée Galiote, the E breakwater; Quai du Canada on its SW side.

The main harbour, entered from the S corner of the Avant-port, consists of the following five basins listed clockwise from its entrance:

2 Port de Plaisance, the marina.

Bassin à Flot, also called Bassin de la Glacière, a wet dock used by fishing vessels, coasters and small craft.

Two basins, separated by Gare Maritime the ferry terminal, on the S side; the E-most is called Darse 3.

Darse 1, reserved for fishing vessels, lying between Quai du Canada on its N side and Môle Joseph Martin on its S side.

3 **Traffic signals.** International port traffic signals are displayed on a mast on the W side of the entrance to the marina. The signals control departure from the marina only. See *The Mariner's Handbook* for details of signals.

Directions

7.35

1 **North-western approach.** Initial position 46°47′N, 2°23′W, about 4 miles N of Île d'Yeu Main Light (7.17).

The line of bearing 144° of Pointe des Corbeaux Light (46°41′N, 2°17′W) (7.17), just open NE of Pointe Gauthier (2¼ miles NW), leads SE to a position 7 cables NE of Port-Joinville entrance, passing:

2 NE of the 5 m depth contour that encloses the numerous steep-to dangers that lie up to 6 cables off the N coast of Île d'Yeu between the harbour entrance and Les Chiens Perrins (2½ miles W) (7.18).

3 **Clearing bearing.** The 150° limit of a white sector of Jetée NW Light (46°43′·8N, 2°20′·7W) (7.38) clears ½ cable ENE of Basse du Bouet (3 cables NW of the light), a drying reef that is covered by a green sector.

Shoal patches lying within the white sector (150°–232°) of the aforementioned Jetée NW Light include (positions given from the light):

1·7 m (nearly 2 cables NNE).

0·9 m (1 cable N).

7.36

1 **North-eastern approach and entry.** Initial position 46°45′N, 2°19′W, about 1½ miles NE of the harbour entrance.

Leading lights:

Front (pylon, 9 m in height) (46°43′·7N, 2°20′·9W) standing on Quai du Canada near its root.

Rear (mast, 15 m in height) (85 m SW of front light).

2 The alignment (219°) of these lights leads to a position 1 cable NE of the front light in Avant-port entrance, passing (positions given from Jetée NW Light):

NW of the buoy (N cardinal) (1¼ miles NE) moored off the N end of Basse Mayence, thence:

SE of the shoal patches (nearly 2 cables NNE and 1 cable N) described at 7.35, thence:

3 NW of depths of 0·3 m (¾ cable E) and drying 0·2 m (½ cable SSE) on the NW side of Le Rocher du Port, the rock marked by La Galiote Buoy (port hand) (1 cable ESE) which is moored some distance inside the 1 m depth contour.

7.37

1 **Leading marks.** The alignment (202½°) of the following marks then leads, through the dredged channel, to the entrance of the inner harbour:

Front: Quai du Canada Light (white truncated turret, green top; 5 m in height) (about 60 m SE of the front leading light) on the head of the quay.

Middle: disused lighthouse (white tower 12 m in height) (1½ cables SSW of front mark).

Rear: church belfry (cupola on lantern on square tower) (2 cables SSW of front mark).

7.38

1 **East-south-eastern approach.** Initial position 46°43′·5N, 2°18′·0W, about 2 miles ESE of the harbour entrance.

A white sector (279°–285°) of Jetée NW Light (white tower, green top) (46°43′·8N, 2°20′·7W) on the head of the NW breakwater leads WNW to a position 5 cables ESE of the light, passing (positions given from the light):

2 NNE of the rocky flat that extends nearly 2 cables N from the coast between Pointe Gauthier (1¼ miles ESE) and Anse de Ker Châlon (6 cables SE) (7.33), and:

SSW of La Sablaire shoal marked at its SE corner by La Sablaire Light-buoy (S cardinal) (9 cables E).

3 The route then leads NW to a position about 1 cable NE of Jetée NW Light, passing (positions given from the light):

NE of Basse Collette (2½ cables SE), thence:

NE of two 0·3 m patches (1½ cables ESE and ¾ cable E).

The 219° alignment of leading lights (7.36) then leads into Avant-port.

Basins and berths

7.39

1 Brief details of the basins, listed clockwise from the entrance from Avant-port, are as follows:

Basin	*Depth (m)*	*Remarks*
Port de Plaisance	1·5 — 2·5	500 berths on pontoons, 170 for visiting small craft.

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Basin	*Depth (m)*	*Remarks*
Bassin à Flot	Maintained at 3·7 m	Wet dock quayed on all sides; gates open 2 hours each side of HW; ice factory on Jetée de l'Est on W side.
Darse 3	1·5	Ferry terminal on W side.
SW basin	1·5 to drying 1·5	Pontoon reserved for ferry boats; careening slip S corner.
Darse 1	1·5	Môle Martin (S side) and Quai Georgette (W side); berths suitable for taking the ground.

Port services

7.40

1 **Repairs** to engines and hulls carried out; gridiron.

Other facilities: custom house; hospital; yacht club.

Supplies: marine diesel and petrol; fresh water; provisions.

Communications: ferry service to Fromentine (7.22) and in summer to Saint-Gilles-Croix-de-Vie (7.64) and Les Sables-d'Olonne (7.80); air services to La Roche-sur-Yon (70 km E), Nantes (6.166) and in summer Les Sables-d'Olonne (7.65) from airfield (4 km W) and heliport.

Other anchorages and harbours in Île d'Yeu

Chart 2663 (see 1.18)

Small craft: Port de la Meule

7.41

1 **General information.** Port de la Meule (46°41′·8N, 2°20′·6W), a very small drying harbour, lies at the head of a narrow inlet on the S coast of Île d'Yeu. It is used by fishing boats and visited by fishing vessels and small craft in settled weather with offshore winds: local knowledge is necessary.

7.42

1 **Directions.** Initial position 46°41′N, 2°21′W, about 1¼ miles SW of Saint-Sauveur Coastguard Station (7.18).

Leading marks:

Front: Trou de la Charte (46°41′·6N, 2°20′·5W) an islet connected to the coast on the E side of the inlet at LW.

Rear: isolated white chapel (1 cable NE of front mark; uncharted).

2 It has been reported (1983) that the alignment (034°) of the top of the islet and the chapel leads NE towards the entrance of the inlet, passing:

Close SE of drying rocks (1½ cables SW of front mark) that extend about ¾ cable SE from Pointe de la Père, the headland on the W side of the inlet.

3 Approaching the harbour, the line of bearing 022° of La Meule Light (grey square turret, red top; 6 m in height) (46°41′·7N, 2°20′·6W) leads through the inlet, passing (positions given from the light):

Close WNW of Tête Jaune (¾ cables S), a drying reef extending about ½ cable SW from Trou de la Charte, and:

Close ESE of a drying reef (¾ cable SW) extending ½ cable SE, from a point on the W side of the inlet, towards Tête Jaune.

The harbour is entered rounding close E of the promontory on which La Meule Light stands.

7.43

1 **Anchorage** for small craft at the head of the inlet, depth 4 m sand.

Berths: quay on W side of harbour with three landing slips that dry 1·3 m alongside; bottom rocky in places.

Supplies: provisions available at Saint-Sauveur (1½ km NE).

Anse des Vieilles

7.44

1 **General information.** Anse des Vieilles (46°41′·5N, 2°18′·5W), a bay at the S end of Île d'Yeu, has a small artificial drying boat harbour at its W end. It is approached from SE and entered:

NE of Ours des Vieilles, a rock drying 3·5 m that lies at the extremity of a reef extending 3 cables SE from Pointe des Vieilles, the W entrance point of the bay, and:

2 SW of the coastal reefs that extend from 1½ to 2½ cables offshore between Pointe des Corbeaux and the coast 1 mile WNW.

7.45

1 **Outer anchorage:** in depths from 13 to 18 m sandy bottom, sheltered from NW winds but exposed to the swell, on the alignment (313°) of:

W end of the sandy beach at the head of Anse des Vieilles, and:

Saint-Sauveur church (red roof on truncated tower) (46°42′·4N, 2°19′·8W), 1 mile farther NW, which is hidden by trees SW of the alignment.

7.46

1 **Directions.** It has been reported (1983) that the alignment (295°) of the root of the mole on the S side of the harbour and the right hand end of an isolated white house nearly 1 cable farther WNW, neither of them charted, leads to the vicinity of the boat harbour, whence the line of bearing 314° of the entrance leads into harbour.

Anchorage for small craft: off the harbour in depths of 2½ m, sandy bottom, sheltered from W.

2 **Berth:** mole on S side of harbour reported (1983) to dry 3 m alongside; quay on E side of harbour reported (1983) to be inaccessible.

Small craft

Chart 2663

Saint-Jean-de-Monts

7.47

1 **General information.** On the mainland at Saint-Jean-de-Monts (46°47′N, 2°05′W) a pier extending 400 m SW from the coast, with a light beacon (white post, red top; 9 m in height) at its head, is used mainly by dinghies.

Anchorage: 40 mooring buoys for small craft are laid off the pierhead.

Facilities: yacht club.

Repairs to hulls and engines carried out.

POINTE DE GROSSE TERRE TO POINTE DU PAYRÉ

General information

Charts 2663, 2998

Description

7.48

1 The coastal passage from Pointe de Grosse Terre (46°42′N, 1°58′W) to Pointe du Payré (46°25′N, 1°39′W)

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leads about 25 miles SE from the vicinity of Île d'Yeu (46°42′N, 2°20′W) to the entrance to Pertuis Breton (7.89) passing NE of Plateau de Rochebonne (46°10′N, 2°26′W) (2.18).

Topography

7.49

1 Pointe de Grosse Terre, a black rocky bluff, is about the same height (12 to 14 m) as the surrounding dunes. The town of Saint-Gilles-Croix-de-Vie (7.56) lying close E of Pointe de Grosse Terre may be located from the offing by the several water towers that encircle it. Thence to Pointe de l'Aiguille (12 miles SSE) the coastline is low-lying, wooded and fronted by sandy beaches separated by rocky flats.

2 Les Sables-d'Olonne (46°30′N, 1°47′W) (7.65) is a distinctive feature of the coastline which SE of the town consists of low cliffs interspersed with beaches predominantly consisting of grey shingle as far as the mouth of the river Payré (6 miles SE) where they are sandy. Saint-Jean-d'Orbetiers Abbey (46°28′N, 1°44′W; uncharted) is surrounded by large prominent buildings.

Traffic regulations

7.50

1 **Approach channel.** Navigation is regulated in the approach channel, shown on the chart, that leads 7 miles NNE into Rade des Sables-d'Olonne (46°29′N, 1°47′W): for further details see 7.70.

Area to be avoided (46°10′N, 2°26′W): see 2.15 for details.

2 **Prohibited anchorage.** Anchoring, dredging and trawling are prohibited in the area shown on the chart that extends 26 miles WSW from a position on the coast marked by 2 beacons (special) (46°44′N, 1°59′W) where transatlantic submarine cables are landed.

Rescue

7.51

1 **Lifeboat stations** (1.77):
Saint-Gilles-Groix-de-Vie (46°42′N, 1°57′W) (7.56).
Les Sables-d'Olonne (46°30′N, 1°47′W) (7.65).

Tidal streams

7.52

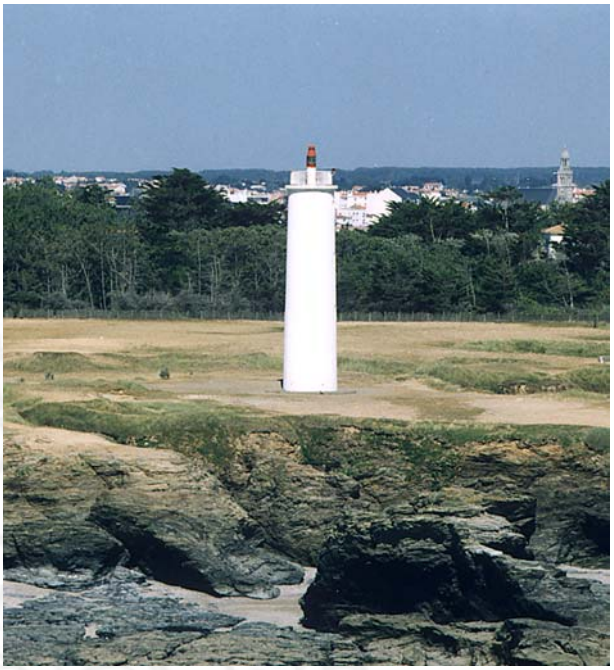
1 The tidal streams are rotary clockwise; they do not in general exceed 1 kn except off the entrance to Pertuis Breton where they are influenced by its indraught and outflow. For further details see the chart and *Admiralty Tidal Stream Atlas: France West Coast.*

Principal marks

7.53

1 **Landmarks:**
Pointe de Grosse Terre Lighthouse (white truncated tower; 25 m in height) (46°42′N, 1°58′W).
Conspicuous water tower (1 mile NNE of Pointe de Grosse Terre Light).
Les Barges Lighthouse (grey tower; 29 m in height) (46°30′N, 1°50′W) standing on La Grande Barge, a reef that dries 4·5 m.
L'Armandèche Lighthouse (white 6-sided tower, red top; 39 m in height) (1½ miles ESE of Les Barges Light).

2 **Major lights:**
Île d'Yeu Main Light (46°43′N, 2°23′W) (7.17).
Pointe des Corbeaux Light (46°41′N, 2°17′W) (7.17).
Pointe de Grosse Terre Light—as above.
L'Armandèche Light—as above.
Saint-Gillies-Croix-de-Vie leading lights (46°42′N, 1°57′W) (7.61).



Pointe de Grosse Terre Lighthouse from WSW (7.53)
(Original dated 1994)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)



L'Armandèche Lighthouse from SW (7.53)
(Original dated 1994)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

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Directions

(continued from 7.20)

Caution

7.54

1 Numerous dangerous wrecks, whose positions may be seen on the chart, lie within 10 miles of this coast

7.55

1 **Initial position:** SE of Pointe des Corbeaux (46°41′N, 2°17′W), the SE point of Île d'Yeu.

The route leading about 25 miles SE to a position off the entrance to Pertuis Breton (7.89), passes:

SW of Basse Vermenou (46°30′N, 1°52′W) an unmarked detached rocky patch; in bad weather the area between this patch and the shore becomes a mass of breakers, thence:

2 SW of Petite Barge (1½ miles ESE of Basse Vermenou), a drying rock marked by Petite Barge Light-buoy (S cardinal). These are the outer dangers of Les Barges d'Olonne, marked by Les Barges Light (7.53). And:

3 NE of the area to be avoided (46°10′N, 2°26′W) (2.18), thence:

SW of Bourgenay Light-buoy (safe water) (7.86) moored on the SW side of Roches du Joanne (46°25′N, 1°41′W).

Useful marks:

Prominent radio mast (46°31′N, 1°48′W).

4 Bourgenay Rear Leading Light-beacon (46°26′N, 1°40′W) (7.86).

Les Baleineaux Light (46°16′N, 1°35′W) (7.153).

Les Baleines Light (46°15′N, 1°34′W) (7.152).

Pointe du Grouin du Cou Light (46°21′N, 1°28′W) (7.99).

(Directions continue for Pertuis Breton at 7.100, and for the coastal route at 7.153)

Saint-Gilles-Croix-de-Vie

Leading Lights



Jetée de Boisvinet *Jetée de la Garenne*

Saint-Gilles-Croix-de-Vie from SW (7.56)

(Original dated 1994)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

Chart 3640, plan of Saint-Gilles-Croix-de-Vie

General information

7.56

1 **Description.** Saint-Gilles-Croix-de-Vie (46°42′N, 1°57′W) situated at the mouth of La Vie river is an important fishing port with a large marina. The town, population 6300 (2003), consists of Croix-de-Vie lying on the W bank close within the entrance and Saint-Gilles-sur-Vie on the E bank farther upstream. The harbour is protected from seaward by Pointe de la Garenne, a sand dune forming the SW bank of the harbour reach: it is approached from the SW and entered through a buoyed channel on the NW side of Jetée de la Garenne.

2 **Port Authorities:**

Bureau du Port.

Capitainerie du Port de Plaisance, Boulevard de l'Égalité, BP 61, 85800 Saint-Gilles-Croix-de-Vie.

Limiting conditions

7.57

1 **Controlling depth:** The approach channel is dredged but is subject to silting, which can reduce the depth to about 0·7 m.

Deepest berths: alongside the quays of the fishing port that border the channel (7.63).

Tidal levels. See information in *Admiralty Tide Tables*. Mean spring range about 4·4 m; mean neap range about 2·1 m.

2 **Maximum size of vessel handled:** length 60 m; draught 5·5 m at springs, 3·5 m at neaps.

Local weather: breakers form off the entrance with strong winds from SE to SW and when a swell is running, especially during the out-going tidal stream.

Arrival information

7.58

1 **Port radio:** operated from Capitainerie du Port de Plaisance, see 1·44 for further details.

Outer anchorage. Temporary anchorage may be obtained in the approaches close SE of the leading line (7.61) shown on the chart, depth 3 to 4 m, bottom sand and mud, sheltered from winds between N and E.

Prohibited anchorage: in the channel.

Harbour

7.59

1 **General layout.** The harbour extends SE from the entrance between Pointe de la Garenne and the head of Grand Môle (46°41′·9N, 1°56′·8W). The following facilities, listed from seaward, front Croix-de-Vie (positions given from Grand Môle):

2 Small drying basin (immediately N) belonging to the yacht club.

two tidal basins (1½ cables E and 2½ cables ESE) reserved for fishing vessels.

Port La Vie, the marina (4 cables ESE); the W side of the first pontoon is reserved for visitors.

Quai du Port-Fidèle, fronting Saint-Gilles-sur-Vie, extends S from Pont de la Concorde (vertical clearance 6 m) which spans the river at the inner end of the harbour.

7.60

1 **Tidal streams** in the outer anchorage are rotary anti-clockwise, weak and usually masked by the current due to the wind. In the entrance channel, between the extremity of Jetée de la Garenne and that of Grand Môle, the tidal streams attain rates of 2¼ to 3½ kn out-going, 1¼ to 2 kn in-going.

Directions

7.61

1 **Initial position** 46°41′N, 1°58′W, 1½ cables SE of Pilours Light-buoy (S cardinal) moored 4 cables SW of Pill'Hours, an above-water rock on the drying ledge extending 2 cables S from Pointe de Grosse Terre.

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2 **Leading lights** at Croix-de-Vie, for the approach:
Front light (white square tower with red top; 7 m in height) (46°41′·9N, 1°56′·7W) which is reported to be difficult to distinguish by day and must not be confused with the white round stone tower on the head of Grand Môle (1 cable SW).
Rear light (white pyramidal tower, red top; 28 m in height) (260 m NE of front light).

3 The alignment (043¾°) of these lights leads NE to a position about 50 m NW of the head of Jetée de la Garenne (5 cables SW of front light), passing:
SE of the drying ledge extending 1 cable SE from Pill'Hours.

4 **Clearing marks:**
Front mark: Jetée de Boisvinet Light-beacon (red column on white hut; 6 m in height) (46°41′·7N, 1°57′·1W) on the NW breakwater head.
Rear mark: tower on head of Grand Môle (2½ cables NE of front mark) described above.

5 The alignment (045°) of these marks clears SE of the drying ledge extending SE from Pill'Hours, which is covered by the red sector, in a least charted depth of 1·9 m.

6 **Clearing bearing:** the line of bearing 345° of Jetée de la Garenne Light-beacon (white structure green top) (46°41′·5N, 1°57′·2W) on the head Jetée de la Garenne, clears WSW of a 1·3 m patch (5 cables SSE of the light-beacon).

Useful marks:
Pointe de Grosse Terre Lighthouse (46°41′·6N, 1°57′·8W) (7.53).

7 Conspicuous water tower (1 mile NNE of lighthouse) (Chart 2663) (7.53).
Sainte-Hélène Church (belfry) (46°41′·9N, 1°56′·3W) in Croix-de-Vie.
2 conspicuous water towers (46°41′·9N, 1°55′·6W and 6 cables farther S).

7.62

1 **Entering harbour.** From the vicinity of Jetée de la Garenne Light-beacon (7.61) the axis of the entrance channel lies NW of the 043¾° alignment of leading lights. The channel is marked by light-buoys (lateral) on both sides and leads NE, passing:
NW of the head of Jetée de la Garenne, thence:
Midway between the head of Jetée de Boisvinet and the edge of Jetée de la Garenne.

2 Off Grand Môle the channel turns SE and then passes SW of the outer quays of the two tidal basins and of the heads of the marina pontoons.

Caution. The in-going tidal stream sets onto Môle de l'Adon (½ cable SE of the front leading light).

Basins and berths

7.63

1 Brief details of the basins and berths, listed from seaward (positions given from the front leading light at Croix de Vie), are as follows:

2 Yacht club pontoon (1 cable WSW); private berths for 30 small craft; depth 1 m.
Fishing port; two tidal basins (entered ¾ cable and 2 cables SE); project depths drying 0 m in NW basin, 1 m in SE basin; 1000 m of quay, of which 260 m bordering the channel has sufficient depth alongside for fishing vessels to remain afloat at LW.

3 Port La Vie (4 cables SE); seven pontoons provide berths for 800 small craft from 5 to 20 m in length, 80 reserved for visitors; project depth 1 m.
Quai du Port-Fidèle (5 cables ESE); length 150 m; dries 1·5 m alongside.

Port services

7.64

1 **Repairs** of all kinds carried out; careening slip 40 m long, 20 m wide, dries 2 m; 26-tonne mobile boat hoist at marina.

Other facilities: custom house.

Supplies: fuel; fresh water; provisions.

Communications: ferry service in summer to Port-Joinville (7.40), Île d'Yeu.

Les Sables-d'Olonne and approaches

Charts 3638, 2998

General information

7.65

1 **Description.** Les Sables-d'Olonne (46°30′N, 1°47′W) is an important fishing port that also handles small cargo vessels and has a large marina. The town is a sophisticated holiday resort with a resident population of 35 600 (2003) that expands to 100 000 in summer.

Topography. The town is easily identified from seaward by its many large buildings in an otherwise rather featureless stretch of coastline.

2 **Approach and entry.** Rade des Sables-d'Olonne (46°29′N, 1°47′W), the outer anchorage, is approached from the SE and SSW by two main channels, from SW by a passage used by local craft. The harbour is entered through a channel leading NNW from the anchorage.

Traffic. In 2003 the port was used by 118 vessels totalling 358 275 dwt.

Port Authority: Capitainerie du Port, 1 Rue Colbert, F–85100 Les Sables-d'Olonne; situated at the SE corner of the tidal basin.

Limiting conditions

7.66

1 **Controlling depth.** The entrance channel is dredged to 2·0 m, but is subject to siltation; for the latest information mariners should contact the port authority.

Deepest berths: in Bassin à Flot (7.79).

Tidal levels. See information in *Admiralty Tide Tables*. Mean spring range about 4·5 m; mean neap range about 2·1 m.

2 **Abnormal water levels:** N and E winds decrease the water level by 0·3 m and advance the time of HW by 30 minutes; S winds increase the water level by 0·4 m and retard the time of HW by 40 minutes.

Density of water: reported to be 1·025 g/cm^3.

Maximum size of vessel handled in Basin à Flot: length 110 m; beam 16 m; draught, varies from about 6.3 m at springs to 5m at neaps.

Arrival information

7.67

1 **Port radio:** see *Admiralty List of Radio Signals Volume 6(2)* for details.

Outer anchorages. Rade des Sables-d'Olonne (46°29′N, 1°47′W), the roads SE of the harbour entrance, is a fair weather anchorage exposed to winds between SE and W and dangerous in SW squalls. The best holding ground lies close to the 320° leading line (7.76) 2½ cables NW of its intersection with the 032½° leading line (7.75), depth 10 m bottom muddy sand, but a wreck lies close SW.

2 Petite Rade lying N of the aforementioned position provides anchorage in depths from 6 to 8 m bottom sand and clay.

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Les Sables-d'Olonne from S (7.65)
(Original dated 1994)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

3 **Prohibited anchorage.** Anchoring, fishing and trawling are prohibited, due to a submarine pipeline, within the area shown on the charts, that extends 8 cables SW from the shore 3 miles SE of Les Sables d'Olonne. A vessel anchoring in the area due to *force majeure is* required to buoy and slip her cable when getting under way.

Wet dock. The gate to Bassin à Flot is opened every HW, between 1½ hours before and after at neaps, 2 hours before and after at springs.

7.68

1 **Pilotage** is provided by La Loire and is compulsory for vessels 50 m or more in length and vessels over 150 nrt carrying petroleum products, gas or dangerous cargoes.

Requests for Pilots should be made 18 hours in advance of ETA at the pilot boarding position, either direct to the pilots or Harbour Master at Les Sables-d'Olonne Port. Amendments to ETA of more than 2 hours should be advised at least 4 hours in advance.

Outbound vessels should request a pilot at least 3 hours in advance from either Nantes or Saint-Nazaire offices and before 1800 for departures predicted between 2030-1000 the following day.

2 **Availability:** The pilot boat puts to sea when a vessel approaches the roadstead.

Boarding. Pilots board in the roadstead from a pilot boat, see 1.31 for distinguishing marks, or in bad weather from a trawler displaying flag H. In very bad conditions they may board in the shelter of the breakwaters, when the pilot boat will exhibit a searchlight at night: if Masters of vessels do not wish to enter harbour in these circumstances they should inform the Pilot and are recommended to proceed to La Rochelle-Pallice (46°09′N, 1°14′W) (7.190).

7.69

1 **Tugs:** none based at the port; the pilot boat assists berthing.

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Traffic regulations

7.70

1 **Approach channel and waiting area.** Vessels exceeding 1600 grt laden with hydrocarbons or dangerous cargo are required to use the 300 m wide approach channel, shown on the charts, whose centre line is the 032½° alignment of leading lights and extends from 8 miles to 8 cables SSW of La Potence Light (46°29′·6N, 1°46′·1W) (7.75). The designated waiting area for these vessels, shown on the chart, is situated at the inner end of the approach channel. The access channel 200 m wide, whose centre line is the 320° alignment of leading lights (7.76), is subject to compulsory pilotage for the type of vessel described above.

2 See 1.54 for details of the regulations which apply to all vessels entering or crossing these channels. The associated coastguard stations are:

Saint-Sauveur (46°42′N, 2°20′W) (7.18) on Île d'Yeu.
Les Baleines (46°14′N, 1°33′W) (7.152) on Île de Ré.

Harbour

7.71

1 **General layout.** The canalised entrance channel is entered between Jetée Saint-Nicolas and Jetée des Sables, the W and E breakwaters respectively. The harbour consists of the following sections listed from S to N:

Avant-port (7.79), the shallow tidal basin extending 4 cables E from the E side of the entrance channel; used mainly by fishing vessels.

2 Bassin à Flot (7.79), the commercial wet dock entered near the W end of the N side of the Avant-port.

Port Olona (7.81), the marina situated at the inner end of the entrance channel.

A ring road encircling the top of the harbour connects Les Sables d'Olonne on the E side with La Chaume on the W side: a scouring basin extends N from the causeway.

7.72

1 **Traffic signals** for Bassin à Flot are displayed from the dock gate operating station as follows:

International Port Traffic Signals (1.66).

Signals indicating that the gate is open, namely:

By day: Flag P displayed singly, or to the left of and level with the topmost light of the port traffic signal.

2 At night: either three white lights vertically disposed by themselves or a single white light exhibited to the left of and level with the topmost light of the port traffic signal.

7.73

1 **Tidal streams** in the approaches are weak and rotary clockwise; in position 46°28′·1N, 1°46′·8W the tidal stream sets as follows:

Interval from HW Brest	*Direction*	*Rate (kn)*
–0600	N	¼
–0300	E	½
HW	S	¼
+0300	SW	½
+0500	NW	½

In the entrance channel between the breakwaters the in-going tidal stream normally does not exceed 1 kn. When the sluice-gate of the scouring basin is open the tidal streams attain a rate of 1½ kn in-going, 2 kn out-going.

2 **Tide gauges** on Jetée Saint-Nicolas and the gateway to Bassin à Flot indicate the height of the tide above chart datum.

Directions for entering Rade des Sables-d'Olonne

7.74

1 **Approaches routes:** two principal channels and an inshore passage lead into Rade des Sables-d'Olonne, namely:

Passe du Sud-Ouest (7.75); the charted SSW approach channel that is governed by the traffic regulations given at 7.70; the approach recommended in heavy weather.

2 Passe du Sud-Est (7.76), the SE approach; controlling depth 7 m where it passes inshore of Barre Marine.

Passe Secondaire (7.77), the SW inshore approach which is dangerous in bad weather from SW due to breakers and should only be attempted by day and with local knowledge.

7.75

1 **Passe du Sud-Ouest.** Initial position 46°23′·0N, 1°52′·5W.

Leading lights:

Front light (metal mast 12 m in height) (46°29′·5N, 1°46′·3W), on the sea-front.

Rear: La Potence Light (square tower, white house; 20 m in height) (330 m NNE of front light).

2 The alignment (032½°) of these lights, which are exhibited throughout 24 hours, leads NNE into Passe du Sud-Est (7.76), passing (positions given from front light):

3 ESE of Nouch-Sud Light-buoy (S cardinal) moored 1¾ cables S of Le Nouch (1 mile SW), an underwater rock, thence:

WNW of a depth of 8 m (8½ cables SSW) on Barre Marine, a shoal on which the sea breaks heavily except in fine weather, and:

ESE of an unmarked rock (depth 4·9 m) (7 cables SW).

7.76

1 **Passe du Sud-Est.** Initial position about 46°26′N, 1°43′W.

Leading lights:

Front: Jetée des Sables Light (white truncated tower, green top; 9 m in height) (46°29′·5N, 1°47′·4W) on the breakwater head.

Rear: Tour d'Arundel Light (large grey square tower surmounted by white turret; 27 m in height) (465 m NW of front light). Part of the tower is hidden behind a tall building.

2 The alignment (320°) of these lights leads into and through Rade des Sables-d'Olonne (7.67), passing (positions given from front light):

3 Over Basse de la Pironnière in a least charted depth of 8·8 m (2¼ miles SE), thence:

SW of the 5 m depth contour enclosing several rocky patches lying about 4 cables offshore in the vicinity of Pointe de Tanchette (1½ miles SE), and:

Over the E part of Barre Marine (1 mile SE) (7.75), see 7.74 for controlling depth, thence:

NE of an underwater rock (depth 4·9 m) (6½ cables SSE).

7.77

1 **Passe Secondaire.** Initial position 46°28′N, 1°49′W, about 1½ miles SE of Petite Barge Light-buoy (S cardinal) (7.55).

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Leading marks:

Front: L'Estacade Old Lighthouse (white square masonry tower, 10 m in height) (46°29′·5N, 1°46′·4W) standing on the sea-front.

Rear: La Potence Lighthouse (7.75) (350 m NE of front mark).

2 The alignment (051°) of these marks which passes close SE of Saint-Pierre Church (1 cable NE of front mark) whose distinctive tower is more prominent than the leading marks, leads NE into Rade des Sables-d'Olonne (6 cables SW of front mark) (7.67), passing (positions given from front mark):

3 SE of Le Brou (1¼ miles SW) an unmarked rocky patch, thence:

Close NW of the 5 m depth contour enclosing Le Nouch (1 mile SW) (7.75), thence:

NW of Nouch-Nord Buoy (N cardinal) (8½ cables SW) moored nearly 2 cables NNE of Le Nouch, and:

SE of the 5 m depth contour enclosing Le Noura (9 cables WSW), an unmarked underwater rock on which a dangerous sea breaks in heavy weather.

Directions for entering harbour

7.78

1 **Initial position** 46°29′·3N, 1°47′·3W 1 cable E of Jetée Saint-Nicolas Light-beacon (white tower, red top; 14 m in height) on the head of the W breakwater.

Lights in line:

Front (red rectangular daymark on white hut; 6 m in height) (2 cable N of Tour d'Arundel).

Rear (red rectangular daymark on white tower, red lantern; 9 m in height) (65 m NNW of front mark).

2 The alignment (328°) of these lights leads NNW towards the harbour entrance, see 7.66 for controlling depth, passing:

WSW of Jean Marthe Buoy (isolated danger) moored ¾ cable S of a stranded wreck (4 cables SE of front light).

3 Then, from a position close WSW of the head of Jetée des Sables, the alignment indicates the ENE edge of the dredged channel almost as far as the root of the E breakwater.

Caution. Jetée Saint-Nicolas and Quai George V, its extension N, are bordered by rubble and must not be approached closer than 25 m. The rubble foundations of Jetée des Sables extended 7 m towards the channel.

4 The dredged channel, depth 2 m, for which the best guide is the chart, then continues N following the E bank of the canal as far as the entrance to Avant-port, then the W bank as far as Port Olona.

Basins and berths

7.79

1 **Avant-port,** situated S of Bassin à Flot, has quays except at the E end of the N side where there are slipways and a shipyard. The quays on the S side are named, from W to E: Quai Guiné; Quai Garnier; Quai Franqueville. Quai Nord on the N side provides lightening berths. The quay on the E side fronts the fish market.

The depth in the basin is 1·5 m except within 15 m of Quais Nord, Guiné and Garnier and within 30 m of Quai Franqueville; the depth alongside Quai Nord is 1 m.

2 **Bassin à Flot.** The entrance 18 m wide, sill 1·5 m below chart datum, is closed by a single pair of gates, see 7.67 for opening times. The basin has depths of 5·3 m, except for the SE corner where the depths are 3·5 m.

Port services

7.80

1 **Repairs** to ships, of a minor nature, carried out. Shipyards build and repair steel and wooden fishing vessels up to 25 m in length; patent slip.

Other facilities:

Compass adjustment.

Custom house on S side of Avant-port.

Hospital.

2 **Supplies:** fuel oil by road tanker from Nantes or La Rochelle, marine diesel and petrol from service stations in Avant-port; fresh water at quays; provisions.

Communications: ferry service to Île d'Yeu (7.40) in summer.

Small craft

7.81

1 **General information.** Port Olona (46°30′·2N, 1°47′·5W), the marina, is situated at the inner end of the dredged channel. No berths are available for visiting small craft in the Avant-port. Permission must be obtained from Sables-d'Olonne Port Authority (7.65) before small craft may enter Bassin à Flot.

2 **Port Authority** for the marina: Capitainerie du Port de Plaisance, BP 122, 85104 Les Sables d'Olonne Cedex; situated on the W entrance point of the marina basin.

Arrival information:

Port radio: See *Admiralty List of Radio Signals Volume 6(2)* and 1.41 for details.

Regulations: yachts are not allowed to proceed under sail in the entrance channel.

3 **Berths:** in W basin for 600 small craft, maximum length 20 m, at seven pontoons depth alongside 1·5 m; 100 places reserved for visitors at outer end of 1st, 3rd, 5th and 6th pontoons counting from W: in E basin for 500 small craft at five pontoons, depth alongside one 3·5 m alongside the others 1·5 m.

4 **Repairs** of all kinds carried out; 27-tonne mobile boat hoist; slip.

Other facilities: yacht club at marina.

Supplies: fuel from service station at Capitainerie; fresh water at pontoons; provisions.

Communications: ferry services from marina to Les Sables-d'Olonne.

Bourgenay Marina

Chart 2998 plan of Port de Bourgenay

General information

7.82

1 **Description.** Port de Bourgenay (46°26′N, 1°40′W) is an artificial small craft harbour constructed on the coast 6 miles SE of Les Sables-D'Olonne.

Port Authority: Capitainerie, Port du Plaisance de Bourgenay, 85440 Talmont-Saint-Hilaire Cedex; situated on N side of marina.

Limiting conditions

7.83

1 **Controlling depth:** 1 m in entrance channel, but subject to silting.

Deepest berth: 2 m.

Tidal levels at Les Sables-d'Olonne: see 7.66.

Breakers form at the entrance when there is a heavy swell.

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Arrival information

7.84

1 **Port radio:** see 1.41 for details.
Speed limit in the harbour: 3 kn.

Harbour

7.85

1 The harbour is formed by two breakwaters:
Digue Ouest extending S from the coast, with a short spur extending E from a position about 150 m N of its head, which curves to the E.
Môle Est extending W from the coast, its head terminating N of the head of Digue Ouest and S of the spur.
The entrance between the breakwater heads is 40 m wide.

Directions

7.86

1 **Initial position** vicinity of Bourgenay Light-buoy (safe water) (46°25′·5N, 1°41′·5W).
Leading lights:
Front (white rectangular topmark on white tower; 8 m in height) (46°26′·4N, 1°40′·5W) on Môle Est about 150 m E of its head.
Rear (white rectangular topmark, green border, on white pylon; 17 m in height) (about 225 m NE of front light).

2 The alignment (040°) of these lights leads NE into the approach channel between Roches du Joanne, passing (positions given from front light):
SE of a rocky patch (depth 3·7 m) (1 mile SW), and:
NW of a rocky patch (depth 2·9 m) (8 cables SSW), thence:
Close SE of the head of Digue Ouest (1 cable SW), marked by a light-beacon (red structure), and:
NW of a buoy (starboard hand) (1 cable SSW) marking the entrance to the dredged channel.

3 The entrance channel, see 7.83 for depth, first rounds the head of Digue Ouest, passing:
W of a beacon (starboard hand) (½ cable E of head of Digue Ouest) near the drying bank E of the entrance channel then:
The channel rounds the head of Môle Est, passing:
S of the spur on the E side of Digue Ouest.
Lights on the head of Môle Est and on the head of the spur of Digue Ouest are not visible to seaward of the entrance.

Berths

7.87

1 Seven pontoons extending S from the N side of the marina provide 560 berths 60 of them for visitors; visitors berth at Pontoon ‘E’, the 5th counting from E to W.

Port services

7.88

1 **Repairs** of all kinds carried out; gridiron; slip.
Other facilities: 15-tonne mobile crane; doctors at Talmont-Saint-Hilaire (6 km NE).
Supplies: fuel from service station on Môle Est; fresh water at pontoons; provisions.

PERTUIS BRETON

General information

Chart 2999

Description

7.89

1 **Pertuis Breton,** the channel between Île de Ré (46°12′N, 1°25′W) and the mainland N, leads ESE to Coureau de la Pallice (46°10′N, 1°15′W), the passage between the E end of Île de Ré and the port of La Rochelle-Pallice (7.190) that connects it with Pertuis d’Antioche (7.169).

2 **Fosse Orientale de Chevarache and Fosse Occidentale de Chevarache,** two troughs lying parallel to the N side of Île de Ré, provide comparatively deep channels in the outer part of Pertuis Breton. The S side of Fosse Orientale de Chevarache is rocky and steep-to whereas that of Fosse Occidentale de Chevarache shelves gradually. The N side of both troughs gradually shoal towards Banc du Grouin du Cou.

3 **Peu Breton,** a broad very shallow sill at the SE end of Pertuis Breton limits the use of this N approach to La Rochelle-Pallice Harbour (46°09′N, 1°14′W) to small vessels: larger vessels use Pertuis d’Antioche.

4 **La Sèvre Niortaise** flows into Pertuis Breton through Anse de l’Aiguillon, the bay at its NE corner that consists mainly of mud flats. The river is navigable by small vessels as far as Brault Lock whence a canal leads to the minor port of Marans (46°19′N, 1°00′W) (Chart 2663) (7.114).

Topography

7.90

1 The shores of Pertuis Breton consist mainly of sandy beaches backed by flat low-lying land, some of it wooded.
Pointe du Grouin du Cou (46°20′N, 1°28′W) is bordered by sand dunes. Pointe d’Arçay (46°18′N, 1°18′W) and Pointe de l’Aiguillon (4 miles ESE) are both low-lying. Features and marks that help to locate the entrances to Rivière le Lay and Anse de l’Aiguillon are described at 7.111 and 7.118 respectively.

2 Saint-Martin-de-Ré (46°12′N, 1°22′W) (7.134) on the N coast of Île de Ré is prominent, as are the factory chimneys and harbour works at La Rochelle-Pallice (6 miles ESE).
Pont de l’Île de Ré, the bridge connecting Pointe des Sablanceaux (46°10′N, 1°15′W) the E end of Île de Ré with the mainland ENE, spans the SE end of Pertuis Breton.

Limiting conditions

7.91

1 **Controlling depth** over Peu Breton (7.89): 2·2 m, as shown on the chart, in position 46°12′·6N, 1°15′·3W.
Vertical clearance beneath Pont de l’Île de Ré (7.90): 30 m.

Hazards

7.92

1 Heavy seas occur during stormy weather from W.

Pilotage

7.93

1 Pilotage is not available for Pertuis Breton. Vessels proceeding to Marans use La Rochelle-Pallice Pilots, see 7.116 for further details.

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Traffic regulations

7.94

1 **Pont de l'Île de Ré.** Two navigational channels beneath the bridge, shown on the chart and marked as described at 7.103, have been established between the tenth and fourteenth piers counting from Pointe des Sablanceaux (46°10′N, 1°15′W) and standing 5 and 7 cables ENE of the point respectively. Vessels pass:

S-bound: between the tenth and eleventh pier, and:
N-bound: between the thirteenth and fourteenth pier.

7.95

1 **Prohibited area.** Entry is prohibited to the area of a marine farm centred on 46°16′·5N 1°21′·1W marked at its N, E, S and W corners by light-buoys (cardinal) and NE and SW sides by light-buoys (special).

7.96

1 **Prohibited anchorage.** Anchoring, dredging and trawling are prohibited within the area, shown on the chart, extending 2 miles N from Coureau de la Pallice (46°10′N, 1°15′W), due to a submarine pipeline, power cables and cables laid between Île de Ré and the mainland. The N limit of the area is the line joining Fort de la Prée (46°11′N, 1°17′W) and the light close SE of Pointe du Plomb (3¾ miles ENE).

See also 7.194.

Rescue

7.97

1 **Coastguard station** (1.75): Les Baleines (46°15′N, 1°34′W) (7.152).

Tidal streams

7.98

1 Tidal streams in Pertuis Breton follow the general direction of the channels; the in-going tidal stream begins 6 hours before, the out-going tidal stream at or shortly after HW Pointe de Grave. Off Pointe des Baleines (46°17′N, 1°36′W) and off Pointe du Grouin du Cou (46°20′N, 1°28′W) the tidal streams attain a rate of 2 kn at springs; farther ESE they are weaker. For further details see information on the chart.

2 Peu Breton (46°13′N, 1°15′W) (7.89) constitutes the meeting point of the incoming tidal streams from Pertuis Breton and Coureau de la Pallice and the point at which the out-going tidal streams divide. The tidal streams in Coureau de la Pallice are however greatly influenced by the wind as described at 7.213.

3 Inshore between Pointe du Grouin (46°14′N, 1°24′W) and Pointe des Barres (5 miles ESE), and in Rade de Saint-Martin (46°14′N, 1°21′W), there is a W or WNW-going eddy during the first 45 minutes and the last quarter of the in-going tidal stream farther offshore.

Principal marks

7.99

1 **Landmarks** include:

Pointe du Grouin du Cou Lighthouse (white octagonal tower, black lantern; 16 m in height) (46°21′N, 1°28′W).
Les Baleineaux Lighthouse (46°16′N, 1°35′W) (7.153).
Les Baleines Lighthouse (46°15′N, 1°34′W) (7.152).
Conspicuous water-tower (46°11′N, 1°21′W) (7.182).

2 **Major lights:**

Pointe du Grouin du Cou Light—as above.
Les Baleines Light—as above.

Directions

(continued from 7.55)

Fosse de Chevarache

7.100

1 **Initial position** NW of Les Baleineaux Light (46°16′N, 1°35′W) (7.153), at least 3 miles from the light.

Route. Fosse de Chevarache, a trough, leads about 15 miles ESE through the W and central part of Pertuis Breton, passing:

2 SSW of Banc du Grouin du Cou, a bank extending about 7 miles W from Pointe du Grouin du Cou, on which the sea breaks when fresh NW winds are opposed to the out-going tidal stream and that is dangerous in bad weather from seaward, and:

3 NNE of Pointe des Baleines, an extensive rocky flat marked by Les Baleineaux Light (7.153) which stands about 1 mile within its outer extremity. Depths of less than 5 m lie up to 2½ miles NW of Les Baleineaux Light. Thence:

NNE of the steep-to coastal reef extending 1 mile offshore in the vicinity of Pointe du Lizay (2 miles ENE of Les Baleines Light), thence:

4 NNE of Roche du Fier (46°15′N, 1°26′W), an unmarked pinnacle rock, and:

SSW of Banc Breton (2 miles NNE of Roche du Fier), a sandy shoal, thence:

NNE of Les Islattes (46°14′N, 1°23′W), the extremity of a drying reef extending 1 mile E from Pointe du Grouin, marked by a prominent beacon-tower, (N cardinal, 10 m high), thence:

5 NNE of Rocha Light-buoy (N cardinal) (2 miles ENE of Les Islattes) moored off the extremity of Banc du Rocha, a submerged rocky spit extending 1½ miles ENE from Les Islattes, and:

SSW of a marine farm (46°17′N, 1°21′W) (7.95).

7.101

1 **Small craft caution.** The foreshore of Île de Ré E of Pointe du Grouin (46°14′N, 1°24′W) and the foreshore of the mainland between Pointe du Grouin du Cou (46°20′N, 1°28′W) and Pointe de Digolet (46°13′N, 1°11′W) are mostly devoted to shellfish beds which contain numerous stakes that cover at HW. Buoys (special) numbered from G1 to G12 mark the outer limits of the beds on the mainland shore, but the beds on the foreshore of Île de Ré are unmarked.

7.102

1 **Useful marks:**

On the N shore (positions given from Pointe du Grouin du Cou Light):
La Tranche-sur-Mer Light (1½ miles E) (7.110).
Water tower (2 miles ENE), (chart 2998).
Prominent water tower (3 miles E).

2 On Île de Ré:
Ars-en-Ré church (46°12′N, 1°31′W) (7.154).
Water tower at Loix (46°13′N, 1°26′W).
Saint-Martin-de-Ré Light (46°12′N, 1°22′W) (7.138).

North-western approach to Coureau de la Pallice

7.103

1 **Initial position** 46°15′N, 1°21′W, NE of Rocha Light-buoy (N cardinal) (7.100).

Route. The shallow waterway for which the best guide is the chart, leads 4 miles SE to position 46°12′·5N, 1°15′·0W to pass over the deepest part of Peu Breton (7.91), the sill that extends NE across the channel from the vicinity of Fort de la Prée (46°11′N, 1°17′W).

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2 Thence the route leads 2½ miles S into Coureau de la Pallice, the passage between Pointe des Sablanceaux (46°10′N, 1°15′W) and Môle d'Escale (6 cables E) (7.210), passing beneath Pont de l'Île de Ré (7.90) through the navigational channel for S-bound vessels (5 cables ENE of Pointe des Sablanceaux) (7.94) which is marked by:

3 Two light-buoys (lateral): at its entrance (1 cable from bridge).
Daymark (green triangle point-up on white background): on pier on starboard side.
Daymark (red square on white background): on pier on port side.
Light: exhibited from bridge deck above channel centre.

4 The navigational channel for N-bound vessels (7 cables ENE of Pointe des Sablanceaux) is similarly marked. For vertical clearance see 7.91.

Useful marks:
La Flotte Light (46°11′N, 1°19′W) (7.142).
Saint-Laurent Abbey (1 mile E of La Flotte).
Port du Plomb Light (46°12′N, 1°12′W) (7.144).
Conspicuous grain silo (46°09′·7N, 1°13′·5W) (7.214) at La Rochelle-Pallice.
(Directions for Coureau de la Pallice and La Rochelle-Pallice are given at 7.215)

Roadsteads

7.104

1 Open anchorages are available at the following positions shown on the chart:
W of Rocha Light-buoy (N cardinal) (46°15′N, 1°21′W) (7.100), depth 16 to 20 m, bottom mud very good holding.
At Mouillage du Préau (46°14′N, 1°19′W) in Trou des Sept Brasses, an 11 m hole.

2 In Rade de Saint-Martin (46°14′N, 1°21′W), entered E of Banc du Rocha (7.100), in depths from 4 to 7 m, bottom mud very good holding; the best sheltered anchorage in Pertuis Breton but exposed to N to NE winds.
Off La Flotte (46°12′·5N, 1°18′·2W) (7.142), depth 4 m mud, sheltered from S and W.

Small craft: harbours on the northern shore of Pertuis Breton

Chart 2998 plan of Port de Jard-sur-Mer

Jard-sur-Mer Marina and approaches

7.105

1 **General information.** Jard-sur-Mer Marina (46°24′·5N, 1°34′·9W), sheltered by a breakwater that extends nearly 3 cables ESE from the shore, has a sandy bottom that dries completely at MLWS. There are trots for 200 small craft capable of drying out and two landing slips on the breakwater that are accessible at half tide.

Bureau du Port, situated at the NW corner, is open during office hours from April to September.

7.106

1 **Directions.** Initial position: 1 mile SSW of the breakwater head. The alignment (038°) of two white rectangular boards (5 cables ENE of the breakwater head), standing on the shore and backed by trees, leads through the SW approach to a position 2 cables SW of the front mark, passing (positions given from the front mark):
NW of Roches de l'Islatte (7 cables SSW), a reef that dries 2 m marked by a buoy (starboard hand; seasonal May-Sep) and:
SE of Roche de la Brunette (6 cables SW), a reef that dries 1 m.

7.107

1 The alignment (293°) of two beacons (red and white topmarks) standing 90 m apart on the W side of the marina then leads 3 cables WNW into the marina, passing:
Close NNE of the beacon (port hand) marking the ledge extending about 1 cable ESE of the breakwater head, thence:
Between two beacons (lateral) marking the harbour entrance.

7.108

1 Alternative approach channels, from W passing N of Roche de la Brunette and from SE passing NE of Roches de l'Islatte, are unmarked and the best guide is the chart.

7.109

1 **Facilities:** 5-tonne boat hoist; 5-tonne crane.
Supplies: fresh water.

Chart 2998 plan of Port de la Tranche-sur-Mer

La Tranche-sur-Mer

7.110

1 **General information.** A landing stage (46°20′·6N, 1°25′·6W) extending 160 m ESE from the extremity of a spur on the seawall at La Tranche-sur-Mer, marked by a light-beacon (red column 4 m in height) at its head, is used by a ferry-boat service to Saint-Martin-de-Ré (7.134) during the holiday season.

2 **Directions.** Initial position 1 mile SSE of the landing stage head. The line of bearing (000°) of the conspicuous water tower (46°21′·4N, 1°25′W) leads N into Anse de Maupas, passing:
E of Rocher de l'Aunis (4 cables SSW of the landing stage), a drying rocky ledge, marked by two seasonal buoys (May-Sep) (S cardinal) lying W and SW of Rocher de l'Aunis respectively.
Once clear of the W extremity of Rocher de l'Aunis the track then leads NNW towards the landing stage, for which the chart is the best guide.

3 **Anchorage.** A small craft anchorage lies 2 cables ENE of the landing stage head in Anse de Maupas.

Chart 2999

L'Aiguillon-sur-Mer and approach

7.111

1 **General information.** L'Aiguillon-sur-Mer (46°20′N, 1°18′W) is situated on the E bank of Rivière le Lay, also called Rivière de Saint-Benoist, 5 miles above the bar at the river entrance: it is connected to La Faute-sur-Mer on the W bank of the river by a fixed bridge. The river is frequented by craft working the local shellfish beds and small yachts.

2 The river entrance is not easy to locate from seaward as the land on both sides is low-lying. Pointe d'Arçay (46°17′·5N, 1°17′·5W), containing a wildfowl sanctuary whose limits are marked by buoys (special) numbered F1 to F4, may be identified by the belt of low trees growing on it. On the E bank the only distinctive object is a conspicuous transformer (46°18′·3N, 1°14′·8W) (uncharted).

3 The channel, which is not lit, is used by craft of 1·5 m draught from 3 hours before to 3 hours after local HW, but the bar is dangerous in bad weather.

7.112

1 **Directions.** Initial position 46°16′·1N, 1°16′·8W, 6 cables W of Le Lay Light-buoy (S cardinal) that marks the S edge of Banc des Jaux, a sandy flat on the SE side of the entrance channel.

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The line of bearing 048° of a ruined house (46°17′·6N, 1°15′W) leads across the bar at the entrance to Le Lay river, passing (positions given from the ruined house):

2 NW of No 1 Buoy (starboard hand) (1 miles SW), thence:

SE of Grand-Abois buoy (port hand) (1 mile SW), thence:

NE of No 3 Buoy (starboard hand) (5 cables SSW).

The channel thence to L'Aiguillon-sur-Mer, for which the best guide is the chart, is marked by beacons and perches.

7.113

1 **Anchorage** in the pool extending about 2 cables downstream from the bridge at L'Aiguillon-sur-Mer dries at MLWS, bottom mud.

2 **Basins:**

L'Aiguillon-sur-Mer small craft harbour; non-tidal basin in which a depth of 1·8 m has been reported (1983) to be maintained; entered through a gate on the E bank 2 cables below the bridge; berths for 35 craft.

La Faute-sur-Mer small craft harbour; tidal basin reported (1983) to dry 2 m; entrance marked by Gounelle de Virly Beacon (port hand) (6 cables SSE of bridge); 40 berths, four for visitors.

3 **Repairs** to hulls and engines; slip.

Supplies: fuel; fresh water; provisions.

Marans and approach

Charts 2999, 2663

General information

7.114

1 **Description.** Marans Harbour (46°19′N, 1°00′W; uncharted), a canal port in the attractive old town of Marans, is frequented by small craft but no longer used for commercial traffic. The approach leads NE through Anse de l'Aiguillon (46°17′N, 1°10′W), then 3½ miles up La Sèvre Niortaise river to Brault Lifting Bridge and Lock, whence Canal de Marans leads 3 miles E into the harbour.

2 Anse de l'Aiguillon consists mainly of mud flats on which there are numerous stakes used for the rearing of mussels; it is bordered by saltings. La Sèvre Niortaise winds between training banks. The land is low-lying.

Port Authority: Bureau du Port, Quai Maréchal Foch, 17230 Marans.

Limiting conditions

7.115

1 **Controlling depth** in La Sèvre Niortaise: buoyed channel dries 1 m.

Dimensions of Brault Lock: length 104 m; width at gate 11 m; depth over sill 0·5 m.

Tidal levels at La Rochelle: given at 7.199.

Depth of water in Canal de Marans: reported (1983) to vary from 4·7 to 5·8 m depending on tides.

2 **Density of water** at Marans: reported to be 1·000 g/cm^3.

Maximum size of vessel handled reported (1987) to be: length 60 m; beam 10 m; draught 4·5 m at springs, 3·2 m at neaps.

Strong winds from SSW make entry to Brault Lock dangerous.

Daylight entry only.

Arrival information

7.116

1 **Outer anchorages.** Small craft awaiting the tide to proceed up river may anchor in the position (46°16′N, 1°11′W) shown on chart 2999, depth 2·5 m. Three white mooring buoys for small craft are laid 1¾ miles farther WSW.

2 **Pilotage** is compulsory for vessels more than 40 m in length; it is provided by La Rochelle-Pallice pilots, see 7.206 for further details.

3 **Local knowledge** is required to proceed up-river beyond the E limit of chart 2999. Chart 2663 and the French official charts only indicate the course of the river and the canal.

4 **Brault Lock** (46°19′N, 1°04′W) is worked 2 hours each side of HW at springs, 1 hour each side of HW at neaps. Vessels should arrive at Brault Lifting Bridge (5 cables downstream from the lock) at the time of local HW which occurs 20 minutes after HW at La Rochelle when the river is flowing normally. It has been reported (1982) that the lock is opened for small craft once only at the beginning and at the end of the working period and that it is advisable to give the lock-keeper prior notice by telephone.

Tidal streams

7.117

1 For information on the tidal streams in the vicinity of Pointe de l'Aiguillon (46°16′N, 1°12′W) see chart 2999 and *Admiralty Tidal Stream Atlas: France West Coast*; the maximum rate, 1¾ kn in-going, occurs 2½ hours before HW Pointe de Grave.

In La Sèvre Niortaise the tidal streams attain a maximum rate of 3 to 5 kn.

Directions

7.118

1 **Initial position** 46°15′N, 1°17′W, approximately 1 mile S of Le Lay Light-buoy (S cardinal) (7.112).

Approaching Anse de l'Aiguillon the deepest route leads 3 miles E, then 1 mile ENE, to the vicinity of ATT de l'Aiguillon Light-buoy (safe water) (46°15′N, 1°11′W) passing:

2 Clear of a dangerous wreck, position approximate) (46°15′N, 1°17′W), thence:

Clear of a dangerous wreck (46°15′N, 1°15′W), thence:

S then SSE of the buoys (special) (7.101) marking the mussel beds extending 2½ miles W and 5 cables S from Pointe de l'Aiguillon (46°16′N, 1°12′W), and:

3 NNW of Digolet Beacon (W cardinal; iron structure; 6 m high) marking the rocky flat fronting Pointe de Digolet (46°13′N, 1°11′W), thence:

4 **Useful marks:**

Beacon (grey triangular topmark on black metal framework) standing on the low-lying Pointe de l'Aiguillon (46°16′N, 1°12′W).

Marsilly church (9 cables SW).

7.119

1 **Anse de l'Aiguillon.** The channel then leads NE between mud flats and mussel beds, passing (positions given from Pointe de l'Aiguillon):

SE of a buoy (safe water) (2 miles NE), thence:

NW of Pavé de Charron Light-beacon (white column, green top; 12 m in height) (3½ miles ENE) standing on the head of the long landing slip of Port du Pavé.

7.120

1 **La Sèvre Niortaise** fairway then continues for 3½ miles to Brault Lock. It is marked, from a position about 1 mile SW of Pavé de Charron Light-beacon (7.119), by buoys, odd numbers 1 to 31 on the starboard side, even numbers 2

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to 42 on the port side. The river is spanned about 5 cables below Brault Lock by a lifting bridge that is remotely controlled by the lock-keeper. Controlling depth in the fairway is given at 7.115.

7.121

1 **Canal de Marans** is entered through Brault Lock (46°19′N, 1°04′W) in which vessels cannot secure alongside as it has sloping sides, being 11 m wide at the bottom and 45 m wide at the top: see 7.115 for limiting conditions and 7.116 for operating times. The inner end of the lock is spanned by a swing bridge.

2 Thence the canal leads straight E for about 3 miles and then curves ESE where it passes between unused gates into the harbour at Marans. The canal is 7 m wide at the bottom and 35 m wide at its normal water level, see 7.115 for depths.

Basin and berths

7.122

1 Marans Harbour consists of a narrow basin formed by a section of La Sévre Niortaise river closed by a lock at each end and joined at the NW end of its SW side to the inner end of Canal de Marans. The normal flow of the river is taken by a non-navigable canal which by-passes the basin.

2 Quai Maréchal Foch and Quai des Fusiliers Marins, on the NE and SW sides respectively of the SE end of the basin, are used by small craft. There are 50 berths, 10 of them for visitors.

The total length of the quays is 500 m: there is a slip at the NW end of the basin.

Port services

7.123

1 **Repairs** to small craft by boatyard.
Supplies: fuel; fresh water; provisions.

Small craft

7.124

1 **Anchorage** is possible in the approach channel and fairway adjacent to the following landing places:
Pavé de Charron (46°18′N, 1°08′W) (7.119); depth 0·5 m; sheltered except from SW at HW springs.
Corps de Garde (46°19′N, 1°06′W); sheltered but tidal streams very strong.

2 **La Sèvre Niortaise** is navigable by un-masted craft as far as Niort, about 22 miles above Marans.

Small craft: Ars-en-Ré and approaches

Chart 2999

General information

7.125

1 **Description.** Ars-en-Ré Harbour (46°12′·7N, 1°30′·6W) provides berths for small craft. It is approached by a channel leading W from the vicinity of Pointe du Grouin (4½ miles ENE) and entered by a channel leading SW through Le Fier d'Ars, a natural drying basin bordered by salt pans and nature reserves.

Port Authority: Capitainerie du Port, 17590 Ars-en-Ré; situated on NW side of outer harbour (7.132).

Limiting conditions

7.126

1 **Controlling depths:** outer bar dries 0·3 m; inner bar, at entrance to Le Fier d'Ars, dries 0·5 m; outer harbour dries 2·5 m; inner basin dredged to drying 3 m.

Tidal levels at Saint-Martin-de-Ré (6 miles E): given at 7.135.

Tidal streams

7.127

1 Tidal streams in the approach to Le Fier d'Ars are strong; in the entrance they attain a rate of 4½ kn at springs.

Outer anchorages

7.128

1 **Anchorages** for small craft awaiting the tide to enter harbour are available:
Off the village of Les Portes-en-Ré where there are several yacht moorings (white buoys) (46°15′·3N, 1°28′·5W).

2 Between the outer and inner bars, in the vicinity of the beacon (starboard hand) (46°14′·2N, 1°27′·4W) (7.130); depth 2 m; sheltered from S and W.
In the pool (46°13′·7N, 1°28′·8W) within the inner bar; length 400 m, width 150 m, dries 2·6 m good holding; sheltered except from NE.

7.129

1 **Prohibited anchorage:** in the Le Fier d'Ars, within 40 m on both sides of the charted 232½° leading line.
Caution. A submarine power cable (uncharted) is laid across Le Fier d'Ars entrance about 2½ cables SW of Roche Eveillon Beacon (port hand) (46°14′N, 1°28′W) (7.131).

Directions

7.130

1 **Initial position:** 4 cables N of Les Islattes Beacon-tower (N cardinal) (46°14′N, 1°23′W) (7.100).
Le Fier D'Ars Leading Lights:
Front light (white square topmark on white masonry hut; 7 m in height) (46°14′N, 1°29′W).
Rear light (green square tower on dwelling; 12 m in height) (370 m W of front light).

2 The alignment (265¾°) of these lights at Pointe du Fier leads through Le Fier d'Ars approach channel to a position 4 cables E of the front light, passing (positions given from front light):
N of the rocky flat that extends between 2 and 4 cables offshore between Pointe du Grouin (3 miles E) and the SE entrance point of Le Fier d'Ars (5 cables SE), and:

3 S of Bûcheron Buoy (starboard hand) (2 miles E) marking the E extremity of Banc du Bûcheron, a drying sandbank, and:
Across the outer bar (1½ miles E) (7.126), thence:
S of the buoy (starboard hand) (1¼ miles E) and the beacon (starboard hand) (8 cables E) marking the S side of Banc du Bûcheron.

4 **Caution.** Banc du Bûcheron is unstable and reported (2000) to be advancing S. The deepest water in the vicinity of the beacon (starboard hand) lies S of the alignment. The rear leading light has been reported (2000) to be difficult to distinguish.

7.131

1 **Ars-en-Ré Leading Lights:**
Front light (white rectangular hut, red lantern; 6 m in height) (46°12′·8N, 1°30′·5W).
Rear light (black rectangular topmark on white framework tower, green top; 14 m in height) (370 m SW of front light).

2 The alignment (232½°) of these lights, reported (2000) to be difficult to distinguish by day, then lead through Le Fier d'Ars entrance and the channel to Ars-en-Ré Harbour, passing (positions given from front light):
NW of abeacon (port hand) (2 miles NE), and:

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Over the inner bar (2¼ to 1¾ miles NE) (7.126), thence:

3 SE of the beacon (starboard hand) (1½ miles NE) marking the head of the landing slip at La Patache, thence:

Close NW of a beacon (port hand) (1 mile NE).

Then the channel is also marked by buoys until it enters a canal about 2 cables NE of the front light.

Basins and berths

7.132

1 **Outer harbour** consists of Port de la Criée, a wet dock entered close N of the commencement of the canalised section of the channel. There are225 berths at pontoons for small craft.

2 **Inner harbour.** The S-most 100 m of the canal, about 35 m wide, has quays on both sides. Farther N moorings are laid on both sides of the canal. The bottom is soft mud over rock. At the S end of the canal lies a basin, whose gates are left open in summer: in other seasons they are opened at LW to scour the channel. The SW side of the basin is quayed; a pontoon extends 50 m NE from its centre and provides berths for vessels up to 12 m long, 1·5 m draught.

Berthing for 280 small craft including 20 visitors is available at the various quays and the pontoon.

Port services

7.133

1 **Repairs** to hulls and engines; careening slips in inner and outer harbours.

Other facilities: yacht club.

Supplies: fuel, freshwater at quays; provisions.

Saint-Martin-de-Ré

General information

7.134

1 **Description.** Saint-Martin-de-Ré (46°12′N, 1°22′W), the principal harbour of Île de Ré, is used by small craft and fishing vessels.

The fortified town, enclosed by a wall with a citadel at the NE corner, mainly dates from the seventeenth century. Population: 2500 (2003).

Port Authority: Capitainerie, Quai Daniel-Rivaille, 17410 Saint-Martin-de-Ré. Situated on N side of wet dock entrance.

Limiting conditions

7.135

1 **Controlling depth:** the entrance channel has been reported (1983) to dry 1·6 m.

Deepest berth: W side of Bassin à Flot (7.139).

Tidal levels. See information in *Admiralty Tide Tables*. Mean spring range about 5·1 m; mean neap range about 2·5 m.

Winds more than force 4 from NE to E were reported (1988), prior to the construction of the breakwater, to make access difficult.

Arrival information

7.136

1 **Port radio:** see 1.41 for details.

Outer anchorages: in Rade de Saint-Martin (7.104); closer inshore four white mooring buoys, laid 5 cables N of the harbour entrance in a depth of 2 m, may be used by small craft less than 15 m in length for 24 hours only free of charge.

2 **Bassin à Flot:** the gates of the wet dock are open from 2½ hours before until 1 hour after HW by day in season (1st June — 30th September); from 1 hour before until 1 hour after HW at night in season and by day on Saturdays and Sundays out of season; from HW until 1 hour after HW by day on weekdays out of season.

Harbour

7.137

1 **General layout.** The harbour consists of three sections:

Avant-port, the outermost basin, sheltered NE by a detached breakwater (uncharted) and by Grand Môle on the NW side.

2 Port d'Échouage, a drying tidal basin entered from the S side of Avant-port, primarily used by fishing vessels.

Bassin à Flot, an L-shaped wet dock entered at its N end from the W side of Port d'Echouage; berths for 260 small craft, 50 reserved for visitors, maximum length 16 m.

3 **Tide gauges,** on the head of Grand Môle and on the N side of the entrance to Bassin à Flot, indicate the depth over the sill at the entrance to the wet dock (7.139). A third tide gauge, on the ramparts on the S side of the harbour entrance, registers height above chart datum.

Directions

7.138

1 **Initial position** 2½ miles NNE of harbour entrance, 1 cable ESE of Rocha Light-buoy (N cardinal) (7.100).

Leading marks:

Front: Light-beacon (white tripod green top, 7 m in height) (45°12′·6N, 1°21′·9W) standing on the head of Grand Môle.

Rear: square tower of Saint-Martin church (3 cables SSW of front mark).

2 The alignment (201½°) of these marks leads SSW to the vicinity of the NW end of the detached breakwater, passing:

ESE of Banc du Rocha (1¾ miles N of front mark) in charted depths of more than 3 m, thence:

3 Through the drying approach channel, see 7.135 for controlling depth, between the rocky flats that extend 6 cables offshore on both sides of the entrance, and;

ESE of the yacht moorings (5 cables N of the entrance) (7.136).

4 The entrance channel, about 20 m wide, then leads S passing E of the head of Grand Môle (50 m SSW of the NW end of the detached breakwater), thence SSW to Port d'Echouage entrance.

Useful marks (positions given from head of Grand Môle):

Le Couronneau Beacon (N cardinal) (8 cables ENE) standing on Pointe du Couronneau, the rocky flat extending 6 cables NE from the shore in the vicinity of the citadel.

5 Saint-Martin-de-Ré Lighthouse (white tower, red top; 13 m in height) (½ cable SE).

Light-beacon (white post, red top) (¼ cable NNE) on NW end of detached breakwater (uncharted).

Basins and berths

7.139

1 **Avant-port:** entrance 50 m wide; berths alongside Grand Môle (135 m in length) dry.

Port d'Echouage, entrance 20 m wide, is about 200 m long and 50 m wide. Berths alongside quays dry 1·5 m,

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bottom 10·3 to 0·5 m of mud on rock; use of legs unsafe. Fishing vessels have priority at all berths except for quay on S side of wet dock entrance. Gridiron (7.140) lies alongside quay on W side SW of the knuckle.

2 **Bassin à Flot.** Entrance 12 m wide, sill 0·7 m above chart datum, is closed by a gate and spanned by a swing bridge. The dock is about 40 m wide and 300 m in length overall: vessels up to 45 m long can be swung close within the entrance. Bottom alongside W side of dock is 0·8 m above chart datum, elsewhere 1·4 m above chart datum: minimum water level in dock is 3·1 m above chart datum. Careening slip at S end of W quay; building slips at N end of dock.

Port services

7.140

1 **Repairs** of all kinds carried out; gridiron in Port d'Échouage is 52 m long and reported to dry 3·5 m; careening slip in wet dock (7.139).

Other facilities: custom house; yacht club on W side of entrance to Port d'Échouage; hospital.

Supplies: fuel from pumps E side of Port d'Echouage; fresh water at most berths in wet dock; provisions.

Small craft: other harbours on the southern and eastern shores of Pertuis Breton

Loix

7.141

1 **General information.** Loix Harbour (46°13′·1N, 1°26′·2W) consists solely of a quay about 50 m in length that dries 2·1 m alongside. Its use by pleasure craft is not recommended.

Directions. Initial position 46°13′N, 1°23′W. Fosse de Loix, a sinuous channel that dries 2 m, leads 1½ miles W to the harbour passing between oyster beds shown on the chart. The inner part of the channel is marked by perches. The passage through the oyster beds is marked by beacons (port hand).

La Flotte

7.142

1 **General information.** La Flotte harbour (46°11′·3N, 1°19′·3W), used by fishing vessels and small craft, dries from 2 to 3 m. Fresh NE winds cause a scend in the inner harbour.

Port Authority: Bureau du Port, Quai Sénac Ouest, 1 7603 La Flotte; situated at the NW corner of the inner harbour.

2 **Directions.** Initial position 1 mile NNE of La Flotte Harbour.

Approaching the harbour the white sector (205°–220°) of La Flotte Light (white round tower green top, 10 m in height) on the molehead leads towards the entrance.

Closer inshore the line of bearing 212½° of a Moiré effect direction light exhibited throughout 24 hours from the molehead leads between the ledges extending 6 cables offshore on both sides of the entrance.

3 **Useful mark** (position given from La Flotte Light):

Beacon (N cardinal, wooden post 7 m high) (5 cables ENE) marking edge of ledge.

7.143

1 **Anchorage:** several moorings (white buoys) (6 cables N of La Flotte Light) for small craft are laid in charted depths of 2 m or more.

Berths:

Avant-port: mole dries from 2·1 to 2·4 m alongside, bottom mud; gridiron alongside root; pontoon berths.

2 Basin about 120 m long, 40 m wide, entrance 13 m wide: jetty on N side. Quays dry 2·5 m alongside.

Repairs to engines only; gridiron 25 m long, reported to dry 2·8 m; careening slip.

Other facilities: yacht club (E side of basin).

Supplies: fresh water at quays; provisions.

Le Plomb

7.144

1 **General information.** Le Plomb (46°12′·2N, 1°12′·1W) a very small sheltered harbour on the E shore of Pertuis Breton, used by a few fishing boats, dries muddy bottom. The entrance, about 10 m wide and reported (1983) to dry 0·6 m, lies between a mole on the NW side and a breakwater on the SE side, each about 40 m in length. A landing slip at the root of the breakwater has been reported (1983) to dry 1 m alongside.

2 **Directions.** Initial position 3 cables SW of the harbour.

Leading marks. The alignment (about 046°) of the following marks leads to the harbour entrance:

Front: Port du Plomb Light (white metal column, red top; 12 m in height) on the molehead.

Rear: Lauzières church tower (8 cables NE of front mark).

Chart 2743

Rivedoux-Plage

7.145

1 **General information.** Rivedoux-Plage harbour (46°09′·8N, 1°16′·6W) consists of a small basin, reported (1983) to dry from 3·5 to 4 m, lying between two jetties, the N-most 100 m in length. A landing slip on the S side of the N jetty dries 2·1 m.

Regulations. Vessels are forbidden to take the ground in Baie de Rivedoux between the jetties at Rivedoux-Plage and Sablanceaux (1 mile E) (7.146), but this rule does not apply to coasters and fishing vessels frequenting Rivedoux-Plage.

Directions. Initial position 1 mile NNE of Rivedoux-Plage Harbour.

2 Leading lights. The alignment (194½°) of Rivedoux-Plage Leading Lights leads SSW to the vicinity of the front light where the bottom has been reported (1983) to dry 3 m:

Front light (white turret, green top; 5 m in height) on N jetty head.

Rear light (2 white columns, green tops, white and green chequered topmark; 8 m in height) (100 m SSW of front mark).

Repairs to hulls and engines carried out.

Sablanceaux

7.146

1 **Ferry terminal** at Pointe des Sablanceaux (46°10′N, 1°15′W), used by the ferry service to La Rochelle-Pallice (1½ miles ESE) (7.190), consists of a pontoon with a light (E cardinal; 7 m in height) moored in a depth of 6 m and connected to the shore by a metal footbridge 125 m in length.

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POINTE DES BALEINES TO POINTE DE LA COUBRE

General information

Charts 2999, 3000, 3057, 2663, 2664

Route

7.147

1 The coastal route from Pointe des Baleines (46°17′N, 1°36′W), off the NW extremity of Île de Ré, to Pointe de la Coubre (45°42′N, 1°14′W), the N entrance point of La Gironde estuary, leads about 40 miles SSE to the vicinity of BXA Landfall Light-buoy (45°37′N, 1°28′W) (8.41).

The route passes WSW of Île de Ré, Île d'Oléron and the entrance to Pertuis d'Antioche (7.171), the channel between them: both these islands and the mainland farther S should be given a wide berth as their inshore waters are shallow, exposed and littered with unmarked wrecks.

Topography

7.148

1 **Île de Ré** (46°12′N, 1°25′W) is low-lying; its W coast is fronted by extensive rocky flats and backed by dunes. In heavy weather with winds from S to NW the island is covered with spray and is practically invisible.

2 **Île d'Oléron** (45°56′N, 1°17′W) from the offing appears low, with a sandy beach, and dunes covered with conifer trees. The highest dunes (elevation about 28 m) are found near Pointe de Chardonnière (45°58′N, 1°23′W) on the W coast and at Saint-Trojan-les-Bains (45°50′N, 1°13′W) near the S end of the island. The fishing port of La Cotinière (45°55′N, 1°20′W) (7.155) is prominent.

3 **Côte Sauvage,** the mainland coast between Pertuis de Maumusson (45°48′N, 1°14′W) (7.163) and Pointe de la Coubre, is similar to that of Île d'Oléron but the dunes inland are higher reaching an elevation of nearly 60 m at Gardour d'Arvert (45°46′N, 1°13′W).

Rescue

7.149

1 **Coastguard stations** (1.75):
Les Baleines (46°15′N, 1°34′W) (7.152).
Pointe de Chassiron (46°03′N, 1°25′W) (7.152).
La Coubre (45°42′N, 1°14′W) (8.39).
Lifeboat station (1.77):
La Cotinière (45°55′N, 1°20′W) (7.157)

Natural conditions

7.150

1 **Tidal streams** in the offing are weak, rotary clockwise and masked by the currents due to the wind. As Pertuis d'Antioche and Pertuis de Maumusson are approached the direction and rate of the tidal streams are influenced by the indraught and outflow of these straits, especially in the vicinity of Île d'Oléron. For details of the tidal streams see information on the chart and in *Admiralty Tidal Stream Atlas: France West Coast.*

7.151

1 **Local weather** at Pointe de la Coubre (45°42′N, 1°14′W): see 1.156 and 1.162 for climatic table.

Principal marks

7.152

1 **Landmarks:**
Les Baleines Lighthouse (grey octagonal tower, red lantern; 57 m in height). (46°1 5′N, 1°34′W), on the NW point of Île de Ré; a disused lighthouse stands ½ cable N; Les Baleines Coastguard Station (house with a white tower; radio mast exhibiting 3 red aircraft obstruction lights) stands 1 cable SSW.

2 Chassiron Lighthouse (white tower, black bands; 46 m in height) (46°03′N, 1°25′W) on the NW point of Île d'Oléron; Chassiron Coastguard Station (white round tower beside white house yellow roof) stands ½ cable N.



Chassiron Lighthouse from SW (7.152)
(Original dated 1995)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

La Coubre Lighthouse (45°42′N, 1°14′W) (8.39).

3 **Major lights:**
Les Baleines Light—as above.
Chassiron Light—as above.
La Coubre Light—as above.

Directions

(continued from 2.18 or 7.55)

7.153

1 **Initial position** 46°15′N, 1°50′W, approximately 10 miles W of Pointe des Baleines.

Route. The coastal route leads SSE to the vicinity of BXA Landfall Light-buoy (45°37′N, 1°28′W) (8.41), passing:

2 WSW of Pointe des Baleines, the rocky flat that extends from the NW point of Île de Ré to the vicinity of Les Baleineaux Lighthouse (pink tower, red top; 32 m in height) (46°16′N 1°35′W), also called Haut Banc du Nord Lighthouse, and beyond; also of the rocky flats fronting the W coast of Île de Ré, thence:

3 WSW of PA Light-buoy (safe water) (46°06′N, 1°42′W) moored, off the entrance to Pertuis d'Antioche (7.171), thence:

4 WSW of Plateau de Chardonniere, an area of rocky bottom fronting Pointe de Chaucre (45°59′N, 1°24′W) and Pointe de Chardonnière (1½ miles farther S), where the 10 m depth contour lies nearly 3 miles offshore, thence:
WSW of Banc de la Mauvaise and Banc du Matelier (8.41), the shoals extending nearly 6 miles WSW from Pointe de la Coubre (45°42′N, 1°14′W).

5 **Caution.** Vessels passing Île de Ré and Île d'Oléron should give them a berth of at least 3 miles.

In bad weather with winds from S to NW there are extremely heavy seas over depths of less than 20 m off Île de Ré. In similar conditions a line of breakers forms off

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Les Baleines Lighthouse from NW (7.152)
(Original dated 1994)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

the W coast of Île d'Oléron, extending S miles W from Pointe de Chardonnière and 4 miles offshore elsewhere.

6 Numerous dangerous wrecks, whose positions may be seen on the chart, lie within 10 miles of the coast.

7.154

1 **Useful marks:** On Île de Ré:

Conspicuous water tower (46°13′N, 1°32′W) at Saint-Clément, with Tour Carola (4 cables SE), a prominent tower, and a radio mast (red and white framework) (2½ cables SSW) in the vicinity.

Ars-en-Ré church (tall spire) (1½ miles SE of the water tower).

2 On Île d'Oléron:

Saint-Pierre-d'Oléron Church (white octagonal belfry) (45°57′N, 1°18′W) which looks like a lighthouse.

At La Cotinière (45°55′N, 1°20′W): the light on the elbow of Grand Jetée and the lifeboat station, described at 7.157.

Conspicuous water tower (45°53′N, 1°15′W).

3 On the mainland:

Marennes church spire (45°49′N, 1°06′W).

Gardour d'Avert Beacon (T-shaped topmark on framework lookout tower) standing on the wooded summit of dunes at Gardour d'Arvert (45°46′N, 1°13′W) (7.148).

Conspicuous television tower (45°44′N, 1°12·W).

(Directions for Pertuis d'Antioche are given at 7.183; directions continue for Grande Passe de l'Ouest at 8.41)

La Cotinière

Chart 3000 plan of Port de La Cotinière

General information

7.155

1 **Description.** La Cotinière (45°55′N, 1°20′W), a small artificial fishing port on the W coast of Île d'Oléron, dries. It is approached by a channel leading NE then NNW through the shoals and flats bordering the coast and entered through a dredged channel whose inner part is sheltered on its W side by a breakwater.

2 The port is used by fishing vessels only; leisure craft are not permitted to enter except in emergency.

Local knowledge is required to enter the port.

Limiting conditions

7.156

1 **Controlling depth.** The entrance channel is dredged to 0·5 m and the basins are dredged to drying 0 m.

Tidal levels at Pointe de Gatseau (7½ miles SSE): given at 7.167.

Weather. Entry is dangerous with wind or swell from SW to W.

Harbour layout

7.157

1 The harbour consists of two basins separated by Épi du Colombier, a jetty 100 m long extending SSW from the shore towards the principal light (white tower, red top; 11 m in height) (45°54′·9N, 1°19′·7W) standing on the elbow of Grande Jetée where the breakwater joins the quay on the SW side of the NW basin.

2 The SE basin is sheltered by Jetée Sud, a mole extending 150 m SW, then 125 m WNW, from the shore to the harbour entrance opposite the elbow in Grande Jetée. The entrance channel is sheltered from W by the outer part of Grande Jetée which extends 1½ cables S from the elbow.

The former lifeboat station on the head of Épi du Colombier is prominent.

Directions

7.158

1 **Initial position:** SW of La Cotinière Approach Direction Light (45°54′·5N, 1°18′·5W) at least 3 miles offshore.

Leading marks:

Front: La Cotinière Approach Direction Light (white rectangular daymark, black border, on white metal column; 6 m in height).

Rear: beacon (black rectangular topmark on black metal framework structure, white bands; 16 m in height) (3 cables NE of front mark) which is obscured by trees SE of the leading line.

2 By day the alignment (047½°) of these marks, and at night the white sector (046°–050°) of the direction light, leads NE through the outer section of the approach channel to a position 6 cables SW of the front mark.

7.159

1 **Leading lights.** The alignment (339½°) of the following lights at La Cotinière then leads NNW, through the inner section of the approach channel, to the S end of the dredged entrance channel:

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2 Front light (white turret, red top; 5 m in height) (45°54′·8N, 1°19′·8W) on the outer section of Grande Jetée, ½ cable N of the light (white tower, red top; 10 m in height) on the rubble covered breakwater head, with which it must not be confused.

Rear light (white pylon, red bands; 11 m in height) (425 m NNW of front light) seen between a tower close W and the fish market SE.

3 Thence the dredged channel, see 7.156 for depth, whose entrance is marked by a beacon (starboard hand) (½ cable ESE of breakwater head) leads N to the harbour entrance.

Useful marks (positions given from the principal light on the elbow of Grande Jetée).

4 Épi du Colombier Light (white turret, violet top; 5 m in height) (½ cable NE) and lifeboat station, on the head of the central jetty.

Jetée Sud Light (white round tower, green top; 8 m in height) (½ cable ESE) on the head of the mole.

Basins and berths

7.160

1 NW Basin: cleared of rocks to the level of chart datum; three pontoons extending SSW from the shore to within 25 m of Grande Jetée, are reserved for fishing vessels of less than 20 tonnes.

SE Basin: berths alongside Jetée Sud, where the bottom is cleared of rocks to the level of chart datum. Three pontoons extend SW from the NE side of the basin.

Port services

7.161

1 **Repairs** of a minor nature carried out; patent slip at NW corner of NW basin; careening slip at SE corner of SE basin.

Other facilities: ice factory on Épi du Colombier; fish market on Grande Jetée.

Supplies: fuel from pumps on Grande Jetée; fresh water.

Small craft

Anse de la Perroche

7.162

1 **Directions.** The alignment (027½°) of two black beacons (posts; one with square, the other with triangular topmark) (45°54′N, 1°17′W), standing about 2 cables E of La Perroche church (uncharted), leads NNE between rocky flats to an anchorage for small craft off the village.

Moorings (white buoys) for the use of small craft are laid, in the entrance to the bay, about 1½ miles SSE of La Cotinière Harbour.

Pertuis de Maumusson

General information

7.163

1 **Description.** Pertuis de Maumusson, the treacherous entrance and channel S of île d'Oléron between the S point of Île d'Oléron and the mainland, is entered over a sand-bar joining the W extremities of Banc de Gatseau and Banc des Mattes. These two mobile sandbanks extend about 1½ miles W from Pointe de Gatseau (45°48′N, 1°14′W) and Pointe d'Arvet (7 cables S) also called Pointe Espagnole respectively.

2 The channel, whose position and depth changes continually, leads 2 miles E to its junction with Chenal de Bry (7.336), the S-most section of Coureau d'Oléron (7.317), and with Chenal de la Garrigue (7.357) the W approach to La Seudre river.

7.164

1 **Controlling depth:** 2·2 m on the bar in position 1½ miles W of Pointe d'Arvet; however the controlling depth varies and may be less than the figure given above.

7.165

1 **Caution.** The bar is completely exposed to the open sea; any onshore wind or swell causes a large area of breakers to form, especially during the out-going tidal stream, making the channel very dangerous. Small craft should only attempt Pertuis de Maumusson on the last of the in-going tidal stream with no swell and calm weather or offshore wind.

7.166

1 **Pilotage.** There are no official pilots for Pertuis de Maumusson. The services of an unofficial local pilot (1.30) should be obtained by those without local knowledge.

Local knowledge is essential owing to the unstable nature of the bar. The channel buoys are re-positioned at the end of every winter, but owing to subsequent changes in the channel they may not mark the deepest water.

7.167

1 **Tidal streams.** See information on the chart for details of the tidal streams. In Pertuis de Maumusson the times of commencement and direction of the tidal streams are:

Interval from HW La Rochelle	*Direction*
–0540	E
–0050	W

2 In normal conditions the maximum rate at springs is 3 kn E-going and 4 kn W-going, but with a strong wind blowing in the same direction as the tidal stream they may attain a rate of 5 kn.

Tidal levels at Pointe de Gatseau. See information in *Admiralty Tide Tables*. Mean spring range about 4·1 m; mean neap range about 2·0 m.

Directions

7.168

1 **Initial position:** vicinity of ATT Maumusson Light-buoy (safe water) (45°47′N, 1°18′W).

Route. The approach leads about 1 mile E to the entrance of the channel over the bar, which may be distinguishable due to the colour of the water and the breakers on each side, and is marked by:

Mattes Buoy (starboard hand) moored off the extremity of Banc des Mattes, on the S side.

2 The best time to cross the bar is the hour proceeding HW slack, especially if there is a W wind.

Thence the scoured channel, marked by buoys (lateral), deepens and leads about 2 miles NE, between Banc de Gatseau (7.163) and Banc des Mattes, to a position 5 cables NE of Pointe d'Arvet marked by Galon d'Or Buoy (safe water), where it divides.

(Directions are given for Coureau d'Oléron at 7.329, and for La Seudre at 7.356).

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PERTUIS D'ANTIOCHE, LA ROCHELLE, LA CHARENTE RIVER AND COUREAU D'OLÉRON

GENERAL INFORMATION

Charts 2999, 3000

Description

7.169

1 **Pertuis d'Antioche** (46°05′N, 1°15′W) is bounded N by Île de Ré, SW by the NW part of Île d'Oléron and E by the mainland N of the entrance to La Charente river. Its shores are very low-lying.

La Rochelle city (46°09′N, 1°09′W), population 71 000 (2003), the capital of Département de la Charente-Maritime, stands at the NE corner of Pertuis-d'Antioche and contains:

2 La Rochelle-Pallice (7.190) the commercial port situated on Coureau de la Pallice, the channel between Île de Ré and the mainland E.

La Rochelle-Ville (7.226), the old port near the city centre, now an important fishing port.

La Rochelle-Les Minimes (7.242), a vast marina on the S side of the entrance to the old port.

7.170

1 **La Charente** (7.276), entered at the SE corner of Pertuis d'Antioche, leads to the small river ports of Rochefort (45°56′N, 0°58′W) (7.299) and Tonnay-Charente (3 miles farther upstream) (7.310). Access to these ports is limited by the shallow bar at the entrance and, for small craft, by Martrou Lifting Bridge (7.278) which is raised for them only at specified times.

2 **Coureau d'Oléron** (7.317), the passage between the S part of Île d'Oléron and the mainland, is an area of intensive oyster farming. Its shallow winding fairway, spanned by Viaduc d'Oléron, connects the S end of Pertuis d'Antioche with Pertuis Maumusson (7.163). La Seudre river, frequented mainly by oyster boats, flows into the SE corner of Coureau d'Oléron.

PERTUIS D'ANTIOCHE APPROACH AND ENTRANCE

General information

Charts 2999, 3000

Description

7.171

1 Pertuis d'Antioche is approached SSW of the W part of Île de Ré (46°12′N, 1°25′W) and entered between the E part of the island and Pointe de Chassiron (46°03′N, 1°25′W), the NW point of Île d'Oléron.

Fosse d'Antioche, a trench, lies parallel to the S coast of Île de Ré in the middle of the entrance. Its broad outer sill describes an arc from the W end of Île de Ré to Pointe de Chassiron.

Topography

7.172

1 Île de Ré: the W coast is described at 7.148. On its S coast low cliffs reach a maximum elevation of 11 m near the centre. The extensive foreshore consists mainly of rocky flats. The 10 m depth contour lies from 1½ to 3 miles offshore.

Île d'Oléron: the NW part is flat and low-lying. The coast in the vicinity of Pointe de Chassiron consists of low cliffs less than 10 m high, and is fronted by rocky flats.

Controlling depth

7.173

1 The controlling depth in the charted approach channel (7.176) is 19·3 m over the outer sill of Fosse d'Antioche, as shown on the chart, in position 46°08′N, 1°36′W.

Adverse conditions

7.174

1 **Poor visibility.** The coastline is sometimes obscured by haze or spray, especially during the forenoon. In these conditions it is easier to make a landfall at night when the major lights are visible at a greater distance.

Pilotage

7.175

1 La Rochelle pilots boarding place is located at the inner end of the charted approach channel, see 7.206 for further details. Les Sables-d'Olonne pilots (7.68) are qualified to pilot vessels as far as the limits of La Rochelle-Pallice.

Traffic regulations

7.176

1 **Approach channel and waiting area.** Vessels exceeding 1600 grt laden with hydrocarbons or dangerous cargo are required to use the 1 mile wide approach channel, shown on the chart, that leads E from position 46°08′N, 1°42′W to position 46°06′N, 1°17′W and thence, for vessels proceeding to ports on La Charente, SSE to position 46°02′N, 1°13′W. The designated waiting area for these vessels, shown on the chart, lies between:

Parallels 46°03′·0N, and 46°05′·5 N.

Meridians 1°13′W and 1°17′W.

2 **Caution.** A wreck (46°03′·5N, 1°15′·6W) with a least depth of 11·2 m over it lies within this area.

See 1.54 for details of the regulations that apply to all vessels entering or crossing the approach channels and the entry channels to La Rochelle-Pallice and La Charente that are subject to compulsory pilotage. The associated signal station is Chassiron Coastguard Station (46°03′N, 1°25′W) (7.152).

7.177

1 **La Rochelle access channels and anchorages.** The following regulations are in force in La Rochelle-Pallice and La Rochelle-Ville access channels, E of meridian 1°17′W, and anchorages:

Vessels constrained by their draught shall exhibit the lights or shape prescribed by Rule 28 of *International Regulations for Preventing Collisions at Sea, 1972*.

2 Passing and overtaking manoeuvres shall be made at reduced speed.

Vessels of less than 20 m in length, ferries, fishing boats and small craft shall keep out of the way of large vessels navigating the channels.

Vessels laden with hydrocarbons or dangerous cargo shall have their radar, VHF radio and steering gear in good working order.

7.178

1 **Prohibited anchorages.** Anchoring and diving are prohibited within 50 m of the wreck (46°11′N, 1°33′W) lying 1¼ miles SSW of Pointe de Grignon (46°12′N, 1°32′W) the SW corner of Île de Ré. Anchoring and fishing are prohibited within 500 m of the wreck (7.184) lying 6 miles SSW of Pointe de Grignon.

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Dumping ground

7.179

1 Explosives are dumped close N of the eastern waiting area, in 46°05·7N, 1°13′·4W.

Rescue

7.180

1 **Coastguard stations** (1.75):
Les Baleines (46°15′N, 1°34′W) (7.152).
Chassiron (46°03′N, 1°25′W) (7.152).
Lifeboat (1.77) stationed at:
La Rochelle-Les Minimes (46°09′N, 1°10′W) (7.242).

Natural conditions

7.181

1 **Tidal streams.** In the approaches to Pertuis d'Antioche the tidal streams are rotary clockwise, see *Admiralty Tidal Stream Atlas: France West Coast* for further details. In the entrance they set generally in the direction of the channel, attain a maximum rate of about 2 kn at springs and reverse direction at about –0530 and –0015 HW Pointe de Grave: for further details see information on the chart.
Climatic table. See 1.156 and 1.161.

Principal marks

7.182

1 **Landmarks:**
Les Baleines Lighthouse (46°15′N, 1°34′W) (7.152).
Conspicuous water tower (46°11′N, 1°21′W).
Chauveau Lighthouse (white truncated tower, red top; 31 m in height) (46°08′N, 1°16′W).
Chassiron Lighthouse (46°03′N, 1°25′W) (7.152).

2 **Major lights:**
Les Baleines Light—as above.
Chauveau Light—as above.
Chassiron Light—as above.
Île d'Aix Light (46°00′·7N, 1°10′·6W) (7.252).

Directions

(continued from 7.154)

7.183

1 **Initial position** 46°08′N, 1°42′W, about 2½ miles N of PA Landfall Light-buoy (7.153).
Route. The approach channel shown on the chart (axis 098°–278°), in which the traffic regulations given at 7.176 apply, leads 17 miles E into Pertuis d'Antioche through Fosse d'Antioche, a trench about 1 mile wide between 20 m depth contours on each side.

7.184

1 **Approaching Fosse d'Antioche,** the charted approach channel passes:
Over the deepest part of the sill (7.173) at the outer end of Fosse d'Antioche, and:
N of a wreck (46°06′N, 1°35′W) with a least depth of 12 m. A wave recorder light-buoy (special) is moored close S.

2 **Clearing bearing.** The line of bearing 132° of Chassiron Light (46°03′N, 1°25′W) (7.152) passes the W end of Île de Ré parallel to and about 1½ miles off the 10 m depth contour, in a least charted depth N of the approach channel of 17 m. Vessels should not pass SW of Île de Ré in lesser depths, nor closer to the island than 3 miles.
Useful marks on the W end of Île de Ré: see 7.154.

7.185

1 **Entering Pertuis d'Antioche,** the charted approach channel continues E to the pilot boarding place (46°06′N, 1°16′W) (7.206) and the waiting area (2 miles SSE) (7.176), passing:
S of Chanchardon Light (black octagonal tower, white base; 20 m in height) (46°10′N, 1°28′W) which stands at the extremity of Pointe de Chanchardon, the rocky flat that extends 2¼ miles SSE from the W end of Île de Ré, thence:

2 N of Rocher d'Antioche (46°04′N, 1°23′W) the drying reef that extends 1½ miles NNE of Pointe de Chassiron and is marked by Rocher d'Antioche Light-beacon (N cardinal; tower 27 m in height), thence:
S of Plateau de Chauveau that extends 2 miles SSW from Pointe de Chauveau the SE point of Île de Ré and is marked at its SE corner by Chauveau Light-buoy (S cardinal) (46°07′N, 1°16′W).

3 **Caution.** Vessels approaching from S should give Pointe de Chassiron and Rocher d'Antioche a wide berth as there is usually a heavy sea in their vicinity over depths of 10 m or less which lie up to 2 miles offshore.
Useful marks on the S coast of Île de Ré:
La Couarde-sur-Mer Church (spire) (46°12′N, 1°25′W).
Conspicuous tower (46°11′N, 1°23′W).
Sainte-Marie-de-Ré Church (belfry) (46°09′N, 1°19′W).

7.186

1 **At night** the line of bearing 075° of a white sector of Chauveau Light (46°08′N, 1°16′W) (7.182) leads into the entrance of Pertuis d'Antioche to a position (46°06′N, 1°26′W) where Chassiron Light (46°03′N, 1°25′W) (7.152) bears 165°, passing:

2 Through the red sector (103°–118°) of Île d'Aix Light (46°00′·7N, 1°10′·6W) (7.252) that covers the dangers lying NNE of Pointe de Chassiron, and:
Midway between Pointe de Chassiron and Pointe de Chanchardon (7.185).
Thence Fosse d'Antioche leads E as described above.

3 **Clearing bearings:**
The 094° limit of a white sector of Chauveau Light passes S of Chanchardon Light, which is covered by a red sector, in a least charted depth of 13 m.
The 057° limit of a white sector of Chauveau Light passes NNW of Rocher d'Antioche, which is covered by a red sector, in a least charted depth of 8 m, but attention is drawn to the caution at 7.185.

(Directions continue for La Rochelle-Pallice at 7.215; for La Rochelle-Ville at 7.236; and for the approaches to La Charente and Coureau d'Oléron at 7.253)

Waiting anchorage

7.187

1 **Rade des Basques** (46°05′N, 1°15′W) in the middle of Pertuis d'Antioche provides anchorage in depths of 11 to 15 m, bottom mud very good holding: it is exposed to W winds but any swell from that direction is very attenuated.
The recommended berth is from 1 to 2 miles S of the parallel of Chauveau Light-buoy (S cardinal) (46°06′·6N, 1°16′·0W) (7.185), on the line of bearing 135° from the position of the light-buoy, depth 15 m.

2 Vessels more than 1600 grt carrying hydrocarbons or dangerous cargo must anchor in the designated waiting area (7.176).
Caution. Vessels are advised not to anchor on Le Clône (46°05′·5N, 1°17′·0W), a rocky bank on which there is a heavy sea in strong SW winds.

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Saint-Denis-d'Oléron from SE (7.189)
(Original dated 1995)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

Small craft

Anse du Martray
7.188

1 **Description.** Anse du Martray (46°11′N, 1°28′W) is the name given to the area of shallow water lying E of Pointe de Chanchardon (7.185) and W of Pointe de la Couarde, another rocky flat that extends about 1 mile offshore.

Anchorage. Several yacht moorings (white buoys) are laid in the positions shown on the chart where there are charted depths of 2 m or more.

Caution. The drying areas of Pointe du Chanchardon and Pointe de la Couarde are dedicated to the culture of shellfish and may contain stakes that cover at HW.

Chart 3000 plan of Port de Saint-Denis d'Oléron

Saint-Denis-d'Oléron
7.189

1 **Anchorage:** Anse de la Fosse (46°02′·5N, 1°21′·5W), an indentation in the rocky flats off the village of Saint-Denis-d'Oléron, is entered about 1 mile E of the beacon (N cardinal; iron structure 10 m high) marking Les Palles, rocks on the N edge of the flat. Three yacht moorings (white buoys) are laid in the S part of the bay in the area indicated on the chart.

2 **Marina.** Port Saint-Denis d'Oléron (46°02′·2N, 1°22′·0W), also called Port d'Antioche, is protected by two breakwaters. Lights are exhibited at the head of each breakwater.

The entrance facing S is approached from E by a channel marked by beacons (lateral). A rocky flat in the entrance forms a sill that dries 1·5 m.

3 There are 750 berths alongside pontoons for small craft maximum draught from 1·5 to 3·5 m, 70 of them reserved for visiting small craft up to 14 m in length.

Port radio, see 1.41 for further details.

Supplies: fuel, fresh water.

COUREAU DE LA PALLICE AND LA ROCHELLE-PALLICE

General information

Chart 2743

Position
7.190

1 La Rochelle-Pallice harbour (46°09′N, 1°14′W) is situated on the E side of Coureau de la Pallice, the channel separating the E end of Île de Ré from the mainland.

Function
7.191

1 La Rochelle-Pallice is the only harbour between La Loire and La Gironde estuaries that can provide sheltered anchorage and berths for large vessels. La Rochelle is described at 7.169.

Port limits
7.192

1 Port limits are a line joining the following:

Light at the head of Port de Pêche S breakwater (46°09′·0N, 1°13′·6W) (7.218).

Position 46°09′·3N, 1°14′·8W.

Position 46°10′·0N, 1°14′·6W.

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La Rochelle-Pallice from W (7.190)

(Original dated 1994)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

The root of Viaduc du Président Christian Morch (7.210) at Pointe Saint-Marc (46°10′·0N, 1°13′·4W).

Approach and entry
7.193

1 The principal approach is through Pertuis d'Antioche (7.169); small vessels can approach through Pertuis Breton (7.89). The port is entered through Coureau de la Pallice.

Submarine cables and pipelines
7.194

1 Anchoring, dredging and trawling are prohibited in an area of submarine cables and pipelines which lies between Île de Ré bridge (46°10′·3N, 1°14′·5W) and a line joining Pointe des Sablanceaux (46°9′·9N, 1°15′·2W) and the root of Môle d'Escale.

Traffic
7.195

1 In 2003 the port was used by 1158 vessels totalling 14 305 892 dwt.

Port Authority
7.196

1 Capitainerie des Ports de la Rochelle, Terre-Plein de l'Écluse, BP2042 La Pallice, 17009 La Rochelle Cedex. Office situated N side of Bassin à Flot entrance.

Website: www.larochelle.port.fr.

Limiting conditions

Controlling depth
7.197

1 Controlling depths in the approaches to the berths in different parts of the harbour vary as follows:

Môle d'Escale: 10·5 to 11·0 m, as indicated on the chart, depending on the berth.

Bassin Chef-de-Baie: 9 m, maintained by continual dredging.

Avant-Port: cleared of rocks to 5 m and maintained at 3·5 m by regular dredging.

Bassin à Flot: sill depth 4 m.

Deepest and longest berths
7.198

1 Môle d'Escale: W side of tanker terminal (7.221)
Bassin Chef-de-Baie: at Digue Nord (7.222).

Tidal levels
7.199

1 See information in *Admiralty Tide Tables*. Mean spring range about 5·1 m; mean neap range about 2·5 m.

Abnormal levels
7.200

1 Levels are increased by strong S winds, decreased by strong N winds.

Density of water
7.201

1 Density of water is reported to vary from 1·023 to 1·026 g/cm^3.

Maximum size of vessel handled
7.202

1 Maximum size of vessel handled at tanker berths see 7.221. For limiting dimensions of vessels using Bassin à Flot see 7.223.

Arrival information

Port radio
7.203

1 There is a port radio station, see *Admiralty List of Radio Signals Volume 6(2)* for details. Vessels entering, leaving or shifting berth are urged to keep watch.

Notice of ETA
7.204

1 ETA must be given 18 hours in advance to the Port Authority. The message must also report: expiry date of Oil Pollution Liability Certificate and insurers name; status of main engines, rudder, winches, windlass, cargo pumps, radar and VHF radio.

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Outer anchorages

7.205

1 **Waiting anchorages** in Pertuis d'Antioche are described at 7.187.

Rade de la Pallice, off the SE end of Île de Ré between Pointe des Sablanceaux (46°10′N, 1°15′W) (7.146) and Pointe de Chauveau (1½ miles SW), provides sheltered anchorage, except in winds between SE and SW which cause a choppy sea during the S-going tidal stream, in depths from 6 to 13 m, mud good holding.

Pilots

7.206

1 **Compulsory pilotage:** from Chauveau Light-buoy (S cardinal) (46°07′N, 1°16′W) (7.185) to La Rochelle-Pallice; also to the ports of La Rochelle-Ville (7.230) and Marans (7.116). Vessels shall set watch on VHF 2 hours before arrival at the light-buoy.

Exemption: Vessels less than 55 m in length proceeding to La Rochelle-Pallice, provided they can communicate with the Port Authority via port radio.

2 **Boarding place:** pilots board in position 46°05′·6N, 1°16′·0W, 1 mile S of Chauveau Light-buoy. Vessels awaiting the Pilot should, in the absence of other instructions, anchor S of Chauveau Light-buoy and continue to watch VHF.

Pilot vessel: see 1.31 for description of standard French markings.

Tugs

7.207

1 Three tugs, including one ocean-going, are based at La Rochelle-Pallice: they are equipped for fire-fighting and with VHF radio. Tankers of 35 000 dwt or more must use four tugs when berthing at Môle d'Escale; the fourth tug being obtained from Bordeaux (8.148) when required.

Traffic regulations

7.208

1 **Navigation.** See 7.177 for regulations concerning navigation in the waiting anchorages and access channel.

Tankers: berthing at Môle d'Escale (7.210) is usually restricted to HW slack, but vessels may berth on the W side at LW if their draught permits.

7.209

1 **Bassin à Flot.** The gates are opened from 2 hours before to 1 hour after local HW by day and at night. At other times vessels may be passed through the lock as follows:

By day: at any time for vessels leaving; for vessels entering, as dictated by the time at which loading or unloading is due to begin but only if this precludes entry when the gates are open.

At night: at any time but only for vessels leaving.

2 Requests for locking must be made to the Port Authority (7.193):

At least 1 hour before entry for the periods 0800 to 1200 and 1400 to 1800.

Before 1000 for the period 1200 to 1400.

Before 1700 for all other times.

Harbour

General layout

7.210

1 La Rochelle-Pallice Harbour comprises (listed from W to E):

Môle d'Escale (46°09′·7N, 1°14′·3W), an artificial island on which there are warehouses; used primarily for berthing passenger vessels, oil tankers and vessels under repair that are too large to enter Bassin à Flot. Viaduc du Président Christian Morch, a 1100 long bridge on piles, connects it with the shore ENE.

2 Bassin Chef-de-Baie, the outer tidal basin with a berth for grain ships on N side and for Ro-Ro and general cargo vessels on S side.

Avant-Port, the inner tidal basin, whose berths on the NW side are reserved for tankers and grain ships.

Bassin à Flot, the wet dock entered from the E corner of Avant-Port, provides general cargo and repair berths and entry to dry docks.

3 Port de Pêche de Chef-de-Baie, the harbour for fishing vessels, lies SE of Bassin Chef-de-Baie and is protected by breakwaters.

Hazards

7.211

1 **Ferries** ply between the terminal on the N side of Bassin à Flot entrance and the terminal at Pointe des Sablanceaux (1½ miles W) (7.146).

Scend is experienced at the berth on the S side of Bassin Chef-de-Baie during NW winds.

Traffic signals

7.212

1 International Port Traffic Signals are exhibited from the signal mast at the head of Nouvelle Jetée Sud (7.218).

Permission to enter or leave harbour may be requested by sounding four prolonged blasts.

Natural conditions

7.213

1 **Flow.** In Coureau de la Pallice the flow is much influenced by the wind. Generally the tidal stream sets N when the tide is rising and S when it is falling, see information on the chart for further details. Winds from SE to W produce a N-going current, those from NW to E a S-going current: with force 5 winds the rate is about 1 kn with a NW wind, about ½ kn with winds from NNW and from SSE to SSW. With a strong NW wind the flow in the vicinity of the harbour may set S continuously and attain a maximum rate of 3 kn or more.

2 **Climatic table:** see 1.156 and 1.161.

Landmarks

7.214

1 Chauveau Lighthouse (46°08′N, 1°16′W) (7.182).

Le Lavardin Light-beacon (isolated danger; tower 21 m in height) (46°08′N, 1°14′W).

Tower of the old Gare Maritime (46°09′·8N, 1°14′·3W) (7.216) on Môle d'Escale.

Conspicuous white grain silo (46°09′·7N, 1°13′·5W) standing on N side of Avant-Port.

Tour de la Lanterne (46°09′·4N, 1°09′·4W) (7.235).

Directions

(continued from 7.186)

Entering Coureau de la Pallice

7.215

1 **Initial position** 46°06′N, 1°17′W, at the E end of Fosse d'Antioche (7.171) and the charted approach channel (7.176).

La Rochelle Leading Lights:

Front light (red round tower, white bands; 14 m in height) (46°09′·4N, 1°09′·0W) whose intensified sector (056°–062°) is shown on the chart.

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2 Rear light (white octagonal tower, green top; 23 m in height) (235 m ENE of front light), which is obscured by Tour Saint-Nicolas (80 m W of front light) (7.237) between the bearings of 061° and 065° as shown on the chart.

3 The alignment (059°) of these lights, exhibited also by day but with different characteristics, leads ENE to a position 4 cables NW of Roche du Sud Light-buoy (W cardinal) (46°06′·4N, 1°15′·1W) (7.236) passing:

SSE of Chauveau Light-buoy (S cardinal) (46°06′·6N, 1°16′·0W) (7.185).

Approaching Môle d'Escale

7.216

1 **Leading marks:**

Front: white rectangular mark painted on the S wall of Môle d'Escale (charted as beacon) (46°09′·6 N, 1°14′·3W).

Rear: Môle d'Escale Direction Light (grey square tower of old Gare Maritime building; 36 m in height) (340 m NNW of front mark).

By day the alignment (016°) of these marks, at night the white sector (014¾°–017¼°) of the direction light, leads NNE through Coureau de la Pallice, passing (positions given from direction light):

2 ESE of Plateau de Chauveau (7.185) whose ESE edge is covered by the red sector, and:

WNW of Plateau du Lavardin that extends 6 cables S from Le Lavardin Light-beacon (isolated danger) (1½ miles S) (7.214), thence:

ESE of Roches de Chauveau (2½ miles SW), a rocky flat that extends 7 cables SSE and SSW from Pointe de Chauveau (7.185), with Chauveau Lighthouse (7.182) marking the SE corner, thence:

3 Close ESE of an unmarked 9·7 m patch (8 cables SSW), covered by the red sector, and:

ESE of Marie-Anne Light-buoy (E cardinal) marking the wreck of the vessel *Marie-Anne* (8 cables SW).

4 **Caution.** The front leading mark may be obscured if a vessel is secured at the E berth of Môle d'Escale tanker terminal (1 cable SSW of front mark). By day, if the front leading mark is unclear, it is reported that the centre of the S part of Mole d'Escale can be used until the white mark becomes visible.

7.217

1 **Useful marks** on Môle d'Escale (positions given from direction light):

Light-beacon (S cardinal, metal mast 3 m in height) (4 cables SSW) on the S extremity of the tanker terminal.

Light-beacon (white pylon, red top; 4 m in height) (2 cables S) at SE corner.

Light (green column 1 m in height) (1 cable WNW) at NW corner.

Entering harbour

7.218

1 A dredged channel, shown on the chart, leads ENE into Bassin Chef-de-Baie, see 7.197 for controlling depths, passing:

NNW of an obstruction, least depth 8·5 m, lying 1 cable WSW of the head of Nouvelle Jetée Sud, a breakwater, surmounted by a light-beacon (white structure, green top; 11 m in height) (46°09′·3N, 1°13′·9W), thence:

2 NNW of the head of Nouvelle Jetée Sud, thence:

SSE of the head of Môle Nord, a mole, surmounted by a light-beacon (grey tower red top, 9 m in height) (2 cables NNE).

7.219

1 **Entering Avant-Port** the dredged channel leads NE, passing (positions given from the head of Môle Nord):

SE of Môle Nord, and:

2 NW of the light-buoy (W cardinal) (2 cables ESE) marking the NW corner of the undredged E portion of Bassin Chef-de-Baie, thence:

NW of the head of Jetée Sud (2½ cables E), the breakwater on the S side of Avant-Port, surmounted by a light-beacon (white beacon, green top; 4 m in height).

7.220

1 **Leading lights:** The alignment (085°) of the leading lights on the old submarine pens at the E end of Basin à Flot indicates the axis of the lock entrance to the basin:

Front light (red structure 19 m in height) (46°09′·6N, 1°12′·6W).

Rear light (red rectangular topmark, white stripe, on white column, red top; 29 m in height) (154 m E of front light).

Basins and berths

Môle d'Escale

7.221

1 Môle d'Escale provides berths on its E, W and NW sides; all are quayed except for the N-most 300 m of the E side which is faced with piles; the berths are dredged to a width of 40 m in the N part of the E side and 50 m elsewhere.

Appontement Pétroliers, a tanker terminal, extends 420 m S from the SW corner of Môle d'Escale and provides a berth on each side.

Details of the largest berths for different categories of vessel are:

Berth (side)	*Length (m)*	*Depth (m)*	*Remarks*
Appontement Ouest (W)	350	16·0	Tankers up to 120 000 dwt, 280 m long
5 and 6 (W)	381	14·0	Handles general cargo and grain
7 (NW)	225	11·0	Repair berth for vessels too large to enter Bassin à Flot.

Outer harbour

7.222

1 Basins, and the largest berths in them, are:

Berth (side of basin)	*Length (m)*	*Depth (m)*	*Remarks*
Bassin Chef-de-Baie Quay (S)	180	14	Berth for vessels up to 210 m in length; Ro-Ro facility
Môle Nord (N)	About 250	14	Berth for bulk grain ships up to 100 000 dwt
Avant-port Quai Modéré Lombard (N)	About 400	9	Two berths for tankers or bulk grain ships.

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Bassin à Flot

7.223

1 Bassin à Flot, the wet dock, is 565 m long and 201 m wide; the E end is divided into two unequal sections by Quai de l'Entrepôt, 190 m in length; vessels up to 165 m in length and 8 to 9 m draught, depending on the tide, can be accommodated. The entrance lock has an effective width of 21·3 m; length 167 m; depth 4 m. Details of largest berths, listed clockwise from the entrance, are:

Berth (side of basin)	*Length (m)*	*Remarks*
Quai Carnot (N) Nos 1–4	565	No 1 is a Ro-Ro berth
Berth (side of basin)	*Length (m)*	*Remarks*
Quai Bouquet de la Grye (S) Nos 9–11	500	Nos 9 and 10 general cargo, No 11 repair and refitting berth
Quai Camaret (W)	about 80	Repair and fitting out berth.

Port services

7.224

1 **Repairs** of all kinds carried out by shipyard at SE corner of Bassin à Flot. Two dry docks; the larger 176 m long, 22 m wide, sill 3·5 m below chart datum. Repair berth at Môle d'Escale (7.221).

Other facilities:

Deratting exemption certificates issued.

Hospital at La Rochelle-Ville (7.241).

Supplies: fuel oil supplied at all berths by tanker lorry; fresh water at all berths; provisions.

Small craft

7.225

1 **Moorings** (white buoys) for small craft are laid in Anse de Loubye on the W side of Coureau de la Pallice in the position (46°09′·2N, 1°15′·5W) shown on the chart.

LA ROCHELLE-VILLE AND APPROACH

General information

Chart 2743

7.226

1 **Position.** La Rochelle-Ville Harbour (46°09′N, 1°09′W), the old port of La Rochelle, lies on the S side of the city at the head of an inlet entered between Pointe des Minimes (46°08′N, 1°10′W), the site of La Rochelle-Les Minimes Marina (7.242), and Pointe de Chef-de-Baie (1½ miles WNW).

2 **Function.** La Rochelle-Ville is one of the most important fishing ports in France and is equipped for the rapid handling, processing and despatch of fish. The three small craft harbours make it one of the largest yachting centres in the country. For details of the city see 7.169.

Port limits are a line joining Pointe des Minimes Light-beacon (7.236) and the SE extremity of the breakwater close SW of Port Neuf (46°09′N, 1°11′W).

3 **Approach and entry.** The approach leads ENE from the S end of Coureau de la Pallice through Rade de la Rochelle to the vicinity of Tour Richelieu (46°09′N, 1°10′W) (7.235), whence dredged channels lead ENE to La Rochelle-Ville Harbour and SE into La Rochelle-Les Minimes Marina.

Port Authority: Capitainerie du Port, situated on the N side of the outer basin entrance.

Limiting conditions

7.227

1 **Controlling depth** 0.5 m in the buoyed entrance channel. which silts at a maximum rate of 0·5 m a year and is dredged annually.

Deepest berths: in outer basin (7.238).

Tidal levels. See information in *Admiralty Tide Tables*. Mean spring range about 5·1 m; mean neap range about 2·5 m.

Maximum size of vessel handled; draught 0·3 m less than the height of the tide, allowing for 0·5 m of silting in the channel; length and beam as given at 7.238 for outer basin.

La Lanterne *Tour de la Chaîne* *Tour Saint-Nicolas*



Leading Lights

La-Rochelle-Ville from SW (7.226)

(Original dated 1996)

(Photograph – Mr T S Plews, Yacht "Du Bleiz")

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Arrival information

Port radio
7.228

1 There is a port radio station, see *Admiralty List of Radio Signals Volume 6(2)* for details.

Outer anchorage
7.229

1 Vessels awaiting the tide to enter harbour anchor in Rade de la Rochelle on both sides of the alignment (059°) of La Rochelle Leading Lights (7.215), in depths of 3 to 5 m, bottom mud very good holding, sheltered from N to SE.

Pilotage and tugs
7.230

1 **Pilotage:** details are given at 7.206. It has been reported (1986) that warships are exempt pilotage but that a pilot is advisable for first time entry.

Tugs are available from La Rochelle-Pallice (7.207).

Regulations
7.231

1 **Navigation.** See 7.177 for regulations concerning navigation in the approach and entrance channels. Permission to enter or leave harbour is given by the port radio station.

Anchorage prohibited: in the entrance channel.

Anchoring and fishing are prohibited within 300 m of Pointe des Minimes Light-beacon (46°08′·3N, 1°10′·7W).

Harbour

General layout
7.232

1 La Rochelle-Ville Harbour consists of three basins:

Bassin Extérieur, the L-shaped outer wet dock entered at its NW corner from the inner end of the dredged channel; used by small craft and fishing vessels.

2 Bassin d'Échouage, the old port, entered between Tour Saint-Nicolas (46°09′·4N, 1°09′·1W) (7.237) and Tour de la Chaîne (60 m W); now mainly used as a small craft harbour.

Bassin Intérieur, the inner wet dock entered from the SE corner of Bassin d'Echouage, used mainly by harbour service craft, small craft and trawlers laid up or under repair.

Traffic signals
7.233

1 Traffic lights (Diagram 7.233) are exhibited, from the N part of the bascule bridge spanning the entrance to Bassin Extérieur, to regulate the movement of vessels through the gate.

Signal	*Meaning*
	Vessels may proceed provided the passage of merchant ships is not obstructed.
	No vessel shall proceed.

Traffic Signals (7.233)

Natural conditions
7.234

1 **Tidal streams** in the approaches: see information on the chart.

Climatic table: see 1.156 and 1.161.

Principal marks
7.235

1 **Landmarks:**

Chauveau Lighthouse (46°08′N, 1°16′W) (7.182).

Le Lavardin Light-beacon (46°08′N, 1°14′W) (7.214).

Tour Richelieu Light (red octagonal tower 17 m in height) (46°09′N, 1°10′W).

Tour de la Lanterne (46°09′·4N, 1°09′·4W), also called Tour des Quatre-Sergents, a conspicuous tower with a spire.

2 **Major light:**

Chauveau Light—as above.

Directions
(continued from 7.186)

Approach and dredged channel
7.236

1 **Initial position** 46°06′N, 1°17′W.

La Rochelle Leading Lights. The alignment (059°) of leading lights described at 7.215 leads 6½ miles ENE to the entrances to Bassin Extérieur and Bassin d'Echouage, passing:

2 SSE of Chauveau Light-buoy (S cardinal) (46°06′·6N, 1°16′·0W) (7.185), thence:

NNW of Roche du Sud Light-buoy (W cardinal) (6 cables ESE) marking the shoal of the same name, thence:

SSE of the spoil ground (46°08′N, 1°14′W), shown on the chart and marked by buoys (S and E cardinal), thence:

3 NNW of Les Minimes Light-buoy (W cardinal), thence:

NNW of the rocky flat, marked by a light-buoy (starboard hand), that surrounds Pointe des Minimes (46°08′·4N, 1°10′·4W), thence:

4 NNW of Digue Lazaret, the W breakwater of Port des Minimes, and:

SSE of Tour Richelieu Light (7.235); marking the S extremity of Digue du Cardinal, a rocky flat, and:

Through the 35 m wide dredged channel (7.227) marked by Nos 2, 4, 6 and 8 Buoys (port hand) and bordered by drying mud flats.

5 **Caution.** It is essential to keep exactly on the alignment when in the dredged channel. The bottom is hard sand: grounding is liable to cause severe damage.

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7.237

1 **Useful marks** (positions given from Tour Saint-Nicolas):
Tour Saint-Nicolas (square tower) (46°09′·4N, 1°09′·1W) standing on E side of Bassin d'Échouage entrance.
Tour de la Chaîne (¼ cable WNW).
Cathedral (square belfry with roof) (3 cables N).
Notre-Dame Church (spire) (5½ cables NE).
Tower of railway station (4 cables ESE).

Basins and berths

Bassin Extérieur

7.238

1 The entrance to the outer non-tidal basin is 16·3 m wide; the sill is 1·1 m below chart datum but is usually covered by about 0·6 m of silt.

The depth of water in the basin is maintained at 4·3 m.

Maximum dimensions of vessels permitted entry: beam 14 m; length 100 m, as they have to be swung close within the entrance.

2 The gate is opened from 2 hours before until 45 minutes after HW by day and at night.

There is 850 m of quay; yachts have priority for berths.

A patent slip (7.241) is situated at the S end of the S arm.

Bassin d'Échouage

7.239

1 The entrance to the tidal basin is 25 m wide; depths in the basin decrease from 0·3 m in the entrance to drying 1·5 m at Quai Duperré on the N side.

2 Off Quai Wilson, the NW side of the basin, an area (uncharted) 120 m long by 60 m wide has been deepened to 2·5 m near the entrance and 0·8 m towards Quai Duperré and provided with pontoon berths for 100 small craft up to 10 m in length; the SE-most pontoon is reserved for visitors.

A gridiron 75 m in length, that dries 3·4 m, lies alongside the NE end of Quai de Carénage, the SE side of the basin.

Bassin Intérieur

7.240

1 The entrance to the inner non-tidal basin is 10·2 m wide: the sill is 0·5 m above chart datum but the bottom within the basin is 1·2 m above chart datum.

It has been reported (1984) that the depth of water in the basin is maintained at 3 m.

2 The gate is opened from 2 hours before until 30 minutes after HW by day and, from 1st June until 30th September, at night: from 1st October until 31st May it is only opened at night if requested; application must be made to Capitainerie du Port before 1800. The entrance is spanned by a sliding footbridge that is opened on request.

There are berths for 100 small craft, maximum length 35 m, at pontoons and quays.

Port services

7.241

1 **Repairs** of all kinds by several shipyards; gridiron in Bassin d'Échouage, see 7.239 for details.

Other facilities: custom house at Quai Duperré; hospital; yacht club S side of inner basin entrance.

Supplies: fuel oil by pipeline in Bassin Extérieur or by tanker lorry; marine diesel from self-service station near the entrance to the outer basin; fresh water at quays and pontoons; provisions.

La Rochelle-Les Minimes Marina

General information

7.242

1 **Description.** Port des Minimes (46°08′·8N, 1°10′·0W), situated on the S side of the entrance to La Rochelle-Ville harbour, provides berthing and facilities for 3000 small craft including 300 visitors.

Port Authority: Capitainerie, Port des Minimes, BP145, 17005 La Rochelle Cedex. Situated on Môle Central.

Controlling depth: as given at 7.227.

2 **Maximum size** of craft handled: length 25 m, draught 2·5 m.

Deepest berth: 2·5 m reported (1983) near the centre of W and NE basins.

Port radio keeps 24 hour watch; see 1.41 and t *Admiralty List of Radio Signals Volume 6(2)* for further details.

7.243

1 **Layout.** Môle Central separates the marina into three basins: Bassin Bout Blanc (NE); Bassin Marillac (SE) and Bassin de Lazaret (W).

A pontoon extending N from Môle Central provides reception berths for visitors. Berths at the two E-most pontoons extending N from the S side of Bassin de Lazaret are reserved for visitors.

Directions

7.244

1 **Initial position:** 1 cable E of Tour Richelieu (7.235).

Entrance channel, about 50 m wide, dredged to 0·8 m, marked on its NE side by M Buoy (W cardinal) and M2, M4 Buoys (port hand), leads SE into the marina, passing (positions given from Tour Richelieu):

2 NE of the head of Digue Lazaret, surmounted by a light-beacon (white tower, green top; 7 m in height) (1½ cables SE), thence:
SW of the head of Digue du Bout Blanc, surmounted by a light beacon (white turret, red top; 5 m in height) (2 cables ESE).

Port services

7.245

1 **Repairs** of all kinds carried out. 50 and 13-tonne boat lifts; 12-tonne mobile crane; privately operated crane may be available to lift craft up to 25 tonnes.

Other facilities: two 3-tonne fixed cranes; two yacht clubs on Môle Central; custom house at La Rochelle-Ville (7.241).

Supplies: fuel from service station NW side of Môle Central; fresh water at pontoons; provisions.

APPROACHES TO LA CHARENTE AND COUREAU D'OLÉRON

General information

Charts 3000, 2747

Description

7.246

1 La Charente estuary (7.276) and Coureau d'Oléron (7.317) are approached through the SE part of Pertuis d'Antioche that lies between the NE coast of Île d'Oléron and the mainland E. The SE part of Pertuis d' Antioche is encumbered by La Longe and Le Boyard (46°01′N, 1°14′W), an extensive shoal of rock overlaid with sand, that is especially dangerous in bad weather due to the formation of eddies and breakers.

2 Passage de l'Est (7.253), the main channel, leads NE of La Longe and Le Boyard to Rade de l'Île d'Aix (46°00′N,

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La Rochelle-Ville



Les Minimes Marina from WSW (7.242)
(Original dated 1994)
(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

1°11′W) (7.255), the roadstead lying SW of Île d'Aix (7.266) at the entrance to La Charente river.

Passage de l'Ouest (7.258), the channel SW of La Longe and Le Boyard, leads SE into Grande Rade des Trousses (45°58′N, 1°12′W) (7.256), the roads at the N entrance to Coureau d'Oléron.

Passage du Sud (45°59′N, 1°11′W) (7.259) connects the aforementioned roadsteads.

Topography

7.247

1 Île d'Aix (7.266) and the shore on both sides of the approaches are all low-lying and fronted by extensive tidal flats, those on the mainland and SE of Île d'Aix being mainly assigned to the culture of shellfish. Exceptionally the coast in the vicinity of Pointe des Saumonards (45°59′N, 1°15′W), the NE point of Île d'Oléron, consists of an extensive sandy beach backed by wooded dunes. There are few landmarks and those on the mainland are often obscured by haze.

Pilotage

7.248

1 Pilotage from the vicinity of Chauveau Light-buoy (S cardinal) (46°07′N, 1°16′W) (7.185) to the latitude of the N point of Île d'Aix (46°01′N, 1°10′W) is optional. If required it is provided by La Rochelle-Pallice pilots, see 7.206 for further details.

Pilotage between the parallel of the N point of Île d'Aix and ports on La Charente and also Grande Rade des Trousses (45°58′N, 1°12′W) (7.256) is compulsory and provided by La Charente pilots. For further details see 7.282.

Traffic regulations

7.249

1 See 7.176 for regulations concerning the waiting area and approach channel shown on the chart.

Marine farms. The positions and limits of the charted shellfish beds are liable to change. Touching bottom and anchoring are prohibited in these areas.

2 Anchoring, dredging and trawling are prohibited in two oyster beds in positions 46°04′N, 1°12′W and 46°03′N, 1°12′W. Each bed is marked by a buoy (special).

Prohibited area. Entry is prohibited in an area of 500 m radius centred on Fort Boyard (7.252).

Rescue

7.250

1 **Lifeboats** (1.77) are stationed at:
Port des Minimes (46°09′N, 1°10′W) (7.242).
Île d'Aix (46°01′N, 1°10′W) (7.266).

Tidal streams

7.251

1 For details of the tidal streams in Rade de l'Île d'Aix (46°00′N 1°11′W) see information on the charts. About 3 miles farther NW in Passage de l'Est the tidal streams are similar except that they turn and attain their maximum rate about one hour earlier. Tidal streams in Grande Rade des Trousses (46°58′N, 1°12′W) are described at 7.256.

Principal marks

7.252

1 **Landmarks:**
Chassiron Lighthouse (46°03′N, 1°25′W) (7.152).
Fort Boyard (large grey round structure) (46°00′N, 1°13′W) standing on Le Boyard shoal.

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Île d'Aix Lighthouses (two white round towers, red tops, 17 m in height; one exhibits the light the other supports the red sector screen) (46°00′·7N, 1°10′·6W). A disused signal station (grey tower) stands 300 m NNE.

2 **Major lights:**

Chassiron Light—as above.

Chauveau Light (46°08′N, 1°16′W) (7.182).

La Rochelle Rear Leading Light (46°09′·5N, 1°08′·9W) (7.215).

Île d'Aix Light—as above.

Fort la Pointe Leading Lights (45°58′·0N, 1°04′·3W) (7.289).

Directions for Passage de l'Est

(continued from 7.186)

7.253

1 **Initial position:** approximately 46°04′N, 1°15′W.

The charted approach channel (7.176) leads SSE into Passage de l'Est, passing (positions given from Île d'Aix Light):

ENE of the NW end of La Longe (7.246) which extends 3½ miles NW of Fort Boyard (1½ miles WSW) (7.252) and is marked by Longue Boyard, a lighted buoy (W cardinal) (4½ miles WNW), and:

WSW of the buoy (isolated danger) marking a wreck with 5·9 m over it (2 miles NNW).

2 Entering Rade de l'Île d'Aix (7.255), the line of bearing 338° of Chauveau Light (46°08′N, 1°16′W) (7.182), astern, leads in mid-channel, passing (positions given from Île d'Aix Light):

ENE of the edge of La Longe, and:

WSW of Île d'Aix foreshore whose W edge is marked by Le Jamblet Beacon (W cardinal; iron structure 4·5 m high) (9 cables NNW) and Le Tridoux Beacon (W cardinal; iron structure 4 m high) (4½ cables NW).

7.254

1 **Clearing bearings.** The 118° limit of the white sector of Île d'Aix Light (46°00′·7N, 1°10′·6W) (7.252) clears NNE of La Longe, which is covered by the red sector, in a least depth of 8·7 m (4¼ miles WNW).

The 342° limit of a white sector of Chauveau Light (46°08′N, 1°16′W) (7.182) clears ENE of La Longe (NW of Fort Boyard) which is covered by a red sector.

(Directions continue for Passage du Sud at 7.259 and for La Charente at 7.289)

Rade de l'Île d'Aix

7.255

1 **General information.** Rade de l'Île d'Aix, the roadstead lying SW of Île d'Aix (46°01′N, 1°10′W) (7.266), is used by vessels waiting to enter La Charente (7.276). It is exposed to W and NW; winds from these directions raise a choppy sea during the out-going tidal stream which attains a rate of l¾ kn at springs, see information on the chart for further details.

2 **Anchorages:**

On the alignment (115°), shown on the charts, of Fort la Pointe Leading Lights (46°00′·7N, 1°10′·6W) (7.289) in depths from 7 to 12 m, bottom mud very good holding.

In the position (3½ cables S of Île d'Aix Light) shown on the charts, on the line of bearing about 013° of the disused signal station (300 m NNE of Île d'Aix Light) (chart 2747) seen between the two towers of Île d'Aix Light (7.252).

3 **Cautions.** Vessels should not anchor in the SSW part of Rade de l'Île d'Aix between Fort Boyard (46°00′N, 1°13′W) (7.252) and Plateau des Palles (2 miles ESE) as the ground is fouled by old obstructions (uncharted).

Depths within Rade de Île d'Aix are liable to change.

Grande Rade des Trousses and approaches

General information

7.256

1 **Description.** Grande Rade des Trousses (45°58′N, 1°12′W), the roadstead at the N end of Coureau d'Oléron (7.317), is sheltered from seaward by Pointe des Saumonards, the NE point of Île d'Oléron, and by the shoal area of La Longe and Le Boyard, but fresh NW winds opposing the out-going tidal stream cause a choppy sea uncomfortable for boats.

2 **Tidal streams** in the middle of the roadstead are similar to those in Rade de l'Île d'Aix (7.251) except that the out-going tidal stream begins about 1 hour earlier and reaches a maximum rate of 2¼ kn at springs. Close to the W shore the tidal streams are weaker.

7.257

1 **Approaches.** The roads are approached from NW through Passage de l'Ouest and from N through Passage du Sud, the channels passing W and E respectively of Le Boyard. Although the controlling depth in both channels is a little more than 5 m, the swell in the entrance to Passage de l'Ouest becomes very heavy at times and there is a danger of touching bottom due to scending; Passage du Sud is encumbered with unmarked shoals.

Directions for Passage de l'Ouest

(continued from 7.186)

7.258

1 **Initial position** approximately 46°04′N, 1°20′W, on the S side of Pertuis d'Antioche.

Passage de l'Ouest is approached passing NE of the rocky flats and shoals fronting the NE coast of Île d'Oléron, where the 5 m depths contour lies up to 1¾ miles offshore, and entered SW of Longe Boyard N buoy (W cardinal) (46°02′N, 1°17′W) moored NW of the NW end of La Longe (7.246).

The channel then leads 5 miles SE into Grande Rade des Trousses, passing (positions given from Fort Boyard (46°00′N, 1°13′W)):

2 SW of the edge of La Longe and Le Boyard shoal which is steep-to and unmarked on its SW side, and:

NE of a marine farm (1½ miles W) marked by two light-buoys (N cardinal and E cardinal), and:

NE of Pointe des Saumonards, on which stands a small fort (1½ miles WSW), thence:

3 NE of several yacht moorings (1¼ miles SW) (7.264), thence:

NE of La Perrotine Buoy (starboard hand) (1½ miles S) marking the sand-bar off the entrance to La Perrotine Harbour (7.262), thence:

SW of Longe Boyard S Buoy (S cardinal) moored about ½ cable W of a dangerous wreck (position doubtful) (1½ miles SSE).

Directions for Passage du Sud

(continued from 7.254)

7.259

1 **Initial position** in Rade de l'Île d'Aix (7.255) about 1 mile E of Fort Boyard (46°00′N, 1°13′W) (7.252).

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Passage du Sud, for which the best guide is chart 2747, leads 1½ miles S into Grande Rade des Trousses, passing (positions given from Fort Boyard):

2 E of Le Boyard shoal (7.246) which extends 1 mile SSE from Fort Boyard and is marked by Longe Boyard S Buoy (S cardinal) (1½ miles SSE) (7.258) moored off its SE extremity, and:

W of Plateau des Palles (2 miles SE), the unmarked extremity of the ledge extending 2½ miles NW from Île Madame.

3 **Caution.** Roches du Sud-Est, unmarked patches with a least depth of 2·8 m (1½ miles SE of Fort Boyard) lie in the middle of the passage. A channel 3 cables wide between 5 m depth contours passes E of these patches. The channel W of Roches du Sud-Est is wider but passes over Basse de la Rade (1 mile SE of Fort Boyard), a shoal with a least depth of 4·9 m.

(Directions continue for Coureau d'Oléron at 7.329).

Anchorage

7.260

1 Anchorage may be obtained in Rade de la Perrotine (45°58′N, 1°13′W) and farther E in the N part of Grande Rades des Trousses in depths from 8 to 12 m bottom mud very good holding.

Caution. Anchorage in the SE part of Passage de l'Ouest between Rade de la Perrotine and the meridian of the fort on Pointe des Saumonards (7.258) is not recommended as the bottom is foul due to old mine sinkers and other objects.

Small craft: harbours on Île d'Oléron

Chart 3000 plan of Port du Douhet

Port du Douhet

7.261

1 **General information.** Douhet Marina (46°00′N, 1°19′W), an artificial harbour, is entered at its E corner; within the harbour the channel lies alongside the N side. The S part of the harbour consists of two impounding basins:

Outermost in S corner: dredged to 1·5 m contains four pontoons with finger berths.

Innermost in W corner: dredged to 1 m; contains three pontoons.

2 **Directions.** A buoyed channel, which dries 1·6 mleads W to the entrance, passing between two breakwaters marked by beacons (lateral) at their heads. The N-most breakwater extends 150 m E from the entrance; the S-most 50 m E. Works are in progress (2004) to extend the breakwaters.

Anchorage may be obtained in Anse de la Maleconche, the bay lying between the harbour and Pointe des Saumonards (3 miles ESE); the bottom, apart from several rocky patches, consists of muddy sand or sand and shells.

3 **Berths:** about 350 including 50 for visiting small craft up to 15 m in length, 2·7 m draught.

Repairs: of a minor nature to engines; hauling out slip; gridiron.

Supplies: fresh water at quays.

Chart 2747

La Perrotine

7.262

1 **General information.** La Perrotine (45°58′N, 1°14′W), the harbour of the village of Boyardville, is formed by the mouth of Rivière la Saurine, a canalised river. A combined breakwater and training wall extends nearly 3 cables ENE from the SE side of the harbour entrance; an unstable sand-bar off its head is steep-to on its outer edge and dries about 1½ to 2 m.

7.263

1 **Directions.** It has been reported (1983) that the alignment (266°) of the following marks leads from a position 1½ cables S of La Perrotine Buoy (starboard hand) (4 cables ENE of front mark) (7.258) across the sand-bar to the vicinity of the breakwater head:

2 Front mark: La Perrotine Light (white column, red top; 7 m in height) (45°58′N, 1°14′W) on the breakwater head.

Rear mark: bell-tower (black conical roof on round tower) (uncharted; about 500 m W of front mark).

Thence the channel follows the breakwater at a distance of about 10 m almost as far as its root where it diverges. Thence the canal dries except in the centre where there is a depth of about ½ m.

7.264

1 **Outer anchorage,** sheltered from SW and W winds, is found 5 cables N of La Perrotine Light in depths of about 3 m sandy bottom. Yacht moorings (white buoys) are laid about 2 cables farther N. A landing stage extends E from the beach about 1 cable S of the anchorage.

2 **Berths.** Four quays, each 30 to 40 m in length, on the NW side of the canal between Boyardville Marina entrance (7.265) and the fixed bridge at the head of the harbour have been reported (1983) to dry from 2·5 m to 2·9 m alongside; only the third from the bridge has been reported (1985) to be suitable for small craft.

3 **Repairs** of all kinds at boatyard on SE side of canal opposite the marina entrance.

Supplies: fuel at wharf at boatyard; provisions.

Communications: ferry service to La Rochelle (7.226) and Île d'Aix (7.267).

Boyardville Marina

7.265

1 **General information.** Boyardville Marina (45°58′·1N, 1°14′·4W), a non-tidal basin on the NW side of La Perrotine harbour, is dredged to a depth of 2 m above chart datum. A pair of automatically operated gates at the entrance in the E corner of the basin maintains a minimum depth of 2 m in the basin: they open approximately 1½ hours before HW at neaps, 2½ hours before HW at springs and close at the same interval after HW. Red lights are exhibited when the gates are operating.

2 **Port Authority:** Bureau du Port de Boyardville, 17190 Saint-Georges-d'Oléron; situated at the S corner of the marina.

Port radio: see 1.41 for further details.

Berths for 230 small craft, 180 at pontoons and 50 alongside quays for visiting small craft up to 13 m in length. Waiting berth: SE side of quay on SW side of marina entrance, reported (1983) to dry 2·5 m alongside.

Repairs of all kinds carried out; hauling out slip.

Other facilities: 1-tonne crane; yacht club.

Île d'Aix

7.266

1 **General information.** Île d'Aix (46°01′N, 1°19′W) contains a walled and moated village at Pointe Sainte-Catherine, the S end of the island, and Fort Liédot, a prison, at the N end. Jetée des Barbotins, the ferry landing extending SSE from the SE side of Pointe Sainte-Catherine, has been reported (1983) to have a depth of 0·6 m at its extremity; a landing slip (1 cable N) used by small craft dries 1·5 m, rocky bottom, at its outer end.

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7.267

1 **Anchorages.** Yacht moorings (white buoys) are laid as follows:

About 100, E of Pointe Sainte-Catherine, each side and N of a channel 40 m wide that leads NNW to the landing slip and is marked by two beacons (starboard hand).

In the positions shown on the chart, about 2 cables SE and NW of Pointe Sainte-Catherine and 3 cables N of Pointe de Coudepont, the E point of the island.

2 The bottom E and SE of Pointe Sainte-Catherine is soft mud, poor holding.

Communications: ferry boat services to La Rochelle (7.226), Boyardville (7.264) and Fouras (7.274).

Small craft passage

General information

7.268

1 **Fosse d'Énet,** the channel passing between Île d'Aix (46°01′N, 1°10′W) and the mainland ESE, is about 1 cable wide between 2 m depth contours at its narrowest point.

Prohibited anchorage. Anchoring, dredging and trawling are prohibited in the area shown on the chart between Île d'Aix and Fouras (3½ miles ESE) (7.275) due to submarine cables and a submarine pipeline for water.

2 **Dumping ground.** Munitions have been dumped in the area shown on the chart and marked by Fouras Buoy (W cardinal) (46°01′N, 1°08′W) that also indicates the N limit of the prohibited anchorage described above.

7.269

1 **Tidal streams** in position 3 cables WNW of Fort d'Énet (46°00′N, 1°08′W) (7.288) set:

Interval from HW Pointe de Grave	*Direction*	*Maximum rate (kn)*
At springs		
–0530 to–0030	SSW	1½ at –0300
Interval from HW Pointe de Grave	*Direction*	*Maximum rate (kn)*
+0030	NE	½
+0130 to +0230	WSW	1½ at +0230
+0330 to +0530	SW	1½ at +0330
+0600	Slack	
At neaps		
–0600	Slack	
–0500 to –0100	S	1 at –0500 and –0400
HW to +0100	Slack	
+0200 to +0400	NW	1 at +0400
+0500	SW	1
+0600	NW	½

Directions

7.270

1 **Initial position** 5 cables E of Pointe de Coudepont.

Fosse d'Énet leads 1½ miles SSW into La Charente estuary, passing (positions given from Fort d'Énet (46°00′N, 1°08′W)):

2 ESE of the mud flat covered with shellfish beds that extends 8 cables SE from Île d'Aix and is marked at the extremity of its drying part by Aix SE Buoy (special) (6 cables W), and:

WNW of La Fumée Buoy (W cardinal) (4 cables N) moored off Pointe de l'Epée (3 cables NNE), the NW extremity of the rocky flat extending W from Pointe de l'Aiguille (9 cables E), thence:

3 WNW of Le Chiron Beacon (W cardinal; wooden structure 4 m high) (2 cables W) marking the extremity of the drying ledge extending W from Fort d'Énet (7.288).

Small craft: harbours on the mainland

Chart 2999 plan of Port de Châtelaillon

Châtelaillon-Plage

7.271

1 **General information.** Châtelaillon-Plage harbour (46°03′·7N, 1°05′·6W), situated at the S end of the beach fronting the village, is used mainly by sailing boats. It is approached either N or S of Pointe de Châtelaillon, the extremity of a rocky flat marked by a beacon (W cardinal; 6 m high) (1½ miles W of the harbour entrance), and entered between the main breakwater head and the NW end of the detached breakwater. The harbour has been reported (1983) to dry 2·5 m at the entrance and 3 m at the pontoon berths. The Bureau du Port is situated at the root of the main breakwater.

7.272

1 **Directions.** The alignment (about 101°) of the following marks has been reported (1983) to lead to the harbour entrance and passes close N of a patch that dries 2·6 m (3 cables W of harbour entrance):

Front mark: beacon (port hand, post) (46°03′·6N, 1°05′·7W) on the main breakwater head.

Rear mark: L'Abbé Guichard water tower (800 m E).

2 The chart is the best guide to the SW approach which requires local knowledge.

Berths: pontoon with finger berths extends SSW from the inner section of the main breakwater; moorings; bottom soft mud.

Other facilities: careening slip; yacht club.

Supplies: fresh water.

Les Boucholeurs

7.273

1 **General information.** Les Boucholeurs harbour (46°03′·2N, 1°05′·2W) whose layout is similar to Châtelaillon-Plage (7.271), consists of a jetty extending about 250 m SSW from the shore and a detached breakwater lying ESE of the head of the jetty. The entrance has been reported (1983) to dry 2·6 m.

2 **Directions.** The harbour is approached from W passing:

S of La Torge, a ledge drying 4·2 m that extends about 6 cables W of the jetty, and:

N of the N limit of a mussel bed whose NE corner lies about 2 cables SSW of the head of the jetty.

3 The alignment (about 018°) of the following marks has been reported (1983) to then lead to the entrance:

Front mark: W edge of the head of the jetty (5 cables SSW of rear mark).

Rear mark: L'Abbé Guichard water tower (46°03′·5N, 1°05′·1W) (7.272).

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Berth: E side of jetty, which has been reported to dry 3 m alongside near its root and has a slipway used by oyster boats on its W side.

Chart 2747

La Fumée

7.274

1 **General information.** Port de la Fumée (46°00′·3N, 1°07′·0W) on the N side of Pointe de l'Aiguille, is used by ferries to Île d'Aix (7.267) and fishing craft awaiting the tide to proceed to Port Nord du Fouras (1 mile ESE) (7.275).

2 **Directions.** Initial position 46°00′·7N, 1°08′·5W, about 1 cable N of La Fumée Buoy (W cardinal) (7.270). The approach leads E then ESE to the vicinity of Jetée de la Fumée whose extremity is marked by a light-beacon (green mast 8 m in height), passing (positions given from the light-beacon):

3 N of the beacon (N cardinal) (7 cables WNW) marking Pointe de l'Epée (7.270), and:

S of the explosives dumping ground (8 cables NW) (7.268).

4 **Berths:** alongside the head of Jetée de la Fumée, and also its E side where the depth has been reported (1983) to decrease from drying 0·5 m at the outer end to drying 2·5 m about 50 m from the root.

Repairs to engines carried out.

Port Nord de Fouras

7.275

1 **General information.** Port Nord de Fouras (45°59′·9N, 1°05′·8W) consists of a jetty extending about 100 m ENE from the shore with a spur near its head extending 40 m N then 40 m E.

Directions. From the vicinity of Jetée de la Fumée (7.274), the approach leads 1 mile ESE passing between the oyster beds fringing Pointe de l'Aiguille peninsula and the mussel beds lying about 4 cables offshore.

2 Clearing bearing: the 127° limit of the white sector of Port Nord de Fouras Light (white pylon, green top; 7 m in height) exhibited from the head of the spur of the jetty, clears NE of the oyster beds fringing the peninsula, which are covered by the green sector.

Berths on the S and E sides of the spur of the jetty dry about 4 m. A pontoon extends E from the head of the jetty.

LA CHARENTE RIVER

General information

Chart 2747

Description

7.276

1 La Charente river is navigable by ocean-going vessels as far as the suspension bridge at Tonnay-Charente (45°56′·4N, 0°53′·1W) (7.313).

From Rade de l'Île d'Aix (46°00′N, 1°11′W) (7.255) the channel leads ESE then SE through the estuary to the vicinity of Port-des-Barques (45°57′N, 1°04′W) (7.295) whence the river winds generally E to Rochefort (45°56′N, 0°58′W) (7.299), about 15 miles from Rade de l'Île d'Aix, and thence to Tonnay-Charente (7.310) 3 miles farther upstream.

Topography

7.277

1 The surrounding land is flat and generally very low-lying. The bar across the estuary consists of very soft mud, but within the river the bottom is hard mud and depths in the fairway are stable.

Two large red dish-shaped radar antennae (37 m in height) (45°56′·5N, 0°59′·5W) at Rochefort-Soubise Naval Air Station are prominent.

Limiting conditions

7.278

1 **Controlling depth:** 0·8 m over bar (45°59′N, 1°07′W) in the estuary.

Vertical clearances:

Martrou Viaduct (45°55′·0N, 0°57′·9W): 32·5 m in the centre and 30 m each side; navigable width 95 m.



Martrou Viaduct from W (7.278)

(Original dated 1996)

(Photograph – Mr T S Plews, Yacht "Du Bleiz")

Martrou Transporter Bridge (45°55′·0N, 0°57′·6W): 45 m; navigable width similar to the viaduct.



Martrou Old Transporter Bridge from W (7.278)

(Original dated 1996)

(Photograph – Mr T S Plews, Yacht "Du Bleiz")

Power transmission line (45°56′·4N, 0°55′·7W) up-river from Rochefort: 36 m.

2 **Tidal levels** at Île d'Aix (46°01′N, 1°10′W). See information in *Admiralty Tide Tables*. Mean spring range about 5·2 m; mean neap range about 2·5 m.

Maximum size. Limiting factors are the maximum dimensions of vessels that can enter Bassin No 3 at Rochefort (7.300) and that can be swung at Tonnay-Charente (7.311).

3 **Visibility.** Only the estuary is lighted; passage of the river at night is made only in exceptional circumstances. See 7.283 for regulations concerning navigation in fog.

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Small craft: breakers form on the outer bar during the out-going tidal stream and heavy seas may occur in Rade de l'Île d'Aix; the *mascaret* (7.286) can be dangerous.

Passage information

Port radio

7.279

1 Rochefort Port Radio (7.301) and the pilot boat (7.282) both guard VHF.

Entry and departure

7.280

1 The time of departure from Rade de l'Île d'Aix (46°00′N 1°11′W) for passage up river to Rochefort or Tonnay-Charente depends on the state of the tide at Île d'Aix and the vessel's draught and is:

Draught 5 m or more: from 2 to 3 hours before HW at neaps, from 1 to 2 hours before HW at springs.

Draught less than 5 m: between 2 and 4 hours after LW whatever the range of the tide.

The passage to Tonnay-Charente takes about 2 hours.

7.281

1 Departure from Rochefort or Tonnay-Charente is normally timed so as to cross the bar at HW. From Tonnay-Charente the passage downstream takes about 3 hours.

Vessels unable to descend the river on a single tide anchor between Martrou bridge and Soubise (2 miles downstream) as directed by the pilot. A stern anchor is laid out before the out-going tidal stream begins and the vessel lies aground in soft mud at LW.

Pilotage

7.282

1 **Regulations.** Pilotage is compulsory between Rade d'Île d'Aix and ports on La Charente; vessels less than 45 m LOA are exempt.

Authority. La Rochelle-Charente pilots based at La Rochelle.

Requests for pilots: see *Admiralty List of Radio Signals Volume 6(2)*. On sailing from La Charente ports 3 hours notice is required.

Availability: at the times given at 7.280 and 7.281.

2 **Boarding place:** in position 46°05′·6N, 1°16′·0W, as shown on the chart.

Waiting anchorage: Rade de l'Île d'Aix (7.255). To facilitate boarding in bad weather it is recommended that, on the approach of the pilot boat, vessels lie stopped across the wind.

Pilot boat: painted white, with the word PILOTE on both sides of the hull: equipped with VHF radio.

Traffic regulations

7.283

1 *International Regulations for Preventing Collisions at Sea, 1972,* are in force in La Charente. Passing and overtaking should be avoided on bends in the river.

Navigation prohibited: in fog when the river banks cannot be seen clearly.

2 **Speed limits:**

12 kn in La Charente.

10 kn when approaching Martrou Bridge.

As slow as possible when passing Rochefort between Corderie Royale Landing (45°56′·5N, 0°57′·2W) and the entrance to Bassin No 3 (3 cables N).

7.284

1 **Prohibited anchorages.** Anchoring is prohibited in the following areas, listed from seaward:

At Soubise: within the area extending 100 m above and below the old ferry landing (45°55′·8N, 1°00′·3W) due to a submarine power cable.

At Four du Diable (45°54′·9N, 0°58′·7W) in the turning berth.

2 At Martrou: within the area (45°55′·0N, 0°57′·5W) shown on the chart and in Traverse de l'Avant-Garde, the narrows close upstream.

Off UNIMA Pumping Station (45°57′·0N, 0°56′·5W) due to a submarine pipeline.

Any vessel anchoring or taking the ground must report her position to the Capitainerie du Port de Rochefort (7.299) and her Ship's Agent.

Natural conditions

7.285

1 **Tidal streams.** In La Charente estuary the tidal streams on the bar (45°58′·9N, 1°06′·7W) set as follows:

Interval from HW Pointe de Grave	*Direction*	*Rate (kn)*
Springs		
–0530	Slack water	
–0430	118°	1½
–0330 and –0230	130°	2
–0130	130°	1
+0130	Slack water	
+0330 and +0430	305°	2
+0630	304°	3
Neaps		
–0600	Slack water	
–0500	105°	1
–0400	125°	1
–0100 until +0100	Slack water	
+0200 until +0400	285°	½
+0500	283°	1

7.286

1 In La Charente river the tidal streams at springs attain a rate of 4 kn in the narrow passages such as Traverse de l'Avant-Gard (45°55′N, 0°57′W) and off the old naval base at Rochefort (1 mile farther upstream) and about 2 kn elsewhere.

2 At Rochefort the tidal streams begin:

In-going: from 1 to 1½ hours after LW at Rochefort at neaps and springs respectively.

Out-going: 1 hour after HW Rochefort.

Mascaret. A bore which can attain a height of 1·5 m occurs between Rochefort and Tonnay-Charente at equinoctial spring tides at the time that the in-going tidal stream begins.

7.287

1 **Fog** is reported to be infrequent but in the winter morning mists may occur in the river.

Principal marks

7.288

1 **Landmarks** at the entrance to La Charente (relative positions given from Tour Marchand) include:

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Fort d'Énet (conspicuous round building) (46°00′·3N, 1°08′·5W).
Tour Marchand (45°59′·3N, 1°05′·2W) (7.293).
Fouras church (3 cables WNW) (7.293).
Tour de Fouras (4 cables WSW) (7.293).
Conspicuous square fort (2 miles SW), surmounted by low white-roofed building, on Île Madame.

2 **Major lights:**
Île d'Aix Light (46°00′·7N, 1°10′·6W) (7.252).
Fort la Pointe Leading Lights (45°58′·0N, 1°04′·3W) (7.289).

Directions

(continued from 7.254)

La Charente estuary

7.289

1 **Initial position** 46°00′·5N, 1°12′·0W in Rade de l'Île d'Aix (7.255).

Fort la Pointe Leading Lights:
Front light (white square tower, red top; 9 m in height) (45°58′·0N, 1°04′·3W).
Rear light (similar structure; 23 m in height) (600 m in ESE of front light).

2 The alignment (115°) of these lights, which passes close NNE of two dish-shaped radar antennae (3½ miles ESE of rear light) (7.277), leads ESE into the estuary to a position 1¾ miles WNW of the front light, passing (positions given from front light):
Through an area (6½ to 2 miles WNW), extending 1½ cables each side of the alignment, that was systematically examined for obstructions with side-scan sonar in 1982, and:

3 NNE of Les Palles Light-buoy (N cardinal) (4 miles WNW) moored ¾ cable N of a wreck that dries 2·7 m, thence:
NNE of Sablière Buoy (starboard hand) (2½ miles WNW) moored near the outer edge of the shallowest part of the bar, see 7.278 for controlling depth.

7.290

1 **Port-des-Barques Leading Lights:**
Front light (white square tower 6 m in height) (45°57′N, 1°04′W).
Rear light (white square tower with black band on W side; 16 m in height) (480 m SE of front light).
The alignment (134½°) of these lights then leads SE into the river entrance to a position 4 cables NW of the front mark and 1 cable NE of the beacon (starboard hand) marking the head of a jetty at Port-des-Barques (7.295), passing (positions given from front light):

2 Close NE of Fontenelles Buoy (starboard hand) (2¼ miles NW) marking a drying mud bank extending NW from Les Fontenelles, drying ledges, thence:
Close NE of Mouclière Buoy (starboard hand) (2 miles NW) marking Grave de la Mouclière, a continuation SE of the drying ledge, thence:
Close NE of La Moucliére, a patch that dries 0·5 m (1¾ miles NW) where there are greater charted depths about 1 cable NE of the alignment.

Chart 2747 plans of Port-des-Barques to Rochefort and Tonnay-Charente

La Charente river

7.291

1 From the vicinity of Port-des-Barques Jetty to Traverse de Soubise (45°56′N, 1°00′W) the fairway is indicated by a continuous series of charted alignments lettered in reverse alphabetical sequence from T to F. Each alignment is marked by one or two pairs of leading beacons consisting of a tall white post surmounted by the appropriate letter painted black and enclosed within a white circular frame. Beacons common to two alignments bear both letters.

7.292

1 From Traverse de Soubise to Martrou (45°55′·0N, 0°57′·5W) the fairway narrows but is unmarked except by alignment "E", where it crosses to the S bank. This section passes:
Between the ferry landings at Soubise (45°56′N, 1°00′W), thence:
Beneath the bridges (7.278) at Martrou.

2 Then the fairway through Traverse de l'Avant-Garde is indicated by the alignments "C", "B", and "A". The final section passing Rochefort (7.299) and thence to Tonnay-Charente (7.310) is unmarked and the chart is the best guide. Above Rochefort the river is spanned by a power transmission line (45°56′·4N, 0°55′·7W) (7.278).

Small craft facilities below Rochefort

Chart 2747 La Charente, île d'Aix to Tonnay-Charente

Port Sud de Fouras

7.293

1 **General information.** Port Sud de Fouras (45°59′·1N, 1°05′·6W), a drying harbour used mainly by fishing vessels, is sheltered from W by a mole.

Directions. The alignment (042½°) of Passe aux Filles Leading Lights, whose primary purpose is to indicate the passage used by local craft to cross the rocky flats extending NW from Île Madame (45°57′N, 1°07′W), leads NE from La Charente channel to the vicinity of the molehead:

2 Front light (two white tubes with platform, red top; 4 m in height), situated about 50 m NE of the root of the mole.
Rear light (similar structure 6 m in height) (75 m NE of front mark).

3 Useful marks (positions given from Fouras Sud Light):
Fouras Sud Light (white structure, red top; 5 m in height) situated on the molehead.
Tour de Fouras (square tower) (2 cables NNW).
Fouras church (spire) (3½ cables N).
Tour Marchand (4 cables NE) a small but conspicuous tower.

7.294

1 **Berths:**
Alongside E side of mole; reported (1983) to dry 2·2 m at molehead and 3·5 m near root; normally fully occupied by fishing vessels and local craft.
At two pontoons extending S from the shore E of the mole in a pool dredged to a depth of 3 m; reception berth for visitors at end of pontoon.
Several drying moorings bottom mud or sand.

2 **Repairs** to hulls and engines; careening slip.
Other facilities: 3-tonne crane; yacht club.
Supplies: fresh water; provisions.

Chart 2747 Port-des-Barques to Rochefort

Port-des-Barques

7.295

1 **General information.** Port-des-Barques (45°57′N, 1°04′W), a village on the S bank at the river entrance provides berths for a few fishing boats.

Anchorage. About 20 moorings for small craft are laid off the village, others farther upstream.

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Berths: small drying quay; wharf 33 m in length is used by small craft.

Le Vergeroux

7.296

1 **Berths:** two wharves on the E bank near Fort du Vergeroux (45°58′N, 0°59′W) are used by boats. A third wharf on the E bank (500 m S; uncharted) is used to unload sand barges.

Le Port Neuf

7.297

1 **Anchorage:** numerous moorings for small craft in the vicinity of 'H' Leading Beacons (45°57′N, 1°00′W).

Berths for small craft: at pontoon 64 m in length.

Facilities: slip for craft up to 5 tonnes; yacht club.

Soubise

7.298

1 **General information.** Rochefort-Soubise Naval Air Station (45°56′N, 0°59′W) is situated on the NE bank opposite the village of Soubise. The ferry landings on both sides of the river are disused and covered with soft mud.

2 **Berths:** A pier and a slip on the NW side of the air station are used for the berthing and launching of seaplanes. A pontoon 48 m in length on S bank at Soubise, berths small craft. Four berthing dolphins on the N bank 300 m upstream from Soubise are reserved for work connected with the lifting bridge.

Supplies: provisions at Soubise village.

Rochefort

General information

7.299

1 **Description.** Rochefort (45°56′N, 0°58′W) an old walled town, population 25 600 (2003), lies on the W bank of La Charente 15 miles upstream from Rade de l'Île d'Aix (7.255). Formerly an important naval base, the harbour now consists of a commercial dock and a marina.

2 **Port limits:**

Downstream: meridian 1°00′·1W, at Pointe de la Sablière (45°58′·3 N).

Upstream: meridian 0°56′·4W.

Traffic. In 2003 the port was used by 47 vessels totalling 167 132 dwt.

3 **Port Authority:** Capitainerie du Port, Av William Ponty, BP 125, 17306 Rochefort Cedex. Situated on SW side of Bassin No 3 entrance.

Limiting conditions

7.300

1 **Controlling depths:**

2·7 m in lock at entrance to Bassin No 3 decreasing to 2·0 m at the end of the winter due to silting.

Bassin No 3 dredged to 6·0 m (2002).

See 7.278 for limiting conditions in La Charente.

2 **Tidal levels.** See information in *Admiralty Tide Tables*. Mean spring range about 5·7 m; mean neap range about 3·1 m.

Density of water: reported to be 1·010 g/cm^3.

Maximum size of vessel handled inside the lock: length 115 m, but normally vessels more than 90 m long are handled only at springs to avoid silting in the basin; beam 16 m; draught 5·8 m.

Arrival information

7.301

1 **Port radio:** See *Admiralty List of Radio Signals Volume 6(2)* for details.

Pilots: See 7.282 for details.

Tugs: none based at Rochefort; if required they may be ordered from La Rochelle-Pallice (7.207).

2 **Regulations** concerning entry to Bassin No 3. Locking into the basin is arranged through the Ship's Agent. The lock is worked from 3 hours before to 3 hours after HW, but normally entry is made at or shortly after HW slack, the mandatory time for larger vessels, or during the out-going tidal stream.

Harbour

7.302

1 **General layout.** The port of Rochefort is comprised of (listed in sequence from seaward):

Appontement de la Corderie Royale (45°56′·5N, 0°57′·2W) (7.308), a pontoon berth on the W bank, used by passenger ferries and small craft.

Bassins Nos 1 and 2, wet docks entered 150 m farther N, containing the marina.

Bassin No 3 (7.305), the commercial dock entered through a lock 500 m N of the entrance to Bassin No 1.

7.303

1 **Traffic signals** (1.66) are shown from a mast standing on the NW side of the entrance to Bassin No 3 to control movements into and out of the basin.

Directions

7.304

1 The axis of Bassin No 3 lock is angled obliquely to that of the channel in the river outside; vessels enter directly without swinging ship. If entry or departure is not made at HW slack it can only be carried out heading into the tidal stream in the river. Vessels more than 100 m in length enter at the beginning of the out-going tidal stream rather than at HW slack.

Bassin No 3

7.305

1 Bassin No 3 has 1225 m of quays. The entrance lock is 100 m long, 18 m wide and is spanned by a swing bridge. Both the basin and the lock are dredged annually, see 7.300 for depths and extent of silting. The bottom is foul in places due to cables and debris that lie below the level to which the basin is dredged.

Port services

7.306

1 **Repairs** carried out; gridiron 36 m long, 13 m wide situated close N of Bassin No 3 entrance.

Other facilities: custom house; hospital.

Supplies: fuel oil supplied by road from La Rochelle; fresh water at quays; provisions.

Small craft

7.307

1 **Bassin No 1,** dredged to 2 m above chart datum, provides pontoon berths for 210 small craft maximum length 18 m. The entrance 8 m wide, sill 1·5 m above chart datum, has a single pair of gates that are opened, between 0700 and 2200 (0600 and 2200 May to September), for a brief period at HW: it is spanned by a swinging footbridge. Vessels waiting to enter can berth at the pontoon on N side of entrance.

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Rochefort – Bassin No 3 from ENE (7.305)
(Original prior dated to 1997)

(Photograph – Le Commandant des ports de Rochefort/Tonnay-Charente)

Bassin No 2, dredged to a depth of 2 m above chart datum, is used by small craft.

7.308

1 **Appontement de la Corderie Royal.** A pontoon 44 m long, with a white mooring buoy laid 40 m off each end, at Quai d'Artillerie, is used by passenger ferries of less than 100 tonnes and pleasure craft.

7.309

1 **Repairs** of all kinds are carried out; small dry dock, entered close S of Bassin No 3, used by port service craft; slipway close N of the gridiron (7.306).

Supplies: fuel; fresh water; provisions.

Tonnay-Charente

General information

7.310

1 **Description.** Tonnay-Charente (45°56′·6N, 0°53′·5W), population 6800 (2003), stands on the N bank of La Charente 3 miles above Rochefort.

Traffic. In 2003 the port was used by 16 vessels totalling 47 596 tonnes dwt.

Port Authority: Capitainerie du Port; situated at the E end of Appontement No 2.

Limiting conditions

7.311

1 **Controlling depth** in La Charente and vertical clearances beneath bridges and power transmission lines are given at 7.278.

Deepest and longest berths: see 7.315.

Tidal levels at Rochefort: given at 7.300.

Density of water: reported to be 1·000 g/cm^3.

Maximum size of vessel handled: draught 6·5 m at springs, 5·8 m at neaps; length is limited by the size of the swinging berth, a shallow draught vessel 125 m in length can be swung at springs; for a vessel 115 m in length the maximum draught is 5·5 m at springs, 4·8 m at neaps.

Arrival information

7.312

1 **ETA.** See 7.280 for times of departure from Rade de l'Île d'Aix; 24 hours notice is required to arrange cargo handling labour.

Pilots: details given at 7.282.

Tugs must be ordered from La Rochelle-Pallice (7.207) if required.

Harbour layout

7.313

1 There are three wharves on the N bank:

Appontement SICA (45°56′·4N, 0°54′·4W); private wharf for loading grain.

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Appontement No 2 (5 cables ENE); principal berths.
Quai de Commerce (1 cable farther E); waiting berths.

2 A suspension bridge (45°56′·4N, 0°53′·1W), vertical clearance 22 m, forms the limit of navigation for ocean-going vessels.

Swinging berths, dredged every two years, are located on the S bank between Appontement No 2 and Quai de Commerce (on the opposite bank) and between the latter and the suspension bridge.

Directions
7.314

1 Directions for La Charente are given at 7.289. Vessels are swung by grounding their bows in the mud of the swinging berth on the S bank and using their main engines. Vessels more than 95 m in length are unloaded before being swung.

Berths
7.315

1 Details of the berths, listed from seaward, are:

Appontement SICA: concrete wharf length 75 m; berth for vessels up to 100 m in length, about 6 m draught, loading grain.

Appontement No 2: concrete wharf 200 m in length, depth alongside 5 m.

Quai de Commerce: three cement wharves each 55 m in length, depth alongside 4 m; central wharf can handle small cargoes of 500 to 1000 tonnes.

Port services
7.316

1 **Repairs:** local workshops can undertake minor repairs.
Supplies: fuel by road from La Rochelle; fresh water at wharves; provisions.

COUREAU D'OLÉRON

General information

Chart 3000

Description
7.317

1 **Coureau d'Oléron,** the channel connecting the S end of Grande Rade des Trousses (45°58′N, 1°12′W) (7.256) with the E end of Pertuis de Maumusson (45°48′N, 1°13′W) (7.163) is tortuous and leads about 10 miles S and SW between extensive tidal flats fronting both Île d'Oléron and the mainland.

2 **Caution.** The channel is encumbered with unstable shoals and is liable to silting. Its position and depth are subject to continual gradual change. The buoyage is moved to conform with the changes in the channel.

Topography
7.318

1 Both shores of Coureau d'Oléron are flat and low-lying; in many places they consist of saltings.

Viaduc d'Oléron, a cantilever road bridge connecting Île d'Oléron with the mainland, spans the channel from Pointe d'Ors (45°52′N, 1°12′W) to Pointe de la Sinche (1½ miles SE).

Limiting conditions
7.319

1 **Controlling depth** in the fairway of Coureau d'Oléron is approximately 0·4 m. The least charted depths in the fairway are found in the vicinity of Banc d'Agnas (45°52′·5N, 1°10′·5W) (7.332).

Vertical clearance beneath Viaduc d'Oléron:
15 m where it spans the fairway (45°51′·1N, 1°10′·5W).
18 m beneath the central arches (3 cables NW).

2 **Tidal levels.** See information in *Admiralty Tide Tables*.
Le Chapus (45°51′·5N, 1°10′·0W) (7.346):
Mean spring range about 4.8 m; mean neap range about 2·5 m.
Gatseau (45°48′N, 1°14′W): given at 7.167.

The times and heights of HW at Le Chapus and at Le Château d'Oléron (2 miles NW) (7.338) are practically the same as those at Île d'Aix (46°01′N, 1°10′W) (7.278).

3 **Abnormal water levels.** The water level is considerably affected by the wind; it may be increased by nearly 1 m when a strong wind blows in the same direction as the tidal stream.

Hazards
7.320

1 Fleets of fishing boats may be encountered in the fairway: the tidal flats are almost entirely devoted to shellfish culture.

2 Tidal streams in Pertuis de Maumusson and its vicinity are very strong: see 7.165 concerning dangerous conditions especially for small craft.

Pilotage
7.321

1 There are no official pilots for Coureau d'Oléron. Mariners without local knowledge are advised to make use of an unofficial local pilot (1.30).

Local knowledge
7.322

1 Local knowledge is essential for Coureau d'Oléron.

Prohibited anchorage
7.323

1 Anchoring, trawling and dredging are prohibited, due to submarine power and other cables laid between Île d'Oléron and the mainland, within the area shown on the chart that is 8 cables wide and lies on both sides of Viaduc d'Oléron (7.318).

Marine farms
7.324

1 Shellfish beds exist on the foreshore throughout Coureau d'Oléron. Touching bottom or anchoring are prohibited in these areas.

Rescue
7.325

1 Lifeboat (1.77) stationed at La Tremblade (45°47′N, 1°08′W) (7.365).

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Tidal streams

7.326

1 The tidal streams set into and out of Coureau d'Oléron from both ends simultaneously except at about the times of HW and LW, when they set S and N, respectively, throughout the passage. At other times the position at which the tidal streams meet or separate moves S with time.

The tidal streams follow the general direction of the channels and are much influenced by the wind; at springs the approximate times of commencement, direction and rate are:

Interval from HW Pointe de Grave	*Direction*
2 Chenal Est, N entrance (45°56′·3N, 1°09′·2W)	
–0530	SE
+0030	NNW

Maximum spring rate: 2 kn in calm weather; may attain 3 kn when wind blows towards the same direction as the tidal stream

3 Bank d'Agnas, NE end (45°53′·0N, 1°09′·4W)	
–0530	SSW
+0130	NNE

Maximum spring rate 1½ kn

4 Viaduc d'Olèron (45°51′·3N, 1°10′·5W)	
–0430	S
+0230	N

Maximum spring rate: 1¼ kn S-going; 1½ N-going

5 Le Pointeau anchorage (45°50′·0N, 1°10′·5W)	
–0330	SSE
+0430	NNW

Maximum spring rate: 1¾ kn

6 Chenal de Bry (45°49′·4N, 1°12′·0W)	
–0100	WSW
+0600	ENE

Maximum spring rate: 2 kn WSW-going; 2½ kn ENE-going.

Principal marks

7.327

1 **Landmarks:**

Le Château-d'Oléron fortifications and church (spire) (45°53′·4N, 1°11′·7W).

Fort Louvois (45°51′·5N, 1°10′·4W).

Marennes church spire (45°49′·3N, 1°06′·3W) (7.331).

Major light:

Île d'Aix Light (46°00′·7N, 1°10′·6W) (7.252).

Direction of buoyage

7.328

1 The direction of buoyage in Coureau d'Oléron, excluding the NW approach channel to La Seudre (7.349), is N and NE. In the directions that follow, the route is described in the opposite direction.

Directions

(continued from 7.259)

Entering Coureau d'Oléron

7.329

1 **Initial position** 45°56′N, 1°10′W, at the S end of Grande Rade des Trousses (7.256) about 2 miles N of Juliar Light-beacon (E cardinal) (7.331), and between (positions given from Juliar Light-beacon):

Sablière d'Arceau Buoy (E cardinal) (2¼ miles NNW) that marks the edge of the extensive flat fronting Pointe d'Arceau (45°56′N, 1°14′W), and:

Chenal Est-Nord Buoy (W cardinal) (2 miles NNE) marking the N entrance to Chenal Est.

2 **Routes** (positions given from Juliar Light-beacon): Coureau d'Oléron is entered either by Chenal Est, the principal channel that passes E of Banc Lamouroux an extensive shoal used for the culture of shellfish whose shallowest part (5 cables NNE) dries 2·8 m, or by Chenal Ouest that passes W of Banc Lamouroux, least depth 0·4 m (4 cables N).

7.330

1 **Chenal Est.** From the vicinity of Chenal Est-Nord Buoy (W cardinal) (7.329) the channel leads (positions given from Juliar Light-beacon):

SSE to a position close E of Chenal Est-Sud Buoy (E cardinal) (1 mile ENE) marking the E edge of Banc Lamouroux, thence:

2 S to a position 2 cables W of Brouage Light-buoy (port hand) (1¼ miles E) which marks the entrance to Chenal de Brouage (7.344), thence:

SSW to a position 3 cables NNW of Charret Beacon (1¼ miles SSE) (7.331).

7.331

1 **Chenal Ouest.** Leading marks for the N part of Chenal Ouest:

Front mark: Charret Beacon (45°53′·0N, 1°08′·6W) painted black and white.

Rear mark: Marennes church spire (45°49′·3N, 1°06′·3W).

2 The alignment (156½°) of these marks leads SSE to a position about 3 cables NNW of the front mark, passing (positions given from Juliar Light-beacon):

Close WSW of Lamouroux Buoy (W cardinal) (1¼ miles NNW) moored off the NW extremity of Banc Lamouroux, thence:

Close ENE of a dangerous wreck, position approximate (6½ cables NNW), thence:

ENE of Juliar Light-beacon (E cardinal) (7.331), thence:

Clear of a dangerous wreck (4½ cables SSE), thence:

Over the bar (6 cables SSE) at the S end of the channel.

3 **Useful mark:**

Rocher des Doux Beacon (E cardinal; 12 m high) (1¼ miles WNW) marking rocks that dry 5 m.

Passing Le Château-d'Oléron

7.332

1 **Initial position** 1 mile SSE of Juliar Light-beacon, at the junction of the E and W entrance channels.

Routes. Passing the approach to Le Château-d'Oléron (45°53′N, 1°12′W) (7.338), the fairway of Coureau d'Oléron is encumbered by Banc d'Agnas (1 mile SE of Le Château-d'Oléron Harbour), a drying middle ground 1¼ miles in length orientated NE–SW and covered with shellfish beds. Directions are given for NW and SE channels but it should be noted that buoyage indicates a preference for the SE channel. Consult national charts for further details.

7.333

1 **North-western channel** passes (positions given from Juliar Light-beacon):

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SE of Grande Mortanne, the ledge on the outer edge of the flats fronting Le Château-d'Oléron, marked by Grande Mortanne Nord Beacon (port hand) (8 cables S), Mortanne Beacon (port hand) (1¼ miles SSW) and Grande Mortanne Sud Beacon (S cardinal) (1¾ miles SSW), and:

2 Close NW of Agnas Buoy (E cardinal) (1 mile S) and Martin Buoy (port hand) (45°52′N, 1°11′W) moored off the NE and SW ends, respectively, of Banc d'Agnas.

7.334

1 **South-eastern channel** leading marks (uncharted):

Front mark: Dolphins at Pointe d'Ors disused ferry terminal (45°51′·6N, 1°11′·1W)

Rear mark: Pier of Viaduc d'Oléron (1¼ cables SW of front mark).

2 The alignment (225°) of these marks has been reported (1983) to lead through the SE channel to a position about 4 cables NE of the front mark, passing (positions given from front mark):

Close E of Agnas Buoy (E cardinal) (2 miles NE)

Over a drying 0 m patch (1 mile NE), thence:

NW of Craze Buoy (starboard hand) (8 cables NE) moored 1 cable W of Rocher de Craze:

Thence SW of Martin Buoy (port hand) (5 cables NNE).

Viaduc d'Oléron and approaches

7.335

1 **Initial position** 45°51′·8N, 1°10′·7W, 4 cables NNW of Fort Louvois (7.327), at the junction of the channels passing each side of Banc d'Agnas.

Route. The fairway continues S for 2¼ miles, passing (positions given from Fort Louvois):

2 W of a buoy (starboard hand) (2½ cables WNW) marking the ledge (drying 3·5 m) that extends 1½ cables WNW from Fort Louvois, thence:

W of the detached structure (2½ cables SW) standing off the head of the disused ferry terminal that extends 3 cables WSW from Pointe du Chapus, thence:

3 Beneath the arch of Viaduc d'Oléron (4 cables S), see 7.319 for vertical clearance, that is marked on both its NE and SW side by two white rectangular panels 60 m apart, illuminated at night and painted with the outline of a green triangle marking E edge of channel, and a red square marking W edge of channel, thence:

4 E of a dangerous wreck, position approximate (5½ cables SSW), thence:

E of Rocher d'Ade Beacon (port hand; 9 m high) (7 cables SW) marking the SE end of the Rocher d'Ade, and:

E of Commissaire Buoy (starboard hand) (6 cables S), thence:

5 E of Sable d'Ade Beacon (port hand) 1¼ miles SSW), and:

W of Les Meules, rocky patches marked by Meules NW Buoy (starboard hand) (1¼ miles SSW) and Meules SE Buoy (starboard hand) (1½ miles S), thence:

E of Trompe-Sot Buoy (port hand) (1¾ miles S) marking the E edge of Banc de Trompe-Sot which extends 7½ cables E from Pointe de Manson (45°50′N, 1°12′W).

6 **Useful mark:**

Beacon (black and white) (45°49′·9N, 1°10′·2W).

Chenal de Bry

7.336

1 **Initial position** 45°49′·7N, 1°10′·5W, about 1 cable S of Trompe-Sot Buoy (port hand).

Route: Chenal de Bry leads 3 miles SW to the E end of Pertuis de Maumusson (7.163) and the entrance of Chenal de la Garrigue (7.357), passing (positions given from Pointe de Manson (45°50′ N, 1°12′ W)):

2 SE of La Palette Buoy (port hand) (5 cables ESE) marking the S edge of Banc de Tromp-Sot, thence:

SE of the tidal flats fronting Île d'Oléron between Pointe de Manson and Pointe de Gatseau (2 miles SW), and:

3 NW of Banc de Bry, a drying quicksand lying from 1½ to 3 cables offshore and marked by Bry NE Buoy (starboard hand) (4 cables S) and Bry SW Buoy (starboard hand) (1¼ miles SW) at its NE and SW ends, thence:

SE of PT des Galets Buoy (port hand) (1¾ miles SW) marking the edge of Banc des Galets, and:

NW of Auger N Buoy (starboard hand) (1¾ miles SW) marking the NW edge of Banc Auger.

(Directions are given for Pertuis de Maumusson at 7.168, and for La Seudre at 7.356)

Anchorages in Coureau d'Oléron fairway

7.337

1 The principal anchorages in the fairway, suitable for vessels less than 50 m in length, are:

La Grande Mortanne anchorage (45°53′·2N, 1°08′·9W) midway between Charret Beacon (3 cables SE) (7.331) and Grand Mortanne Nord Beacon (port hand) (2½ cables NW) (7.333).

2 Le Pointeau anchorage (45°49′·8N, 1°10′·4W) 8½ cables E of Pointe de Manson.

Bry anchorage (46°49′·0N, 1°12′·6W), in Chenal de Bry (7.336) off the disused lifeboat slipway.

Yacht moorings (white buoys) are laid in each of the anchorages described above.

Le Château-d'Oléron

General information

7.338

1 **Description.** Le Château d'Oléron (45°53′·1N, 1°11′·4W), a drying harbour, is used almost exclusively by small craft that work the shellfish beds in Coureau d'Oléron. The small seventeenth century fortified town lies entirely within its walls. The harbour is approached through the channel passing NW of Banc d'Agnas (7.333) and entered through Chenal du Château (7.341).

Port Authority: Capitainerie du Port, 1, Rue Jules Hay, 17480 Le Château-d'Oléron.

Limiting conditions

7.339

1 **Deepest berth:** quay on SE side of Avant-port (7.342).

Tidal levels and abnormal water levels; see 7.319 for details.

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Harbour layout

7.340

1 The harbour consists of:

Avant-port, the outer basin; the quay on the SW side is usually crowded with oyster boats.

Inner basin: a wet dock whose gate is usually left open.

Directions

7.341

1 **Initial position** 45°52′·5N, 1°10′·6W, about 12 metres SW of Grande Mortanne Sud Beacon (S cardinal) (7.333).

Leading lights: The alignment (318½°) of the following lights leads NW to the harbour entrance through Chenal de Château, a 10 m wide channel through the mud flats that is maintained at a level of 0·8 m above chart datum:

Front light (red rectangular topmark on white turret; 3 m in height) (45°53′·1N, 1°11′·4W).

Rear light (white tower, red top; 20 m in height) (240 m NW of front light).

Basins and berths

7.342

1 **Avant-port:** entrance 10 m wide; quay on SW side about 200 m long, dries 1·6 m alongside bottom mud; quay on NE side, reported (1999) to dry 3 m alongside near outer end, bottom soft mud; careening berth in N corner reported (1983) to dry 3·3 m.

Inner basin: entrance 10 m wide, sill 2 m above chart datum; about 150 m of quay; careening berth.

Port services

7.343

1 **Repairs** to wooden hulls and engines at boatyard.
Other facilities: custom house.
Supplies: fresh water; provisions.

Small craft

Brouage and approach

7.344

1 **General information.** Brouage Harbour (45°52′·0N, 1°04′·1W), situated on Rivière de Brouage, is used by oyster boats and pleasure craft. The harbour, which is partially silted up, is approached through Chenal de Brouage, a narrow shallow channel whose inner end is spanned by two power transmission lines with a vertical clearance of 7·4 m.

2 **Directions.** Chenal de Brouage, for which the best guides are the French charts, is marked by Brouage Light-buoy (port hand) (7.330) at its entrance (45°54′·4N, 1°07′·7W) and by a beacon (port hand, wooden post) (5 cables ESE).

Supplies: fuel.

Pointe d'Ors

7.345

1 **General information.** Pointe d'Ors (45°52′N, 1°12′W) was the terminal of the ferry service from the mainland to Île d'Oléron that was discontinued on completion of Viaduc d'Oléron (7.318). Chenal d'Ors, which dries 3 m, leads past the disused terminal to the point.

2 **Directions.** Initial position 45°51′·7N 1°11′·2W, close E of Ors Beacon (port hand; 8 m high) marking the head of a causeway that extends 5 cables ESE from the N side of Pointe d'Ors and covers at HW.

Chenal d'Ors, for which the best guide is the French chart, leads S passing (positions given from Ors Beacon):

3 E of the old ferry terminal pierhead (1½ cables SSE), formerly used at all states of the tide, thence:

Beneath the arch of Viaduc d'Oléron (3 cables SSE) marked on both its NE and SW sides by two white rectangular panels 60 m apart, illuminated at night and painted with the outline of a red square marking the E side of the channel, and a green triangle marking the W side of the channel.

4 Thence the channel turns WNW, passing:

SSW of Chenal d'Ors Beacon (starboard hand; 3 m high) (3 cables S of Ors Beacon).

Le Chapus

7.346

1 **General information.** Le Chapus harbour (45°51′·4 N 1°11′·0W), situated on the N side of Pointe du Chapus, is used mainly by fishing boats. It is approached from the fairway by a winding channel that can be used by small craft at LW neaps.

2 The harbour is entered between the mole on its W side and the detached breakwater on its N and NW sides. A footbridge, vertical clearance 2 m, spans the passage 19 m wide between the E end of the detached breakwater and the jetty on the E side of the harbour.

Details of tidal levels and abnormal water levels are given at 7.319.

7.347

1 **Directions.** The chart and small craft moorings are the best guide to the entrance channel.

Berths: slip alongside E side of mole on W side of harbour dries 0·5 m at its head; a landing slip extending N from the quay on the S side of the harbour dries 2·5 m alongside.

Repairs: at small boatyard.
Other facilities: custom house.
Supplies: fresh water; provisions.

Saint-Trojan-les-Bains

7.348

1 **General information.** Saint-Trojan-les-Bains harbour (45°50′·8N, 1°12′·4W) consists of a drying tidal basin.

Directions. Initial position: on the tidal flat close S of Saint-Trojan-les-Bains Beacon (starboard hand) (45°50′·8 N, 1°11′·5W). Chenal de Saint-Trojan leads W to the harbour entrance as indicated on the French chart.

2 **Useful mark:**

Saint-Trojan-les-Bains Light (grey mast 9 m in height) (½ cable N of the harbour entrance).

Berths for small craft at the head of the harbour.
Repairs to engines.
Other facilities: yacht club.

La Seudre river

Chart 3000 (see 1.18)

General information

7.349

1 **Description.** La Seudre estuary is bordered by extensive tidal fiats and encumbered by Banc Barat (45°48′·8N, 1°10′·0W), a drying sandbank.

2 La Seudre river is approached from the NW by Chenal de la Soumaille (7.356) and from the W by Chenal de la Garrigue (7.357); these channels pass NE and S of Banc Barat, respectively, and meet at the river entrance in the vicinity of Pointe du Mus de Loup (45°47′·9N, 1°08′·4W) where it is spanned by Pont de la Seudre (7.359). Thence La Seudre leads 12 miles SE to the lock at Riberou (uncharted) which lies 1 mile downstream from Saujon and forms the limit of navigation for sea-going vessels.

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7.350

1 **Topography.** Both banks of La Seudre consist of saltings and salt pans devoted to the intensive culture of oysters.

7.351

1 **Limiting conditions.** Controlling depths in the approach channels are subject to change due to silting and the unstable nature of the shoals; the least depths shown on the French chart (published 2000) are:

2 Chenal de la Soumaille: drying 0·6 m (45°49′·1N, 1°10′·7W) on the bar at the entrance between Banc Bourgeois and Banc de la Goëlette.

Chenal de la Garrigue: 1·1 m over Saut de Barat (45°48′·2N, 1°08′·8W), the bar at the inner end of the channel.

3 Vertical clearances:

In the fairway beneath Pont de la Seudre (47°48′N, 1°08′W) (7.359): 18 m.

Beneath power transmission line spanning La Seudre (1 cable SE of bridge): reported (1980) to be 18 m.

4 Tidal levels. See information in *Admiralty Tide Tables*.

At La Cayenne (45°47′·4N, 1°07′·5W):

Mean spring range about 5·6 m; mean neap range about 2·2 m.

At Gatseau (45°48′N, 1°14′W): given at 7.167.

7.352

1 **Pilotage.** There are no official pilots for La Seudre. The approach channels should not be taken near LW without a local unofficial pilot (1.30).

7.353

1 **Local knowledge** is required for La Seudre river and its approach channels.

7.354

1 **Tidal streams** in La Seudre and its approach channels set:

Interval from HW Pointe de Grave	*Direction*	*Spring rate (kn)*
S of Banc Auger (45°47′·8N, 1°12′·8W)		
–0415	E	2¾
–0115	SE	¼
+0245	W	3¼

2 In La Seudre and approaches

–0600	In-going begins
HW	Out-going begins

Maximum rate at springs: 3 kn

7.355

1 **Landmarks:**

Marennes church (45°49′·3N, 1°06′·3W) (7.331).

Gardour d'Arvert Beacon (45°46′·1 N 1°12′·7W) (7.154).

Directions

(continued from 7.168 or 7.336)

7.356

1 **Chenal de la Soumaille.** Initial position 45°49′·4N, 1°11′·0W, about 1 cable SSE of La Palette Buoy (port hand) (7.336).

The route leads about 5 cables SSE over the bar at the entrance to Chenal de la Soumaille, see 7.351 for controlling depth, passing:

2 ENE of Banc de la Goëlette (45°49′·0N, 1°11′·5W), and:

WSW of Banc Bourgeois, marked at the W end of its S side by Soumaille NW Buoy (port hand) (45°49′·0N, 1°10′·5W).

3 Thence Chenal de la Soumaille, which is less than 1 cable wide in places, leads nearly 2 miles first E then in a gentle curve round to SE, passing (positions given from Pointe aux Herbes (45°48′·2N, 1°09′·2W)):

4 S then SW of the very steep-to tidal flats marked by Soumaille SE Buoy (port hand) (1 mile NNW) and by Jéac Beacon (port hand 8 m high) (5 cables NE), and:

N then NE of Banc Barat marked at its SE end by Saut de Barat Buoy (E cardinal) (5 cables E).

7.357

1 **Chenal de la Garrigue.** Initial position 45°47′·6N, 1°13′·5W, about 2 cables SSE of Galon d'Or Buoy (safe water) (7.168).

Chenal de la Garrigue is entered between the SW extremity of Banc Auger (45°47′·7N, 1°13′·4W) and the shore 1 cable farther S.

2 **Leading marks:**

Front: Barat Beacon (red and white) (45°48′·6N, 1°10′·0W).

Rear: white gable (1½ miles ENE of front mark).

The alignment (067½°) of these marks leads ENE through the outermost section the channel, passing (positions given from front mark):

3 NNE of the edge of the tidal flats in the vicinity of Pointe du Galon d'Or (2¾ miles WSW), and:

SSE of Banc Auger marked by Auger Sud Buoy (port hand) (2½ miles WSW) and Auger Est Buoy (port hand) (1¾ miles WSW), thence:

SSE of Barat Buoy (port hand) (1¼ miles WSW) moored off Petit Barat, the WSW end of Banc Barat.

4 Thence to a position 2 cables WSW of Barat Beacon. The 067½° alignment passes close to Banc de Ronce, the tidal flat on the S side of the channel, and the alignment (075°) of Barat Beacon and Marennes church (2¾ miles ENE) (7.331) leads ENE in greater charted depths.

7.358

1 The channel then becomes narrower and shallower and leads 1¼ miles ESE, passing (positions given from Barat Beacon):

SSW of Barat Beacon (7.357), thence:

NNE of Pointe aux Herbes (7 cables SE), thence:

SSW of Saut de Barat Buoy (E cardinal) (7.356) where the channel passes over Saut de Barat (1 mile ESE) (7.351).

7.359

1 **La Seudre.** Pont de la Seudre (47°48′N, 1°08′W), a cantilever bridge, spans the entrance to La Seudre river.

The fairway passes between piles Nos 6 and 7 of the bridge and is indicated, on both the downstream and upstream sides, by a light exhibited from the centre of the span and by white rectangular panels on the piles bearing a red rectangle on the port side and a green triangle on the starboard side. The other piles are marked with a plain white rectangle.

2 **Useful mark:**

Pointe du Mus de Loup Light (green and white column, white to seaward; 8 m in height) (45°47′·9N, 1°08′·5W).

7.360

1 The fairway continues SE in midstream, passing (positions given from the bridge):

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SW of La Cayenne (8 cables SE), a village at the entrance to Chenal de Marennes, the canal leading to Marennes Marina (7.362), thence:

NE of La Grève (1¼ miles SE), a village at the entrance to Chenal de la Tremblade, the canal leading to Tremblade Harbour (7.365).

La Seudre

7.361

1 **Anchorage** is available in the fairway between Pont de la Seudre (47°48′N, 1°08′W) (7.359) and the entrance to Chenal de la Tremblade (1¼ miles SE), depth 5 to 6 m muddy bottom, swinging room 80 m radius with a depth of 3 m.

2 **Moorings,** marked by yellow buoys, laid in the river from Pont de la Seudre to L'Eguille-sur-Seudre (uncharted; about 9 miles upstream), are reserved for fishing vessels and oyster boats.

Repairs: boatyard and careening slip at La Cayenne (7.360).

Other facilities: landing slip and pier, formerly used by ferry service, at La Cayenne and La Grève.

Marennes Marina

7.362

1 **General information.** Marennes Marina (45°49′·2N, 1°06′·6W) at the small market town of Marennes is approached from La Cayenne (1½ miles SSW) (7.360) through Chenal de Marennes and entered through an automatically operated lock gate.

Port Authority: Bureau du Port, Avenue des Martyrs de la Résistance, 17320 Marennes.

Port radio: see 1.41 for further information.

7.363

1 **Limiting conditions:**

Chenal de Marennes, 15 m wide at the bottom, dries 2·2 m and is spanned by a power transmission line vertical clearance 16 m.

Non-tidal basin: bottom reported (1985) to be 2·7 m above chart datum; gate 8 m wide, sill reported to be 2·5 m above chart datum, is reported to operate when the height of the tide reaches 4·2 m.

Tidal levels at La Cayenne (7.360) are given at 7.351.

7.364

1 **Directions.** Chenal de Marennes is entered W of the old ferry pier at La Cayenne, midway between perches marking the banks on both sides. Thence the deepest water is found in mid-channel.

Berths:

In the canal; quays on both sides by the gate dry alongside, bottom soft mud.

2 In the basin; quays and five pontoons provide berths for 220 small craft; 10 places reserved for visiting small craft up to 13 m in length.

Repairs of all kinds at two boatyards; slip.

Other facilities: two 6-tonne cranes; yacht club.

Supplies: fresh water; provisions.

La Tremblade

7.365

1 **General information.** La Tremblade drying harbour (45°46′·1N, 1°08′·2W) is primarily concerned with the shellfish industry; it is approached through Chenal de la Tremblade and occupies Chenal de l'Atelier which extends 350 m WNW then SW from the head of the former canal.

2 **Limiting conditions:**

Chenal de la Tremblade, 23 m wide, has been reported (1983) to dry 3 m and is spanned by power transmission lines vertical clearance about 15 m.

Tidal levels at La Cayenne (7.360) are given at 7.351.

7.366

1 **Directions.** Chenal de la Tremblade is entered (45°46′·9N, 1°07′·2W) about 1 cable NW of La Tremblade Buoy (starboard hand) marking a wreck on the SW side of Le Seudre fairway. The deepest water has been reported (1983) to lie in the centre of Chenal de la Tremblade and on the NNE side of the outer section of Chenal de l'Atelier.

2 **Berth:** stone quay on NNE side of Chenal de l'Atelier dries 3 m alongside, bottom soft mud.

Repairs of all kinds at boatyard.

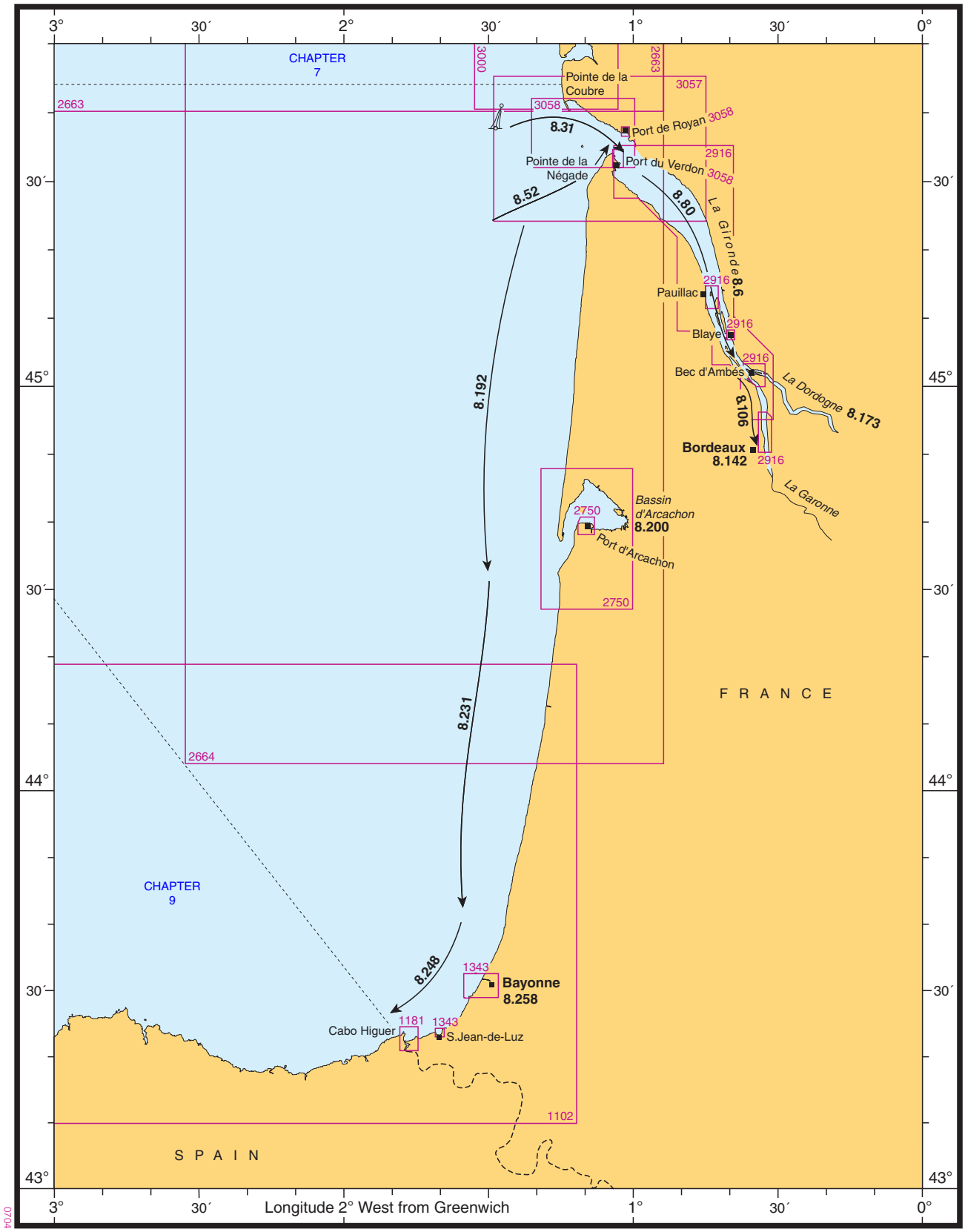
Other facilities: custom house; 5-tonne crane.

Supplies: fuel and fresh water at quay; provisions.

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Chapter 8 - Pointe de la Coubre to Cabo Higuer including La Gironde



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CHAPTER 8

POINTE DE LA COUBRE TO CABO HIGUER INCLUDING LA GIRONDE

GENERAL INFORMATION

Chart 1104

Scope of the chapter

8.1

1 The area covered by this chapter includes:

La Gironde, including its approaches between the dangers lying off and between Pointe de la Coubre (45°42′N, 1°14′W) and Pointe de la Négade (14 miles SSE), and its tributaries La Garonne and La Dordogne.

The offshore and coastal waters from Pointe de la Négade 130 miles S to Cabo Higuer (43°24′N, 1°47′W), the first point in Spain, and Bassin d'Arcachon (44°42′N, 1°08′W) (8.200).

Harbours

8.2

1 **Port Autonome de Bordeaux** (8.10), whose limits include the waters of La Gironde and La Garonne and all the various commercial harbours on these rivers, is the principal port serving the Aquitaine region of SW France.

Bayonne (43°30′N, 1°29′W) (8.258), on L'Adour river, is the only commercial port of any importance between La Gironde and the Spanish frontier.

Refuge

8.3

1 The coast S of Pointe de la Négade is exposed to bad weather from S through W to N. In these conditions Bassin d'Arcachon is inaccessible and the entrance to L'Adour (8.261) may be closed to shipping. Adequate shelter is then available in Baie de Saint-Jean-de-Luz (43°23′N, 1°40′W) (8.301) to vessels of suitable draught, but entry may be difficult. The nearest port of refuge farther W is Pasajes (43°19′N, 1°55′W) (9.15) in Spain.

Flow

8.4

1 **Tidal streams** offshore S of Pointe de la Négade are rotary clockwise and comparatively weak: at the latitude of Bassin d'Arcachon they set inshore when the tide is rising at Pointe de Grave and the average rate is ½ kn. For further details see 8.196.

2 **Currents.** About 5 to 6 miles off the coast S of Pointe de la Négade the current usually sets N and may attain a rate of ½ kn especially with S winds; it is checked by N winds which if strong may give rise to a S or SW-going current. Within 1 mile of the coast there may be a S-going counter-current of about ½ kn.

3 **Caution.** In winter after W gales, especially if long-continued, much stronger N-going currents may set along the coast from the head of Bay of Biscay; the flow may sometimes attain a rate of 4 or even occasionally 5 kn. Such currents have resulted in many wrecks on the shoals in the approaches to Bassin d'Arcachon and Capbreton (43°39′N, 1°26′W).

Navigation

8.5

1 Soundings may be used in conjunction with the bearing of major lights or other navigation aids to determine the ships position when offshore. The following table gives the distance from the coast of various depth contours in the latitude of the lights listed:

	Distance offshore (in miles) of depth contours		
Light	*100 m*	*50 m*	*30 m*
Cordouan (45°35′N,1°10′W) (8.39)	50	20	11
Hourtin (45°08′N, 1°09′W) (8.197)	35	15	7
Cap Ferret (44°39′N, 1°15′W) (8.197)	20	8	4
Contis (44°06′N, 1°19′W) (8.236)	14	6	3

LA GIRONDE AND ITS TRIBUTARIES

GENERAL INFORMATION

Waterways

Charts 3057, 2916

8.6

1 **La Gironde estuary** lies between, and to the E of, Pointe de la Coubre (45°42′N, 1°14′W) and Pointe de la Négade (45°28′N, 1°09′W). It is encumbered by the rocky Plateau de Cordouan (45°35′N, 1°10′W), and other shoals. It is entered through:

Grande Passe de l'Ouest (8.41), the principal channel cuts through the bar NW of Plateau de Cordouan, or:

Passe Sud (de Grave) (8.52) that passes S of Plateau de Cordouan.

8.7

1 **La Gironde river** is entered between Pointe de Grave (45°34′N′1°04′W) and Pointe de Suzac (3 miles E) and extends about 37 miles SE to Bec d'Ambès (45°02′N, 0°36′W) where it is formed by the confluence of La Garonne and La Dordogne. The main ship channel favours the W bank.

La Garonne then leads generally S to Bordeaux (8.142) where Pont de Pierre (44°50′·4N, 0°33′·7W) (8.143) forms the head of navigation for sea-going vessels. This section of the river may be described as La Garonne maritime.

Chart 1104

8.8

1 **La Garonne** river (8.172), which rises in Spain, is used extensively by river barges as far as Agen (uncharted) about 130 km upstream from Bordeaux.

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Canaux du Midi which connect La Garonne with the Mediterranean, are entered at Castets-en-Dorthe, 53 km upstream from Pont de Pierre. They are used only by river barges and small craft.

8.9

1 **La Dordogne** (8.173) entered E of Bec d'Ambès, leads generally SE for 24 miles to Libourne (44°55′N, 0°15′W; uncharted) (8.182), a town at the limit of navigation for coasters and at the point of confluence of La Dordogne and L'Isle rivers.

Port Autonome de Bordeaux

Charts 3057, 2916

8.10

1 **General information.** Port Autonome de Bordeaux is the Port Authority invested with the power of managing the waterways and ports of La Gironde and La Garonne maritime: for address see 8.145. The name is also used to describe the whole complex of widely dispersed ports which include, listed on sequence from the river entrance to Bordeaux itself:

2 Le Verdon (45°33′N, 1°03′W) (8.73); oil terminal for ULCC; Ro-Ro and container terminal; berths for Port Authority vessels and for ferries at its subsidiary Port-Bloc (2 miles NNW) (8.68).

Pauillac (45°13′N, 0°45′W) (8.112) oil terminal for large vessels partly laden and waiting berth.

Blaye (45°07′N, 0°40′W) (8.118): bulk cargo handling berths for medium size vessels.

3 Ambès (8.125): tanker terminals at Bec d'Ambès (45°02′·5N, 0°36′·0W) and Le Marquis (45°00′N, 0°33′W), on La Dordogne and La Garonne respectively, for large vessels partly laden.

Bordeaux (44°50′N, 0°34′W) (8.142) whose Port Maritime extends 10 km downstream to include the principal cargo handling berths at Bassens.

8.11

1 **Port limits.** Port Autonome de Bordeaux extends from the entrances to Grande Passe de l'Ouest (8.41) and Passe Sud (8.52), see chart 3057 for limits, to the upper limit of the port of Bordeaux (8.143), and on La Dordogne to the E end of Île d'Ambès (45°02′N, 0°33′W) and of the minor port of Bourg (8.186).

Pilotage

Authority

8.12

1 **Station de Pilotage de la Gironde** maintains offices at Le Verdon (8.73) and Bordeaux (8.142), see *Admiralty List of Radio Signals Volume 6(2)* for further details, especially communications.

2 **Limits** of the pilotage district are:

Outer: meridian of 1°30′·0W between the parallels of Pointe de la Coubre (45°41′·8N) and 45°28′·7N (8.55).

Inner: the inner limits of the ports of Bordeaux (8.143) and Libourne (8.182) on La Garonne and La Dordogne respectively.

3 The pilotage district is divided into three zones:

Zone de Mer extending from the district outer limit to a line joining Pointe de Grave (45°34′N, 1°04′W) with Pointe de Terre-Nègre (5 miles NNW).

Zone de Rivière lying between the inner limit of Zone de Mer and Pont de Pierre (8.143) at Bordeaux, and the inner limit of Port Autonome de Bordeaux on La Dordogne (8.11).

Zone de Dordogne: upstream from the inner limit of Zone de Rivière as far as Pont de Pierre (8.173) at Libourne.

Regulations

8.13

1 **Compulsory pilotage:** within the pilotage district limits.

Exempt pilotage: vessels, other than those carrying hydrocarbons or dangerous goods and those without VHF radio, whose length over all is less than:

In Zone de Mer: 70 m.

In other zones: 50 m.

All vessels are required, 3 hours prior to their arrival at BXA Landfall Light-buoy (45°37′N, 1°28′W) (8.41), to ask Radar-Verdon for permission to enter the pilotage district (8.12).

Requests for pilots

8.14

1 **Report ETA** at BXA Landfall Light-buoy (45°37′N, 1°28′W) (8.41), maximum speed, draught and Master's agreement to transfer the pilot by helicopter if necessary to the pilot station, at least 12 hours (18 hours if possible) in advance. Vessels sailing from ports between and including Lorient (47°44′N, 3°21′W) (4.105) and Santander (43°27′N, 3°49′W) (10.20) should send their ETA immediately on weighing anchor and any change of over 3 hours should be sent at least 6 hours in advance. For further details see *Admiralty List of Radio Signals Volume 6(2)*.

2 **Amend ETA** if it changes by more than 3 hours.

Contact Le Verdon Pilot's Office 3 hours before arrival at BXA Landfall Light-buoy (8.41). The office will then give detailed instructions concerning boarding operations and also provide information on navigation in the channels.

8.15

1 **On departure,** or for movements within the various ports and anchorages, from 3 to 6 hours notice (depending on location) must be given to the pilot's office at either Le Verdon or Bordeaux.

Availability

8.16

1 Pilotage is provided at the Zone de Mer boarding place from approximately 1 hour before to 5 hours after LW at Corduan. Exceptionally it may be provided at other times for container ships if warranted.

Boarding

8.17

1 **Pilot boats** are normally used to embark Zone de Mer pilot, see 1.31 for details of distinguishing marks. When this method of boarding is used vessels must reduce speed to 5 kn.

Helicopters based at Soulac-sur-Mer Airport (45°30′N, 1°05′W) may be used at other times. The arrangements are made (after making contact) 3 hours before arrival . See *The Mariner's Handbook* for information concerning helicopter operations.

8.18

1 **Boarding places.** Zone de Mer pilots normally board about 1 mile E of BXA Landfall Light-buoy (8.41) or, should the conditions there be unsuitable for vessels less than 120 m in length, in the vicinity of No 13 Light-buoy in the position (45°38′N, 1°06′W) shown on the chart. In the latter event vessels proceed to No 13 Light-buoy with assistance from Radar-Verdon (8.24) This service is not available to vessels carrying dangerous or hydrocarbon substances if the Master has not visited the port at least three times in the preceeding 12 months. Exceptionally,

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vessels more than 120 m in length not carrying dangerous or hydrocarbon substances may have radar asistance by agreement of the Harbour Master. Vessels not permitted radar assistance may, on request 6 hours in advance, embark a pilot at La Pallice Roads (7.206).

Zone de Rivière pilots board off Pointe de Grave (45°34′N, 1°04′W).

Traffic regulations

General information

8.19

1 *International Regulations for the Prevention of Collisions at Sea, 1972* are in force in La Gironde and La Garonne. The lights and shape required by Rule 28 for vessels constrained by their draught are to be exhibited by:

2 Vessels of 80 000 dwt or more, between BXA Landfall Light-buoy (8.41) and Rade du Verdon (3 miles SE of Pointe du Grave).

Vessels with a draught of 7 m or more, between No 15 Light-buoy (starboard hand) (4 miles SE of Pointe du Grave) and Bordeaux (8.143), including Blaye approach channel (8.121).

See 8.26 for details of signals shown by dredgers.

8.20

1 **National regulations** that apply to the whole of La Gironde and La Garonne include the following:

Moderate speed is to be used when passing close to any vessel at anchor or secured alongside a berth.

Passing and overtaking manoeuvres must be accomplished outside narrow, winding or shallow sections of the channel.

Continuous radio watch with Bordeaux Traffic on VHF channel 12 must be kept by vessels under way between BXA Landfall Light-buoy (8.41) and their berth and by vessels at anchor.

Approach channel

8.21

1 Vessels exceeding 1600 grt laden with hydrocarbons or dangerous cargo must sight BXA Landfall Light-buoy (45°37′N, 1°28′W) (8.41) before entering the approach and entry channels that are subject to compulsory pilotage (8.13) and to the traffic regulations given in the previous paragraphs. See 1.54 for the national regulations which are applicable to all vessels using the designated channels. The associated signal station is La Coubre (8.37): there is no specified waiting anchorage but see 8.48.

Tankers

8.22

1 The regulations given in this paragraph apply to tankers that are carrying or have carried dangerous or flammable gases or liquids.

Entry prohibited: when not equipped with radar and VHF radio.

Status reports must be made to Capitainerie du Port de Bordeaux and to Pilotage de la Gironde, 24 hours before arrival, on the state of their radar, VHF radio, main engines, steering gear, windlass and winches.

2 **Permission to enter** the approach channel will be refused unless all the equipment listed in the status report is functioning properly, or exceptionally in good weather if the vessel is in radio contact with Radar-Verdon (8.40) and escorted by a tug.

Departure: similar rules apply; similar exemptions may be granted to vessels sailing from Le Verdon.

Vessel Traffic Service

General

8.23

3 Compulsory VTS which provides full radar coverage from the BXA Light-buoy to the port of Bordeaux, is maintained for the control of shipping. Vesssels are required to give notice of ETA 48, 24, 12, 6 and 3 hours before arrival at BXA Landfall Light-buoy (8.41). For further information see *Admiralty List of Radio Signals Volume 6(2).*

Radar assistance

8.24

4 Radar-Verdon is operated from the Bureau du Port at Le Verdon (45°33′N, 1°03′W) (8.73) and transmits from La Palmyre Rear Leading-Light (45°40′N 1°07′W) (8.41) providing coverage of La Gironde estuary. The radar station is manned at all times and when requested on VHF the operator will provide information (without accepting liability) in the French language, on a vessel's position and the state of traffic in the estuary. For further details see *Admiralty List of Radio Signals Volume 6(2).* Pilotage assistance can also be provided as described at 8.18.

Dredging

8.25

1 **Dredgers** are constantly at work in the channels. They include:

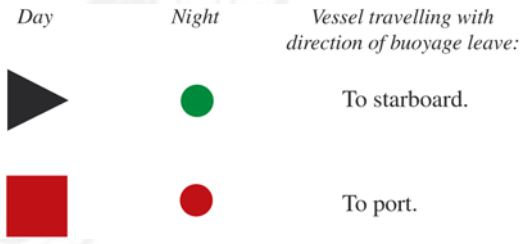
Suction dredgers which operate under way and may execute sudden manoeuvres.

Bucket dredgers that are moored fore and aft when working.

Jack-up rigs employed on rock clearance may also be encountered in the channels.

8.26

1 **Signals** (Diagram 8.26) are exhibited by dredgers to indicate to which side they should be left. They are similar to the lateral marks in the channel.



Traffic Signals (8.26)

Navigational aids

Information services

8.27

1 Navigational information is provided by:

Radar-Verdon as described at 8.24.

La Gironde Pilotage, see 8.14 for details.

Tidal information

8.28

1 The height of water between Le Verdon and Bordeaux is broadcast on VHF from the VTS control centre at 5 minute intervals. See *Admiralty List of Radio Signals Volume 6(2)* for further details.

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Buoyage and lights

8.29

1 **Caution.** The channel depths are liable to frequent change and the buoys and lights are altered accordingly. Charted details of these aids cannot always be relied upon.

Distance marks

8.30

1 **Kilometre marks** shown on the charts on both banks of La Gironde and La Garonne indicate the approximate distance downstream from Pont de Pierre de Bordeaux (km 0) (44°50′·4N, 0°33′·7W) (8.143). This system is sometimes used to position objects located either in the rivers or on their banks.

A similar system is used for La Dordogne river, see 8.174 for further details.

LA GIRONDE ESTUARY AND ENTRANCE

General information

Chart 3057, 3058

Routes

8.31

1 **Grande Passe de l'Ouest** (8.41), the principal entrance channel, is cut through Banc du Matelier, the outer bar 5 miles WSW of Pointe de la Coubre. Thence it follows the N and E shore of the estuary to the vicinity of the river entrance between Pointe de Grave (45°34′N, 1°04′W) and Pointe de Suzac (3 miles E), where the main channel leads S through Passe de la Chambrette (8 cables E of Pointe de Grave).

2 **Passe Sud** (8.52), a minor channel used only by fishing vessels and small craft, leads through the S part of the estuary to the vicinity of Pointe de Grave.

Topography

8.32

1 **North shore.** Between Pointe de la Coubre and Pointe de Terre-Nègre (6 miles SE) the coast is low and backed by dunes covered by conifers. From Pointe de Terre-Nègre to Pointe de Suzac the coast consists of white cliffs, broken by sandy beaches boxed in by rocks and called 'conches', and topped by an uninterrupted succession of houses.

South shore. From Pointe de la Négade to Pointe de Grave the coast consists of low wooded dunes.

Controlling depths

8.33

1 **Banc du Matelier:** 11·4 m as shown on the chart in position 45°38′·4N, 1°19′·7W.

Caution: the bars are unstable and the depths vary. Depths shoaler than those shown on Admiralty charts may exist in the entrance to La Gironde.

Hazards

8.34

1 **Stormy weather** from S through W to N causes a heavy swell and breakers in the approach channels that are a danger to small craft and may necessitate vessels proceeding at considerable speed to maintain steerage way.

Fog is sometimes very thick in the estuary, but often the tops of the lighthouses may be seen when the land and sea is hidden.

2 **Tidal streams** seaward of the 10 m depth contour set across the approach routes at times. Within the channels they are very strong. For further details see 8.38.

Pilotage

8.35

1 See 8.12 for details of La Gironde Pilotage Service.

Traffic regulations

8.36

1 See 8.19 for regulations applicable to the estuary and to the whole of La Gironde.

Rescue

8.37

1 **Coastguard station** (1.75):
Pointe de Grave (45°34′N, 1°04′W) (8.39).
Lifeboat stations (1.77):
Port-Bloc (45°34′N, 1°04′W) (8.68).
Royan (45°37′N, 1°02′W) (8.57).

Natural conditions

8.38

1 **Tidal streams.** To seaward of the 10 m depth contour the tidal streams are rotary clockwise, see *Admiralty Tidal Stream Atlas: France West Coast,* but the predominant directions especially at springs are NE and SW when maximum rates of about 1½ kn occur about 4 hours before and 3 hours after HW Pointe de Grave respectively.

2 Farther inshore at about the meridian of Cordouan Light (1°10′W) the tidal streams, especially the out-going stream, become much stronger and follow the direction of the channels, see information on the chart for details.

Climatic table: see 1.156 and table for Pointe de la Coubre (45°42′N, 1°14′W) (1.162).

Principal marks

8.39

1 **Landmarks:**
La Coubre Lighthouse (white truncated tower, red top; 65 m in height) (45°42′N, 1°14′W) and old coastguard station (white watch tower) (2 cables SSW) on Pointe de la Coubre. A second disused coastguard station (white tower, red bands, 42 m in height) stands 3 cables ENE of the lighthouse.



La Coubre Lighthouse (8.39)
(Original dated 1994)
(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

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2 Cordouan Lighthouse (white tower, grey top; 68 m in height) (45°35′N, 1°10′W) which dominates the centre of the estuary.



Cordouan Lighthouse from W (8.39)

(Original dated 2000–02)

(Photograph – Jean Guichard)

La Palmyre Rear Leading Light (45°40′N, 1°07′W) (8.41).

Terre-Nègre Lighthouse (45°39′N, 01°06′W) (8.44).

3 Notre-Dame Church (45°37′·5N, 1°01′·9W) at Royan, which has a distinctive tower and roof.

Saint-Pierre Church (square tower) (5 cables NE of Notre-Dame).

Pointe de Grave Lighthouse (45°34′·2N, 1°03′·9W) (8.55) and Coastguard Station (building and framework radio mast 63 m in height exhibiting aircraft obstruction lights) (1 cable N).

4 **Major lights:**

La Coubre Light—as above.

Cordouan Light (sectored)—as above.

Terre-Nègre Light (sectored)—as above.

Pointe de Grave Light (sectored)—as above.

Other aids to navigation

8.40

1 **Racon** (1.40) is fitted to BXA Landfall Light Buoy (45°37′N, 1°28′W) (8.41).

2 **Radar-Verdon** is operated from the Bureau du Port at Le Verdon (45°33′N, 1°03′W) (8.73). For further details see 8.24.

Directions for Grande Passe de l'Ouest

(continued from 7.154)

Approach

8.41

1 **Initial position:** vicinity of BXA Light-buoy (safe water mark) (45°37′N, 1°28′W).

Leading lights. The alignment (081½°) of La Palmyre Leading Lights leads in the intensified sector (080½°) into the channel (8.33) through Banc du Matelier:

2 Front light (white pylon on dolphin; 27 m in height) (45°39′·6N, 1°08′·7W).

Rear light (white radar tower; 36 m in height) (1 mile E of front light). The rear leading light for the 327° alignment (8.46) is exhibited from the same structure, which is the Radar-Verdon aerial.

8.42

1 **Buoyage.** The entrance to the channel through Banc du Matelier is marked by Nos 1 and 2 Light-buoys (lateral marks) (45°38′N 1°22′W) 9 miles W of La Palmyre Front Leading Light. The channel is marked on the N side by Nos 2a and 4 Light-buoys (port hand) and on the S side by Nos 3 and 5 Light-buoy (starboard hand). Nos 2a and 3 Light-buoys are high focal plane.

2 **Caution.** Maintenance of the channel may necessitate the displacement of the light-buoys; their charted position must therefore be regarded as approximate. Additional buoys identified by the letters TX may be laid temporarily to mark positions where work is in progress; lateral marks are used when the buoys are moored within or on the limits of the channel, special or isolated danger marks when they are moored outside the channel.

From outer to inner bar

8.43

1 From a position about 7 miles W of La Palmyre Front Leading Light (8.41) the channel then leads 4½ miles ENE in deeper water, passing (positions given from La Coubre Lighthouse (45°42′N, 1°14′W)):

2 SSE of Nos 6 Light buoy (S cardinal) and No 8 Light-buoy (port hand) , marking Banc de la Coubre, a drying sand bank that is advancing S and extends 3½ miles WSW from the spit of land extending 1½ miles SSE from Pointe de la Coubre. No 6 Light-buoy is moored S of the leading line (081½°), 2½ cables W of an underwater wreck. Thence:

3 NNW of No 7 Light-buoy (starboard hand), thence:

Clear of an unmarked dangerous wreck (3 miles SSW), thence:

NNW of No 7a Light-buoy (starboard hand) moored 3 cables ENE of a dangerous wreck.

8.44

1 The line of bearing 100° of a white sector (097°–104°) of Terre-Nègre Light (white round tower red top on W side; 27 m in height) (45°39′N 1°06′W) then leads 2½ miles E passing (positions given from La Coubre Lighthouse (45°42′N, 1°14′W)):

N of Banc de Montrevel (3 miles SSE) marked by No 9 Light-buoy (N cardinal) and No 11 Light-buoy (starboard hand), and:

2 S of Nos 8a and 10 Light-buoys (port hand) moored on the N side of the channel, and:

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Clear of a wreck with a safe depth of 11 m over it (2½ miles SSE).

8.45

1 The channel then leads about 3 miles ESE, from a position 2 miles W to a position 1½ miles SE of Terre-Nègre Light (8.44), and is marked by buoys as shown on the chart.

Useful marks (positions given from Terre-Nègre Light):
Auxiliary light exhibited from La Palmyre Front Leading Light (2 miles NNW) (8.41).
Puyraveau water tower (5 cables E).
Courlay water tower (1¼ miles ENE).

8.46

1 **Leading lights:**
Front: Terre-Nègre Sectored Light (45°39′N, 1°06′W) (8.44).
Rear: La Palmyre Common Rear Directional Leading Light (1·1 miles NNW of front light) (8.41).

The alignment (327°) of these lights and a white sector (319°–327°) of Terre-Nègre Light, astern, lead 3 miles SE from a position about 1½ miles SE of Terre-Nègre Light, to the entrance of La Gironde, passing (positions given from Pointe de Grave):

2 NE of No 13 Light-buoy (starboard hand) (3½ miles NNW), thence:
NE of No 13a Light-buoy (starboard hand) moored off the NE side of Platin de Grave (1 mile NW), a shoal area, and:

3 SW of No 12 Light-buoy (port hand) and of Banc de Saint-Georges Light-buoy (S cardinal) marking the NW end and the S side, respectively, of Banc de Saint-Georges (2 miles NE), a bank of sand and gravel on which the swell breaks heavily especially during the out-going tidal stream.

4 **Useful marks** in the vicinity of Pointe de Vallières (positions given from the first listed):
Water tower (45°36′·2N, 1°00′·4W) (8.63).
Saint-Georges-de-Didonne Church (5 cables E).
Saint Georges disused lighthouse (3 cables S) (8.63).

(Directions for La Gironde secondary channel continue at 8.109)

Passe de la Chambrette

8.47

1 The white sector (170°–173°) of Verdon-sur-Mer Light (white rectangle, black stripe, on white dolphin, black top; 11 m in height) (45°32′N, 1°02′W) leads S through Passe de la Chambrette to the vicinity of Le Verdon oil terminal (1 mile NNW of the light) (8.76), passing (positions given from Verdon-sur-Mer Light):

2 E of No 13b Light-buoy (starboard hand) moored off the SE extremity of Platin de Grave (3 miles NNW) (8.46) and the N extremity (2¾ miles NNW) of the spit extending 1¾ miles N from Pointe de la Chambrette, thence:
Over the bar (2¼ miles N) extending SE from Pointe de Grave to Banc des Marguerites, in a least charted depth given at 8.33.

3 **Useful marks** (positions given from front leading light):
Pointe de la Chambrette Light (green mast, 13 m in height) (1 mile NNW) at the N end of a Le Verdon oil terminal.
Water tower (9 cables NW).

(Directions for main channel continue at 8.100)

Waiting anchorages

Outer anchorage

8.48

1 The best anchorage for vessels waiting to enter Grande Passe de l'Ouest (8.41) is reported to be in position 45°36′N, 1°27′W, about 2 miles SE of BXA Landfall Light-buoy (8.41). During the winter there is a heavy swell and the anchorage may be untenable.

La Gironde entrance

8.49

1 **Mouillage du Verdon** lies:
Between Pointe de Grave (45°34′N, 1°04′W) and the oil terminal at Le Verdon (1½ miles SSE) (8.76) and:
W of Passe de la Chambrette (8.47) and Le Verdon oil terminal approach, which must not be obstructed.
Bottom is sand and mud, very good holding.

2 The anchorage is used by:
Vessels of less than 10 m draught waiting to berth at Le Verdon.
Vessels waiting to proceed to other ports farther up river.

8.50

1 **Mouillage de Suzac** lies SW of Pointe de Suzac (45°34′·7N, 0°59′·5W) between (positions given from the point):
M1 Light-buoy (N cardinal) (1¼ miles WSW) which marks a wreck, and:
Another light-buoy (isolated danger) (1½ miles SSE) moored 1¾ miles farther SE.
Bottom is mud and sand good holding.
The anchorage is reported to be suitable for vessels of 70 000 dwt or less, except at springs and in bad weather.

8.51

1 **Cautions:**
Disused submarine cables, shown on the chart, are laid between Pointe de Grave and Pointe de Suzac.
Foul patches due to abandoned anchor chains may be found in both the above anchorages.
Tidal streams are very strong, see the chart for further details.

Passe Sud

General information

8.52

1 **Description.** Passe Sud, also called Passe de Grave, used only by fishing vessels and small craft, is entered about 4½ miles WNW of Pointe de la Négade (45°28′N, 1°09′W) and leads 10 miles ENE then NE to join Grande Passe de l'Ouest (8.46) about 2 miles N of Pointe de Grave (45°34′N, 1°04′W).

8.53

1 **Least charted depths.** The chart indicates that there are generally depths of more than 5 m on the leading lines, but unmarked shoals with least charted depths from about 2 to 5 m lie close to the alignments as described in the directions (8.55).

8.54

1 **Tidal streams.** In position 45°32′N, 1°10′W the tidal stream sets:

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Interval from HW Point de Grave	*Direction*	*Rate (kn)*	
		Springs	*Neaps*
–0400	ENE	2½	1½
–0000	SSE	½	½
+0300	WSW	3½	2¼
+0600	WSW	1½	1

For further information on tidal streams in other positions see the chart and 8.38.

Directions

(continued from 7.154)

8.55

1 **Initial position** 45°30′·0N, 1°15′·5W, 4 cables S of G Landfall Light-buoy (safe water).

Leading lights:

Front: Saint-Nicolas Direction Light (white square tower 13 m in height (45°34′N, 1°05′W).

Rear: Pointe de Grave Light (white square tower, black corners and top; 25 m in height) (8½ cables ENE of front light).

2 The alignment (063°) of these lights leads ENE, in the intensified sector (061½°–064½°) of the front light, through the outer section of the channel to a position 2½ miles WSW of the front light, passing (positions given from front light):

NNW of several patches with depths of 5 m or less over them (5 to 6½ miles WSW), the innermost marked by G1 Buoy (starboard hand), on the edge of Banc des Olives which extends 3 miles offshore from Pointe de la Négade, and:

3 Close SSE of the 5 m depth contour enclosing the S edge of Banc du Chevrier (5 miles WSW), which is unmarked, thence:

SSE of G2 Buoy (port hand) (4 miles WSW) moored off the SE side of Banc du Chevrier.

4 **Useful marks:**

Radio masts (framework; the tallest exhibits red aircraft obstruction lights) (45°30′·2N, 1°08′·2W) of Sous-Cross Soulac (1.73).

Water tower at Soulac-sur-Mer (2½ miles farther NE), showing above the conifer trees.

8.56

1 **Leading lights:**

Front: Le Chay Direction Light (white round tower, red top; 15 m in height (45°37′·4N, 1°02′·3W).

Rear: Saint-Pierre Direction Light (red water tower 40 m in height (9½ cables NE of front light).

The alignment (041°) of these lights, which are located at Royan (8.57) and have been reported (1984) to be difficult to see by day, then leads 5 miles NE into Grande Passe de l'Ouest, passing (positions given from front light):

2 NW of G3 Buoy (starboard hand) (6 miles SW) marking the spit extending SW from Rocher de Saint-Nicolas (45°33′·5N, 1°05′·8W), a drying reef, thence:

SE of the SE edge of Banc du Gros Terrier (5 miles SW), which is unmarked, thence:

3 NW of G5 Buoy (starboard hand) moored off the W end of Banc de Saint-Nicolas (4¼ miles SW), thence:

SE of G4 Buoy (port hand) moored at the SW end of Platin de Grave (3½ miles SW).

The track then leads NE, then NW, passing:

4 Close SE of G6 Buoy (port hand) (2¾ miles SW), moored at SE edge of Platin de Grave, noting the 3·8 m patch close SE of the buoy, thence;

SE of No 13a Light-buoy (starboard hand) (2 miles SW) (8.46).

5 **Useful marks:**

Notre-Dame Church (45°37′·5N, 1°01′·9W) (8.39) at Royan, which stands close SE of the 041° alignment of leading lights.

Light-beacon (N cardinal; 5 m in height) marking head of groyne extending 1 cable NNE from Pointe de Grave (45°34′N, 1°04′W).

Royan and approaches

Chart 3058 plan of Port de Royan

General information

8.57

1 **Description.** Royan (45°37′N, 1°02′W) is a holiday resort with a population of 16 800 (2003) that increases to 100 000 in summer. The harbour, approached from the inner end of Grande Passe de l'Ouest and entered through Rade de Royan, is used by ferries, fishing vessels and small craft.



Royan Harbour from NE (8.57)

(Original dated 1994)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

Port Authority: Capitainerie, Quai de la Vieille Jetée, 17200 Royan. Office located on SW side of the yacht harbour entrance.

Limiting conditions

8.58

1 **Controlling depth:** the entrance has been reported (2000) to be dredged to 1·7 m.

Deepest berths: the basins are dredged annually to 2·5 m; silting occurs at a rate of about 1 m per year.

Tidal levels. See information in *Admiralty Tide Tables*. Mean spring range about 5·1 m; mean neap range about 4·2 m.

Arrival information

8.59

1 **Port radio:** see 1.41 and *Admiralty Maritime Communications* for details.

Outer anchorage. Rade de Royan, lying between the harbour and Banc de Saint-Georges (1 mile SSW) (8.46), is exposed to winds from SE through SW to NW and the tidal streams are strong. In calm conditions vessels may anchor in depths of 11 to 20 m, mud and sand, clear of the

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wrecks shown on the chart; small craft anchor closer inshore.

Harbour

8.60

1 **General layout.** The harbour consists of three sections:
Jetée Sud; the terminal for ferries from Port-Bloc (3 miles SSW) (8.68); an artificial islet whose NW end is connected to the shore on the SW side of the harbour by a road bridge.
Port de Pêche et de Commerce occupies the S basin.

2 Port de Plaisance: a marina occupying two basins; the NW basin, enclosed by Vieille Jetée and Jetée Est, has a reception berth for visiting small craft at its entrance; the NE basin lies between Jetée Est and an L-shaped outer breakwater named Digue Est at its root and Digue Sud at its head.

8.61

1 **Tidal streams.** In Rade de Royan the tidal streams on the SW side in the vicinity of Banc de Saint-Georges are similar to those in the main channel SW of the shoal, but weaker. On the NE side in Grande Conche, which lies between the harbour and Pointe de Vallières (1 mile SE), an eddy forms during the in-going tidal stream with the result that the tidal stream sets continuously NW; the rate attains 1 kn during the rising tide and 3 kn when it is falling.

Directions

8.62

1 **Western approach.** Initial position 2 miles W of Royan Harbour.

The principal approach leads ESE into Rade de Royan, passing:
SSW of Pointe du Chay (45°37′·1N, 1°02′·5W); a beacon (special) marks the seaward end of an outfall pipe close to the point, and:
NNE of the NW end of Banc de Saint-Georges (5 cables SSW) marked by No 12 Light-buoy (port hand) (8.46).

8.63

1 **Southern approach.** Initial position 45°34′·7N, 0°59′·8W, about 2 cables W of Pointe de Suzac. An unmarked channel about 4 cables wide between 4 m depth contours leads 1 mile NNW then 1½ miles NW into NW into Rade de Royan, passing (positions given from Pointe de Suzac):

2 ESE of the SE end of Banc de Saint-Georges (6 cables WNW), thence:
NE of Banc de Saint-Georges (8.46), and:
SW of Pointe de Vallières (1½ miles NNW), thence:
SW of R1 Light-buoy (starboard hand) (2½ miles NW) marking a wreck.

3 **Caution.** Several wrecks, whose positions best can be seen on the chart, lie in the channel.

Clearing marks. The alignment (358°) of the following marks on Pointe de Vallières clears E of the 2 m depth contour at the SE end of Banc de Saint-Georges:
Front: Saint-Georges disused lighthouse (grey square masonry tower) (47°36′·0N, 1°00′·4W).
Rear: water tower (3 cables N of front mark).

8.64

1 **Entering harbour.** From Rade de Royan the entrance channel leads NE, passing (positions given from Le Chay Light (45°37′·4N, 1°02′·3W)):
NW of R1 Light-buoy (starboard hand) (8 cables SSE) (8.63), thence:
SE of the head of Jetée Sud (5 cables SE) marked by a light (white turret, red brickwork base; 10 m in height), thence:

2 SE of the head of Nouvelle Jetée, marked by a light (white mast, red top; 7 m in height) (6 cables ESE), and:
S of the head of Digue Sud, marked by a light (white post, green top; 4 m in height).

3 **Caution.** Jetée Sud and Nouvelle Jetée should be rounded at a distance of at least 50 m as the tidal stream sets continuously S or SW towards them due to the eddy described at 8.61.

Useful mark (position given from Nouvelle Jetée Head Light):
Strip light on Mole Nord Spurhead (75 m NW) on the NW side of Port de Pêche entrance.

Basins and berths

8.65

1 **Jetée Sud.** Ferries berth on NE side alongside slip, length 100 m, depth alongside 2·7 m at SE end.

Port de Pêche, the S basin, provides berths at:
Quai des Sabliers on S side, a quay 370 m long on the inner side of Nouvelle Jetée.
Pontoons extending SE from NW side of basin.

Port de Plaisance, the two basins, see 8.58 for depths, provides berths for 1020 small craft, including 60 for visitors, at numerous pontoons.

Port services

8.66

1 **Repairs** of all kinds to fishing vessels and small craft; gridiron at N corner of Port de Pêche and E corner of Port de Plaisance.

Other facilities: 26-tonne mobile boat hoist; hospital; custom house; yacht club.

Supplies: fuel; freshwater; provisions.

Communications: ferry service (8.79) to Port-Bloc (3 miles SSW).

Chart 3058

Saint-Georges-de-Didonne

8.67

1 **General information.** Saint-Georges-de-Didonne drying harbour (45°36′·0N, 1°00′·3W) is situated on the E side of the S extremity of Pointe de Vallières and entered from the S approach to Royan (8.63). A jetty extending 100 m E then SE from the shore near the disused Saint-Georges Lighthouse (8.63) provides but little protection from the swell in bad weather.

2 **Anchorage** off the harbour in the channel NE of Banc de Saint-Georges (8.63), depth 15 to 20 m sand and mud, is very exposed to winds from S to NW and the tidal streams are strong. Small craft can anchor close inshore in the entrances to the small bays lying SE of Pointe de Suzac (1½ miles SSE of the harbour).

3 **Berths** alongside N side of jetty and the quay extending N from its root are reported to dry from 0·5 to 2·3 m alongside.

Repairs: of a minor nature to small craft.

Supplies: fuel; fresh water; provisions.

Port-Bloc

Chart 3058 plan of Port du Verdon

General information

8.68

1 **Description.** Port-Bloc (45°34′N, 1°04′W), situated close S of Pointe de Grave beside the main channel, is primarily

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the base for the ferry service to Royan (8.60) and for vessels operated by the Port Authority and the Pilotage Service. It is also used by a few fishing vessels and small craft.

Port Authority: Port Autonome de Bordeaux (8.10); Bureau du Port at Le Verdon (8.73).

Limiting conditions

8.69

1 **Controlling depth:** basin partially dredged to 3 m as shown on the chart.

Deepest berth: ferry terminal (8.71).

Tidal levels See information in *Admiralty Tide Tables*. Mean spring range about 4·4 m; mean neap range about 2·3 m.

Swell: enters the harbour in bad weather.

Directions

8.70

1 **Port-Bloc entrance,** is 30 m wide and leads SSW into harbour, passing:

ESE of Estacade Nord Light-beacon (white metal framework tower, green top; 18 m in height) standing on the edge of the stone embankment on the WNW side, and:

WNW of Estacade Sud Light-beacon (white tower, red top; 17 m in height) standing close off the breakwater head.

2 **Caution.** The tidal stream off the harbour entrance is strong, see information on the chart for details. Ferries leave and enter at frequent intervals and require the full width of the channel.

Berths

8.71

1 **Ferry terminal** on N side of basin; inclined framework ramp depth alongside decreases from 3 m to drying 0 m.

Quai du Balisage at SE corner of basin; depth alongside W face 1 to 2 m; reserved for Port Authority vessels.

Wharf, close N of quay; used for berthing out of service ferries.

2 **Moorings** off Quai du Balisage for Port Authority craft.

Pontoon berths on W side of basin, for fishing vessels and small craft; depths about 1 to 2 m.

Yacht club pontoon in SW corner of basin: depth alongside about 2 m.

Port services

8.72

1 **Facilities:** yacht club.

Supplies: marine diesel fuel; fresh water.

Communications: see Le Verdon (8.79) for details.

Le Verdon

General information

8.73

1 **Position.** Le Verdon (45°33′N, 1°03′W) is situated on the W side of the entrance to La Gironde 2 miles SSE of Pointe de Grave.

Function: Ro-Ro and container terminals; lightening and transhipment area. There is also a tanker terminal which was disused (2003).

2 **Traffic.** In 2003 the port was used by 54 vessels totalling 1 163 039 dwt.

Port Authority: Port Autonome de Bordeaux (8.10); Bureau du Port, address 33123 Le Verdon-sur-Mer, is situated at the root of the oil jetty (8.76).

Limiting conditions

8.74

1 **Controlling depths** in Grande Passe de l'Ouest are given at 8.33.

Deepest and largest berths: see 8.78 for details.

Tidal levels: see 8.69.

Density of water: reported to vary from 1·015 to 1·026 g/cm^3.

Maximum size of vessel handled:

Ro-Ro and container terminal: draught 12·5 m at all states of the tide.

Arrival information

8.75

1 **Port radio:** see *Admiralty List of Radio Signals Volume 6(2)* for details.

Notice of ETA: see 8.14 for details.

Outer anchorages: see 8.48 for details of waiting anchorages in La Gironde approach and entrance.

Prohibited area. Verdon-Sur-Mer oil terminal jetty is disused and no longer maintained; approach and berthing are prohibited.

Pilotage: see 8.12 for details.

Tugs are based at Bordeaux (8.148), about 6 hours steaming from Le Verdon.

Harbour

8.76

1 **General layout.** The oil terminal, a jetty, extends 4 cables N from Pointe de la Chambrette (45°32′·7N, 1°02′·5W). The Ro-Ro and container terminal extends 5 cables S from the root of the oil terminal.

Tidal streams are very strong, see information on the chart for details.

Directions for berthing

8.77

1 **Leading lights:** The alignment of Le Verdon Oil Terminal Approach Leading Lights (45°32′N, 1°02′W) (8.47) leads 135 m E of the E side of the oil jetty, from where the Ro-Ro and container berths can be approached directly.

Berths

8.78

1 **Ro-Ro and container terminal** consists of two berths (Nos 805 and 806) alongside quay, length of each 285 m, least depth alongside 10 m. There is a ramp at N end of Berth 805 for the use of Ro-Ro vessels equipped with an angled ramp.

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Port services

8.79

1 **Repairs:** minor only by firms operating from Bordeaux.

Other facilities: no oily waste reception facilities (reported 1987); 5500 tonne barge for lightening operations.

Supplies: fuel oil; fresh water; provisions supplied from Bordeaux.

Communications: ferry service from Port-Bloc (3 km NNW) (8.68) to Royan can transport container lorries.

LA GIRONDE AND LA GARONNE

General information

Chart 2916

Description

8.80

1 **La Gironde main channel.** From its entrance through Passe de la Chambrette (45°34′N, 1°02′W) (8.47), the main channel leads SE between shoals for about 16 miles to the vicinity of Saint-Christoly-Médoc (45°21′N, 0°49′W), a village on the W bank at km 66. Thence the channel follows the W bank of the river fairly closely for the next 21 miles to Bec d'Ambès (45°02′N, 0°36′W), the point of confluence of La Garonne and La Dordogne rivers.

2 **La Garonne** (8.106) then leads generally S for 14 miles to Pont de Pierre de Bordeaux (44°50′·4N, 0°33′·7W) (8.143) the bridge at the limit of navigation for ocean-going vessels.

8.81

1 **Blaye approach channel** (8.121) leads 3 miles NNW, from a position in La Gironde main channel 2½ miles NW of Bec d'Ambès, closely following the E bank to Blaye (km 37) (8.118).

La Gironde secondary channel (8.107) is entered (45°34′N, 1°00′W) off Pointe de Suzac and follows the E bank of La Gironde to Blaye whence it continues SSE as Blaye approach channel.

Topography

8.82

1 **La Gironde** is broad and apart from the main channel, shallow. Its banks are low-lying and in the lower reaches somewhat featureless.

Limiting conditions

8.83

1 **Controlling depths** in the main channel. From the vicinity of Banc du Richard (km 80) to that of Bacalan (km 3) the main channel passes over a succession of shallows which are resurveyed monthly and dredged whenever this is found to be necessary. In 2002 it was reported that the channel is permanently dredged to a minimum depth of 7·5 m. For details of water level broadcasts see 8.28.

2 The bottom generally consists of more or less fluid mud and grounding presents little danger except on the shallows between Saint-Julien and Cussac (km 45 to 36) and off Caillou (km 16 to 15) where the bottom is sand and gravel.

8.84

1 **Mean tidal levels** in La Gironde and La Garonne: see diagram on the chart.

Tidal curves are distorted due to shallow water effect which becomes more pronounced as the river is ascended and is most marked at Bordeaux at springs when HW and LW occur, respectively, about 2½ and 4½ hours after HW and LW at Pointe de Grave.

8.85

1 **Abnormal water levels** occur in La Gironde due to the wind; in La Garonne they are also caused by abnormal barometric pressure and river water levels.

Strong winds from N through E to S may decrease the water level by 0·3 m and delay the times of HW and LW by 10 to 15 minutes.

2 Moderate winds between S and NW increase the water level by 0·1 to 0·4 m but do not affect the times of HW and LW; strong winds from the same directions may increase the water level by as much as 0·8 to 0·9 m and advance the times of HW and LW by 10 to 15 minutes.

3 The mean and predicted tidal levels are based on the assumption that La Garonne is at its lowest river level which normally occurs in August: it is usually at its highest river level in February. Abnormal water levels due to a high river level are most pronounced at LW and at Bordeaux. When La Garonne is at its average February level the time of HW at springs is advanced by about 15 minutes at Le Marquis (km 20) and by about 30 minutes at Bordeaux; when it reaches its highest river level the time of HW is advanced by three times that amount. The time of LW is little affected by high river levels.

4 Barometric pressure affects the water level in La Garonne: at 1040 mb the level is decreased by about 0·3 m; at 985 mb the level is increased by about 0·3 m.

8.86

1 **Density of the water.** In La Gironde the density of the water is very variable as indicated by the figures given for Le Verdon (8.74) and Pauillac (8.113). In La Garonne the water is fresh (density about 1·000 g/cm^3).

8.87

1 **Maximum draught** (fresh water) permitted to vessels on passage depends upon: their port of call in the river; whether they are proceeding upstream or downstream; the range of the tide; for departure from Bordeaux their speed. In 2000 the average limits were as follows; the draught on departure may be increased for vessels of more than average speed and those using Pauillac waiting berth (8.112).

Port	*Movement*	*Maximum permitted draught (m)*		
		Springs	*Average*	*Neaps*
Blaye	Arrival	10·6	9·9	9·2
	Departure	10·2	9·8	9·5
Ambès	Arrival	11·3	10·7	10·2
	Departure	10·3	10·1	9·9
Bassens	Arrival	11·3	10·8	10·1
	Departure	10·2	10·8	9·9
Bordeaux	Arrival	8·8	8·2	7·8
	Departure	8·8	8·8	8·8

8.88

1 **Vertical clearance** of objects spanning La Garonne are:

Power transmission line (km 10): 48 m.

Pont d'Aquitaine suspension bridge (km 5·8); 51 m.

The above figures may be reduced when the river is in spate.

Hazards

8.89

1 **Traffic.** In addition to the movements of deep-draught and other ocean-going vessels there is considerable internal river traffic, mainly river tankers distributing refined

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products and barges bringing cereals to Bordeaux and Blaye.

Dredging: details are given at 8.25.

Fishing area: in La Garonne small fishing vessels lay their nets across the river at slack water.

Floating debris: large logs and other wooden debris are reported to be a hazard especially in La Garonne.

Pilotage

8.90

1 See 8.12 for details.

Traffic regulations

8.91

1 General traffic regulations are given at 8.19.

Prohibited anchorage areas in the main channel, shown on the chart, are established:

In La Gironde, extending 100 m on both sides of a submarine cable laid across the channel from a position on the W bank (km 46·7) close S of Pauillac Marina to a position on Île de Patiras.

In La Garonne in the vicinity of a submarine cable laid across the channel W from the entrance to No 3 Dry Dock at Barranquine (km 7·8).

Rescue

8.92

1 **Lifeboat station** (1.77):

Pauillac (W bank, km 47) (8.117).

Tidal streams

8.93

1 **La Gironde.** For details of the tidal streams in the main channel between Pointe de Grave (km 95) and Pauillac (km 50) see information on the chart which includes the normal river current.

2 Near the upper limit of La Gironde, in a position (km 28) about 1¼ miles NW of Bec d'Ambès, the tidal streams set as follows at springs.

Interval from HW Pointe de Grave	*Remarks*
–0150	In-going stream begins
+0100	Stream attains maximum rate, 2½ kn
+0240	Out-going stream begins
+0510	Stream attains maximum rate, 3¾ kn.

8.94

1 **La Garonne.** At Bordeaux the approximate times of slack water and maximum rate are:

Interval from HW Bordeaux	*Remarks*
–0230	In-going stream attains maximum rate, 2¾ kn at springs, 2¼ kn at neaps
+0015	Slack water
+0145	Out-going stream attains maximum rate, 4 kn at springs, 2¾ kn at neaps
+0700	Slack water at springs (at the time of local LW)
+0815	Slack water at neaps (shortly after the time of local LW).

8.95

1 **Caution.** Slack water periods in La Gironde and La Garonne are very brief, especially at the onset of the in-going tidal stream when they last only 5 to 10 minutes and the rate increases very rapidly thereafter. The moorings of vessels berthed alongside need to be tended carefully during this latter period at springs.

8.96

1 **Abnormal conditions.** When the river is in spate, the strength and duration of the out-going flow is considerably increased: in La Garonne there may be no in-going flow at all, a condition known as *souberne.* The tidal streams are also considerably affected by the wind.

Navigation

8.97

1 The movements of ocean-going vessels in the rivers are governed by the tidal conditions at the shallows in the channel and, for some vessels, at their berth. The precise timing of the passage will be advised by the pilot and depends on the actual controlling depths and water levels prevailing at the time.

2 **Vessels ascending** La Gironde may proceed on the rising tide as soon as there is sufficient depth of water over the first shallow (45°27′N, 0°54′W) in the vicinity of Banc du Richard. For certain categories of vessel the time of berthing at Ambès and Bordeaux is critical, see 8.130 and 8.156 respectively for further details. Vessels awaiting the tide anchor in Mouillage de Suzac (45°34′N, 1°00′W) (8.50).

3 **Vessels descending** the river are more restricted in time as they must wait until there is sufficient depth of water over the shallow nearest downstream from their berth but must cross the shallow farthest downstream, which they are unlikely to reach until the tide is falling, while there is still enough water over it. Pauillac public wharf at Trompeloup (km 50) (8.112) is used as a waiting berth by vessels which cannot complete the passage on a single tide due to their draught.

8.98

1 **Anchoring.** There are several anchorages in the channel that can be used in an emergency such as fog, but the holding is not good and there is insufficient swinging room for the larger vessels that use the channel.

8.99

1 **Small craft.** It is possible for a yacht capable of maintaining 3 to 3½ kn and starting at LW to carry a single tide up to Bordeaux: also by leaving Bordeaux well before HW subsequently to carry the out-going tidal stream down to the mouth of the estuary.

Directions

(continued from 8.47)

La Gironde main channel

8.100

1 **Route.** The main channel (8.80) from the vicinity of Le Verdon oil terminal (45°33′N, 1°03′W) to that of Bec

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d'Ambès (45°02′N, 0°36′W), best seen on the chart, is marked by light-buoys (lateral marks; odd numbers starboard hand, even numbers port hand) throughout its length.

8.101

1 **Initial position** 45°33′·3N, 1°02′·3W, about 1½ miles SE of Pointe de Grave light (8.55).

A white sector (303°–312°) of Pointe de Grave Light, astern, leads 3 miles SE into Fosse de Richard, passing (positions given from the light):

2 NE of Le Verdon oil terminal (1¾ miles SE) (8.76), thence:

SW of Banc des Marguerites, whose NW end is marked by No 12a Light-buoy (port hand) (2 miles ESE) and covered by a red sector of Pointe de Grave Light, and:

NE of Banc de Talais and a wreck (4¼ miles SE) marked by No 15 Light-buoy (starboard hand) and covered by a green sector of the same light.

8.102

1 The channel then continues SE for a further 14 miles to the vicinity of Lamena on the W bank at km 64, passing (positions given off the km marks on the W bank):

NE of Banc de Richard (km 73 to 80) where it crosses the first of several shallows (8.83), thence:

SW of Digue de Valeyrac (km 65 to 74), a shoal ridge.

2 **Useful marks:**

Richard Tide Gauge (square wooden hut on grey masonry dolphin; 12 m in height) (45°27′N, 0°55′W).

Lamena Light-beacon (isolated danger mark on masonry dolphin (45°20′N, 0°48′W) and tide gauge.

8.103

1 The channel continues SSE, passing:

WSW of Banc de Saint-Estèphe, and:

ENE of the river bank which is comparatively steep-to in this area.

Passing the village of Saint-Estèphe (km 55) the channel curves gradually S.

8.104

1 **Useful marks:**

Tower on Île de Trompeloup (white truncated conical tower, red top; 13 m in height) (45°13′·7N, 0°43′·6W).

Tower on Île de Patiras (white round metal tower, red top; 32 m in height) (45°12′·3N, 0°42′·9W).

2 Pylon at Pauillac (white metal framework structure on dolphin; 11 m in height) (45°11′·9N, 0°44′·6W) situated close S of Pauillac Marina (8.117).

Pylon at Saint-Lambert (white metal framework structure, black top; 16 m in height) (45°11′·3N, 0°44′·5W).

8.105

1 From the vicinity of the berths at Trompeloup, the channel leads SSE in midstream for 7 miles to the vicinity of the light-beacon (N cardinal) marking the extremity of the training wall extending 6 cables NW from the NW end of Île Verte (45°06′N, 0°41′W), passing:

WSW of Île de Patiras, thence:

WSW of Vasard de Beychevelle, a marshy island, thence:

WSW of a drying shoal lying W of Île du Pâté.

2 The channel then leads 4 miles SE to the vicinity of No 62 Light-buoy (W cardinal) (45°03′·0N, 0°37′·3W) marking the bifurcation point of La Garonne and La Dordogne channels, passing:

Close NE of Île Verte and Île du Nord (km 35 to km 27), an island whose various parts are given different names.

3 **Useful marks:**

Île Verte Light-beacon and tide gauge (white hut, green structure and top) (45°06′·0N, 0°40′·8W).

Île du Nord Light-beacon (white, green top) (45°04′·5N, 0°39′·3W).

Pointe du Bec d'Ambès Light-beacon (white metal framework structure, green top; 12 m in height) (45°02′·6N, 0°36′·4W).

La Garonne

8.106

1 From the vicinity of Bec d'Ambès (45°02′N, 0°36′W) La Garonne leads generally S for 14 miles to Pont de Pierre de Bordeaux (km 0), the S limit of Bordeaux Port Maritime (8.143).

The channel, for which the chart is the best guide, favours the outside of the bends; it is marked by light-beacons and light-buoys and passes:

2 SW of No 62 Light-buoy (W cardinal) (45°03′·0N, 0°37′·3W) (8.105), thence:

SW of the tanker berths at Le Marquis (km 20) (8.132), thence:

Beneath power transmission lines (km 10) and Pont d'Aquitaine (km 5·8), see 8.88 for vertical clearances, and:

3 W of berths at Bassens (km 10 to km 6·5) (8.149), thence:

NW of berths at Quais de Queyries (km 4 to km 3) (8.152), and:

SE of the entrance (km 3·5) to the basins at Bordeaux (8.151), thence:

E of Quais de Rive Gauche (8.152).

(Directions continue at 8.156)

La Gironde secondary channel

General information

8.107

1 **Description.** La Gironde secondary channel follows the E bank of La Gironde from its entrance off Pointe de Suzac (km 94) to the vicinity of Roque-de-Thau (km 31), where it rejoins the main channel. The N-most section leads through Suzac waiting anchorage (8.50); the S-most section forms the principal approach to the berths at Blaye (km 37) and is described at 8.121. Passe de Saintogne (km 60 to km 37) (8.110) is used only by small craft.

8.108

1 **Controlling depth:** 2·9 m over the charted shallow in the vicinity of km 68.

Local knowledge is necessary to follow the deepest part of the channel.

2 **Prohibited areas:**

In the vicinity of the light-buoy (special) (45°20′·1N, 0°43′·5W) equipped with special instruments.

In two areas, shown on the chart, off Braud-et-Saint-Louis Nuclear Power Station (km 53) (8.111) where numerous light-beacons, beacons and light-buoys mark submarine pipelines for the intake and discharge of cooling water.

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3 **Prohibited anchorages:** in the following areas, shown on the chart, that lie between:

The two prohibited areas off the nuclear power station described above.

The E bank at km 44 and the SE side of Île de Patiras, due to submarine power cables laid N of Île Bouchaud.

4 The E bank at km 39 and Île Nouvelle, due to a submarine cable whose landing places are marked by a beacon (rectangular topmark) on the E bank and a beacon (triangular topmark) on the island, and to a submarine power cable laid about 100 m farther N.

Directions

(continued from 8.46)

8.109

1 **Initial position** 45°35′N, 1°02′W, about 1½ miles W of Pointe de Suzac (km 94).

The secondary channel leads SE for 20 miles, on the NE side of the river, passing:

2 NE of the following marks and dangers (positions given from Pointe de Suzac): M1 Light-buoy (N cardinal) (1¼ miles WSW) (8.50); a light-buoy (isolated danger) (1½ miles SSE); L'Amiénois Buoy (N cardinal) (4 miles SE) markinged two wrecks lying close together, the E-most with a least depth of 5 m, the other charted as dangerous; a dangerous wreck (5 miles SE). Thence:

3 SW of Banc de Saint-Seurin, the foreshore, whose outer edge is marked by: a beacon (red and white) (45°30′·5N, 0°51′·5W) marking the approach to Les Monards (km 80); Mortagne Buoy (W cardinal) (3 miles farther SE). Thence:

NE of Digue de Valeyrac (km 74 to km 65) (8.102).

4 **Useful marks:**

Saint-Seurin d'Uzet Church (45°30′N, 0°50′W).

Saint-Radegonde Church standing on the promontory at Talmont (km 85).

8.110

1 **Passe de Saintonge.** From the vicinity of Vitrezay (km 60) the channel narrows and continues SSE for 12 miles to Blaye (km 37) (8.118), passing:

2 WSW of the light-buoy (special) (45°20′·1N, 0°43′·5W) (8.108) in whose vicinity navigation is prohibited, thence:

ENE of S1, S3 and S5 Buoys (starboard hand) marking the edge of Banc de Saint-Louis, a partly drying ridge extending 6 miles NNW from the N point of Île de Patiras (45°13′N, 0°42′W), and:

3 WSW of Pigeonnier Light-beacons (port hand) marking the outer limit of the navigation prohibited area (8.108) fronting Braud-et-Saint-Louis nuclear power station (km 53) (8.111), thence:

4 ENE of S9 Buoy (starboard hand) marking a dangerous wreck (45°09′·4N, 0°40′·2W) on the E edge of the spit that partly dries and extends 3 miles SSE from the N end of Île Bouchaud and to within 1 cable of the E bank of the river from km 40 to the vicinity of the bastion at the N end of the citadel (km 38) at Blaye, thence:

5 WSW of the berths at Blaye (km 37) (8.122), where it becomes the principal approach described at 8.121.

Caution. The local direction of buoyage in the channel changes from S-going to N-going at Blaye.

8.111

1 **Useful marks:**

Braud-et-Saint-Louis Nuclear Power Station (km 53).

Vitrezay Light-beacon (white column, red top) on the breakwater head at the entrance to Vitrezay basin (km 60) (8.140).

Pauillac

Chart 2916 plan B

General information

8.112

1 **Description.** Pauillac port installations at Trompeloup (km 50) consist of an oil terminal and a public wharf; the latter is used mainly as a waiting berth for large vessels unable to complete their passage downstream on a single tide and by cruise liners.

Traffic. In 2003 the port was used by 57 vessels totalling 927 254 dwt.

Port Authority: Port Autonome de Bordeaux (8.10). Bureau des Officers de Port is located at the root of the public wharf (8.115).

Limiting conditions

8.113

1 **Controlling depths** in the main channel: see 8.83 for details.

Deepest and longest berth: described at 8.115.

Tidal levels. See information in *Admiralty Tide Tables*. Mean spring range about 5·0 m; mean neap range about 3·3 m.

Abnormal water levels: see 8.85 for details.

2 **Density of water:** reported to vary between 1·000 and 1·026 g/cm^3.

Maximum size of vessel handled:

Oil terminal: length 243 m; draught reported (1990) to vary from 9·75 to 10·35 m depending on tide.

Public wharf; length 280 m; draught 9·7 m (reported 1989).

Arrival information

8.114

1 **Port radio:** see *Admiralty List of Radio Signals Volume 6(2)* for details.

Pilotage: see 8.12 for details.

Tugs: available from Bordeaux (8.148).

Berthing at the oil terminal: loaded vessels berth 1½ hours before HW; shore wires are available to supplement ships mooring ropes, which require constant tending as tidal streams may attain a rate of 6 kn.

Berths

8.115

1 **Shell oil terminal** (45°13′·6N, 0°44′·6W):

Berth 710; used by tankers up to 70 000 tonnes lightened to 30 000 tonnes; L-shaped pierhead with two berthing and two mooring dolphins and two mooring buoys.

Berth 711; used by coastal and river tankers of length 80 to 100 m, draught 5.5 m; at arm extending S from main structure of pier.

2 **Public wharf** (4 cables S of oil terminal):

Berth 700; length 250 m.

Port services

8.116

1 **Repairs** of a minor nature by firms operating from Bordeaux.

Other facilities: no dirty ballast disposal.

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Supplies: fuel oil at Berth 710 or by lighter; fresh water at Berth 710; provisions from Bordeaux.

Pauillac Marina

8.117

1 **General information.** Pauillac Marina (km 47) has pontoon berths for 150 small craft, 20 of them for visitors, with depths alongside of 1 to 6 m or less and can accept craft up to 16 m in length.

Port Authority: Capitainerie, 10 Quai A-Pichon, 33250 Pauillac.

Port radio: see 1.41 and *Admiralty Maritime Communications* for further details.

2 **Directions:** the marina is entered from S. Care is necessary as the tidal stream has been reported (1983) to set through the marina at rates up to 3 kn.

Repairs to hulls only; craft of 8 tonnes or less can be lifted; careening slip.

Other facilities: yacht club.

Supplies: fuel; fresh water; provisions.

Blaye and principal approach

Chart 2916 plans C and D

General information

8.118

1 **Description.** Blaye Harbour (45°07′N, 0°40′W), situated on the E bank of La Gironde (km 37), is equipped to handle dry bulk cargoes mainly grain, fertilisers and china clay, and liquids in bulk principally tar and molasses.

The principal approach leads NNW from the main channel in the vicinity of Roque de Thau (km 31). Small craft may approach from the NNW through La Gironde secondary channel (8.107).

2 **Traffic.** In 2003 the port was used by 88 vessels totalling 346 585 dwt.

Port Authority: Port Autonome de Bordeaux (8.10); Bureau de Port de Blaye, Allées Marines, 33390 Blaye.

Limiting conditions

8.119

1 **Controlling depth:** An obstruction with a depth of 5·3 m over it (45°05′·1N, 0°38′·5W) lies in the approach channel.

Berths: each of the three berths is equipped to handle certain cargoes only, see 8.122 for further details.

Abnormal water levels: see 8.85 for details.

Density of water: reported to be about 1·000 g/cm^3.

Maximum size of vessel handled: length 200 m; draught 9·5 m; see 8.87 for maximum draught in channel.

Arrival information

8.120

1 **Port radio:** see *Admiralty List of Radio Signals Volume 6(2)* for details.

Pilotage: described at 8.12.

Tugs: available from Bordeaux (8.148).

Directions

8.121

1 **Initial position** 45°04′·3N, 0°38′·5W, about 5 cables SE of Île du Nord Light (8.105).

Blaye principal approach channel is entered SE of No 60 Light-buoy (port hand) (4 cables E of Île du Nord Light) that marks the main channel.

The channel then follows the E bank of La Gironde NNW for 3 miles from the vicinity of km 31 to Blaye (km 37). The local direction of buoyage is NNW and the channel is marked by D2, D4 and D6 Light-buoys (port hand) moored near the 5 m depth contour on the ENE side of Banc de Plassac and by light-beacons (starboard hand) at some of the berths at Blaye.

2 **Useful mark:**

Grain silo (45°07′·2N, 0°39′·7W) at Semabla Wharf (8.122).

Berths

8.122

1 Berths at Blaye, listed from SSE to NNW and positioned relative to Semabla Wharf (45°07′·2N, 0°39′·7W), are:

2 Semabla Wharf (Berth 602) length about 100 m, depth alongside 7·5 m, consists of five berthing dolphins; berth for vessels up to 180 m in length; handles grain.

Public wharf (Berths 601 and 600) (close NNW) length 220 m, depth alongside 7·5 m, consists of eight berthing dolphins; handles bulk cargoes. Works are in progress (2004) to convert Berth 601 into a cruise liner terminal.

Ferry terminus (2 cables NNW); ramp for Ro-Ro ferries.

Port services

8.123

1 **Communications:** Ro-Ro ferry service to Lamarque (W bank, km 35).

Small craft

8.124

1 **Berths:**

Quay on S side of basin (45°07′·5N, 0°39′·9W) that is reported to dry from 1 to 2 m.

Halte Nautique (1 cable NNW): pontoon berths for 6 small craft; three mooring buoys for small craft.

Repairs to engines; careening slip.

Other facilities: 25-tonne mobile crane; yacht club; custom house.

Supplies: fuel, fresh water.

Ambès

Chart 2916 plan E

General information

8.125

1 **Description.** Ambès (45°00′N, 0°32′W), the site of two oil depots and a power station, has two tanker terminals:

At Bec d'Ambès (45°02′·5N, 0°36′·0W), on the W bank of La Dordogne close SE of the point, and:

At Le Marquis on the E bank of La Garonne (km 20), 3 miles upstream from Bec d'Ambès.

Traffic. In 2003 the port was used by 271 vessels totalling 4 037 883 dwt.

Port Authority: Port Autonome de Bordeaux (8.10); Bureau de Port at Ambès.

Limiting conditions

8.126

1 **Controlling depths:** described at 8.83.

Deepest berths: No 517 at Bec d'Ambès (8.131); No 511 at Le Marquis (8.132).

Tidal levels. See information in *Admiralty Tide Tables*.

At La Reuille (5 cables N of Bec d'Ambès): mean spring range about 4·9 m; mean neap range about 3·3 m.

At Le Marquis: mean spring range about 5·0 m; mean neap range about 3·4 m.

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2 **Abnormal water levels:** described at 8.85.

Density of water: reported to be about 1·000 g/cm^3.

Maximum size of vessel handled: 40 000 grt lightened to 25 000 tonnes; length 160 m; draught varies with tide, see 8.87 for details of channel, 8.131 and 8.132 for details at berths.

Arrival information

8.127

1 **Port radio:** see *Admiralty List of Radio Signals Volume 6(2)* for details.

Tugs: available from Bordeaux (8.148).

8.128

1 **Traffic signal** at Le Marquis. An occulting orange light exhibited from the N end of Esso-Standard Pier (km 20·4) indicates that vessels must pass at very slow speed as the berth is occupied. A fixed white light is exhibited from the same position when the berth is vacant.

Directions

8.129

1 **Bec d'Ambès.** The approach channel leading 2 miles SE to the oil terminal berths (8.131) on the W bank of La Dordogne is marked on the NE side by BA2 Light-buoy (port hand) and on the SW side by BA1 Light-buoy (starboard hand).

8.130

1 **Berthing** at Bec d'Ambès and Le Marquis. Large laden tankers berth at the time of HW Bordeaux by day or at night, bows SE. Large tankers intending to sail laden must either berth bows NW or be swung before loading: their maximum draught and time of departure are determined by the Pilotage Authority.

Berths

8.131

1 **Bec d'Ambès.** Berth 517 (45°02′·5N, 0°36′·1W), the principal oil depot berth, is a T-shaped pier consisting of a concrete platform extended by two wings with rubber fendering. See 8.126 for maximum size of tanker handled: maximum draught varies between 8 and 10 m depending on tide and silting. Tidal streams are strong: extra berthing ropes are provided.

8.132

1 **Le Marquis.** Principal berths are:

Appontement COBOGAL (Berth 515) (45°01′·1 N′0°35′·0W) a T-headed pier, face 125 m wide; handles LPG tankers up to 140 m in length, 7·5 m draught.

2 Appontement EDF (Berth 511) (1¼ miles SE), a public tanker berth serving the power station and oil depot; T-shaped pierhead consists of concrete platform flanked by flexible berthing dolphins with rubber fendering. See 8.126 for maximum size of vessel handled; maximum draught 10 m subject to tidal conditions.

Port services

8.133

1 **Repairs:** minor only by firms operating from Bordeaux.

Supplies: fuel oil; fresh water; provisions from Bordeaux, embarked using ships derrick.

Minor ports on La Gironde

Chart 2916 plans A and C

General information

8.134

1 **Drying berths** alongside piers, quays or slips at the following locations are used by river craft and in some cases by small coasters:

W bank: Goulée (km 75); Saint-Christoly-Médoc (km 66); Saint-Estèphe (km 55).

E bank: Callonges (km 56) (8.141); Portes Neuves (km 54); Fréneau (km 51); Plassac (km 34·5).

8.135

1 **Small craft.** In addition to Pauillac Marina (W bank km 47) (8.117) and Blaye Halte Nautique (E bank km 37·3) (8.124), several minor ports on the E bank of La Gironde, described below at 8.136 to 8.141, are accessible at HW to small craft with a draught of 2 m or less.

Chart 3057 plan of Port de Meschers

Meschers-sur-Gironde

8.136

1 **General information.** Meschers-sur-Gironde Harbour (45°33′·3N, 0°56′·5W) at the entrance to Canal du Marais is approached through a channel 15 to 20 m wide cut through the rocks that extend 1½ cables ESE from Pointe de Meschers.

Directions. The entrance to the channel is marked by a beacon (port hand) (½ cable ESE of Pointe de Meschers). The alignment (350°) of beacons (white posts; uncharted) standing on the embankment on the E side of the harbour has been reported (1983) to lead to the harbour entrance.

2 **Berths.** Basin on E side of harbour, depth 0·6 m at LW, has pontoon berths for 115 small craft; quay on W side is used by fishing boats. A non tidal basin at the N end of the harbour has pontoon berths for 123 small craft; maximum length 9 m and draught 2·5 m.

Repairs of a minor nature carried out.

Other facilities: yacht club.

Supplies: fuel; fresh water; provisions.

Chart 2926

Talmont-sur-Gironde

8.137

1 **General information.** Talmont-sur-Gironde Harbour (E bank, km 85), a narrow basin 80 m in length, at the entrance to a canal in the W corner of a small drying bay, has been reported (1983) to dry 2·5 m and to be used only by small fishing boats.

The entrance to the approach channel is marked by a beacon (port hand) standing 1½ cables SE of Saint-Radegonde Church (45°32′·1N, 0°54′·5W) (8.109).

2 **Anchorage:** off the entrance to the approach channel, on the alignment (308°) of the W side of Sainte-Radegonde Church and a beacon (port hand) (2 cables farther NW), depth 4 m. A white mooring buoy for small craft (1½ cables SSE of the Sainte-Radegonde Church) is laid farther offshore where the tidal streams are reported to be very strong.

Supplies: fresh water; provisions.

Mortagne-sur-Gironde

8.138

1 **General information.** Mortagne-sur-Gironde Harbour (E bank, km 74) consists of a wet dock reserved for small craft and a small drying outer basin. It is approached by a drying channel leading through Banc de Saint-Seurin, the coastal bank, and through marshland.

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Port Authority: Bureau du Port, Mortagne-sur-Gironde, 17120 Cozes.

2 **Limiting conditions:**

Controlling depth: entrance channel dries 0·7 m.

Wet dock: entrance 10 m wide; minimum depth of water 3·5 m over bottom of soft mud.

Arrival information. The dock gate has been reported (1988) to open from 1 hour before until HW at Lamena (45°20′N, 0°48′W) by day only. It is advisable to request its opening, through Le Verdon Pilot Office (8.73), giving several hours notice.

3 **Directions.** Initial position close SE of Mortagne Buoy (W cardinal) (45°28′·3N, 0°49′·0W) (8.109). The entrance channel, 15 to 25 m wide, has steep sides and leads 7 cables ENE into the outer harbour.

4 **Berths:**

Outer harbour, N side (listed from W to E); drying berths alongside pontoons for 30 small craft; quay about 100 m in length, used by sand barges.

Wet dock 200 m long 75 m wide, entered through gate, berths 200 small craft at quay on S side and pontoons with finger berths extending S from N side.

5 **Repairs** of all kinds at boatyard; gridiron 40 m long 8 m wide can take vessels up to 37·8 m in length, 150 to 280 tonnes maximum; 10-tonne boat-hoist; careening slip in wet dock.

Supplies: fuel oil supplied by road tanker; fresh water; provisions.

Port Maubert

8.139

1 **General information.** Port Maubert (E bank, km 69·5) consists of a narrow basin 500 m long, reported (1983) to dry from 2 to 2·5 m, approached through marshland by a channel about 6 cables in length. The bar at the entrance has been reported (1984) to dry 2·7 m.

2 **Directions.** The alignment (024½°) of Port Maubert Leading Lights, situated on the WNW side of the basin, leads into the entrance channel:

Front light (wooden post) (45°25′·6N, 0°45′·4W).

Rear light (wooden post) (200 m NNE of front light).

Useful mark when approaching from NW:

Pyramide de Beaumont (daymark elevation 66 m) (1¼ miles N of front leading light) standing on a bare hill.

3 **Berths:** at pontoons on WNW side of basin, whose bottom is soft mud.

Repairs: careening slip reported (1984) to dry 2·5 m.

Vitrezay

8.140

1 **General information.** Vitrezay Harbour (E bank, km 60), a narrow basin 200 m long dredged to a depth of drying 1·5 m, is entered from La Gironde close S of Vitrezay Light (49°19′·7N, 0°43′·0W) (8.111).

Berths:

For small craft at two pontoons alongside N side of basin.

For fishing vessels alongside slip (NW corner of basin) and wharf.

Port des Callonges

8.141

1 **General information.** Port des Callonges (E bank, km 56) is a narrow basin about 200 m long.

Berth: wharf about 50 m in length, reported (1983) to dry 1·5 m alongside, on N side of basin.

BORDEAUX

General information

Chart 2916 plan F

Function

8.142

1 **Bordeaux** (44°50′N, 0°34′W), population including its suburbs 696 300 (2003), is the principal commercial centre and port for the Region of Aquitaine and the headquarters of several shipping lines trading worldwide.

Port limits

8.143

1 The port of Bordeaux is divided into two sections by Pont de Pierre de Bordeaux (44°50′·4N, 0°33′·7W) (km 0), a stone bridge with numerous arches and the limit of navigation for ocean-going vessels, from which:

2 Port Maritime extends 10 km downstream to include the berths at Bassens on the E bank of La Garonne, and:

The river port extends upstream as far as Île d'Arcins (uncharted).

The lower limit of the port, km 21, also includes the oil terminal at Le Marquis (km 20) (8.132).

Traffic

8.144

1 In 2003 the port was used by 735 vessels totalling 4 807 994 dwt.

Port Authorities

8.145

1 Direction du Port Autonome de Bordeaux, 2 Place Gabriel, 33075 Bordeaux Cedex.

Website: www.bordeaux-port.fr.

Capitainerie du Port de Bordeaux, Hangar 14, 110 bis Quai des Chartrons, 33300 Bordeaux.

Bureau des Officiers de Port at Bassens: situated at Berth 418 (km 7·7) (8.159).

Limiting conditions

8.146

1 **Controlling depths:** described at 8.83.

Vertical clearances: see 8.88 for details.

Deepest and longest berths: at Bassens Aval (8.158) and Bassens Amont (8.160).

Tidal levels. See information in *Admiralty Tide Tables*. Mean spring range about 5·3 m; mean neap range about 3·8 m.

Abnormal water levels: see 8.85 for details.

Density of water: reported to be approximately 1·000 g/cm^3.

8.147

1 **Maximum size of vessel handled:**

Tonnage: 80 000 dwt half laden; 30 000 dwt fully laden.

Length: 250 m.

Draught: Approximately 11 m but varies depending on tidal conditions and other factors, see 8.87 for further details.

Arrival information

8.148

1 **Port radio:** see *Admiralty List of Radio Signals Volume 6(2)* for details.

Pilotage: see 8.12 for details.

Tugs: available.

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Port Maritime

General layout

8.149

1 Bassens port facilities on the E bank of La Garonne extend S from km 10 to km 6·5 and handle more than three quarters of the port's throughput. They include the newest and deepest berths most of which are equipped to handle specific commodities. The area is divided into three zones:

2 Bassens Aval (km 10 to km 8·3) (8.158); 11 berths, including nine for ocean-going vessels, alongside quay.

Barranquine (km 8·3 to km 7·7) (8.159); No 3 Dry Dock, repair and Ro-Ro berths.

Bassens Amont (km 7·7 to km 6·6) (8.160); seven berths at quays, four of them for ocean-going vessels.

8.150

1 **Pont d'Aquitaine,** a suspension bridge with one tower standing in the river on the W side, spans the channel at km 5·8. See 8.88 for vertical clearance.

8.151

1 **Bassin No 1** (8.164), a wet dock, is entered through either of two contiguous locks on the W bank (km 3·5). It provides berths for leisure craft: no cargo is handled. Nos 1 and 2 Dry Docks are situated on its N side.

Bassin No 2 is entered through a passage on the NW side of Bassin No 1: it is reserved for small craft. There are 230 berths.

8.152

1 **Quais de Queyries** (8.163) situated on the E bank opposite the entrance to Bassin No 1 and close S of Aquitaine Marine, a shipyard, include three berths for ocean-going vessels.

Quais de Rive Gauche (8.165) in the heart of Bordeaux line the W bank from Bassin No 1 entrance to Pont de Pierre (km 0) (8.143). These wharves formed the original port; they are now mainly used by vessels operating scheduled services from the port and warships.

Traffic signals

8.153

1 **Le Marquis** (km 20·4): see 8.128 for details of the signals exhibited from the Esso-Standard berth.

Natural conditions

8.154

1 **Tidal streams** in La Garonne and the effect on them of abnormal conditions are described at 8.94 to 8.96 together with a caution. Upstream from Pont d'Aquitaine (8.150) the strength of the tidal stream and the time of slack water varies markedly from point to point, between positions alongside berths and in mid-channel off them, and from springs to neaps.

8.155

1 **Local weather.** See 1.156 and 1.163 for climatic table for Bordeaux-Merignac (44°50′N, 0°42′W). Fog frequently occurs in the morning from September to January, often clearing by noon.

Directions

(continued from 8.106)

Arrival

8.156

1 **Berthing at quays.** Arrival before HW slack is recommended so that vessels can berth bows N and thus avoid the need to swing ship on departure, which is always taken on an incoming tidal stream.

Entering the basins. Vessels must arrive during the hour preceding the time of actual local HW: factors which cause this to differ from the predicted time are given at 8.85.

2 **Cautions.** The in-going tidal stream sets onto the berths at the S end of Quais de Rive Gauche (8.165); in these conditions vessels should turn to port before berthing. On occasion the flow alongside the quays may be out-going when it is slack or even in-going in midstream, causing dangerous eddies.

Departure

8.157

1 The time of departure of vessels whose draught is near the maximum limit (8.87) needs to be very precise for the reasons given at 8.97.

Basins and berths

Bassens Aval

8.158

1 A quay (km 9·8 to km 8·3) with nine berths, depth alongside 10 to 11 m, can accommodate vessels of 80 000 dwt half laden or 30 000 dwt fully laden. Two further berths close N are used by river vessels. Individual berths are equipped to handle particular cargoes.

La Barranquine

8.159

1 La Barranquine, situated between the quays at Bassens Aval and Bassens Amont, has three berths, depths alongside 7 to 10 m, and No 3 Dry Dock (see 8.166 for details). Berth 430, at the N end, is used by Ro-Ro vessels with axial ramps; maximum vehicular weight 100 tonnes.

Bassens Amont

8.160

1 The N quay (km 7·7 to km 6·9) with four berths, depth alongside 9·5 to 11 m, can accommodate vessels of 80 000 dwt half laden and 30 000 dwt fully laden.

8.161

The S quay (km 6·9 to km 6·5) provides three berths.

Aquitaine Marine

8.162

1 The shipyard on the E bank (km 4) includes a repair berth (342) and a dry dock used for building and repairs equipped with a 140-tonne crane.

Quais de Queyries

8.163

1 Quais de Queyries on the E bank (km 3·8 to km 2·9) extend S from the shipyard. Berths 335–337, length 300 m depth alongside 7 m, are the deepest; they handle dry bulk cargo and timber.

Non-tidal basins

8.164

1 The non-tidal basins, entered at km 3·5 on the W bank, have a total length of quay of 1400 m and a depth of 6·5 m maintained by pumping; their usage is described at 8.151.

2 **Bassin No 1** is entered by one of two locks whose sills are 3·0 m below chart datum. The larger lock, 20 m wide, can accommodate vessels 152 m in length (exceptionally 157 m); the maximum beam varies with draught and height of tide. The small lock consists of two sections 60 and 72 m long. The locks are operated from 1 hour before until 30 minutes after HW at Bordeaux.

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Bassin No 2 is entered from Bassin No 1 through a passage 25 m wide spanned by a swing bridge. The former submarine base occupies the NE side of the basin.

Quais de Rive Gauche

8.165

1 Wharves on the W bank, individual sections named as shown on the chart, extend nearly 3 km from the entrance of Bassin No 1 to Pont de Pierre de Bordeaux (km 0) (8.143). There are 20 berths, numbered from 139 to 120 from N to S, with depths alongside from 7·5 to 9 m.

Port services

Repairs

8.166

1 Repairs of all kinds are carried out:

Dry Dock at La Barranquine, Bassens (8.159), dimensions: length 247 m; width 34 m at bottom, 37 m at top; sill 8·5 m below chart datum.

Aquitaine Marine Dry Dock (8.162).

Slip: length 60 m; breadth 12 m; maximum draught at MHWS 4·0 m; lifting capacity 1500 tonnes.

Divers: available from Port Authority and private companies.

Other facilities

8.167

1 Deratting can be carried out and deratting certificates issued.

Hospitals: two of which admit seafarers.

Ro-Ro berth: at Bassens (8.159).

Salvage services: tugs and a self-propelled floating 60-tonne crane are equipped for fire-fighting.

Self propelled floating 400-tonne derrick.

Supplies

8.168

1 Fuel oil: supplied by road tanker, or at berth at Pauillac (8.116) or Ambès (8.125).

Fresh water: laid on at all quays.

Provisions: plentiful.

Small craft

General information

8.169

1 Bordeaux is seldom visited by small craft, other than those proceeding thence through Canaux du Midi (8.8), owing to the time taken to ascend and descend La Gironde and La Garonne. Pont de Pierre de Bordeaux (km 0) (8.143) is the limit of navigation for masted craft.

Berths

8.170

1 Visiting small craft may berth at:

Halte Nautique Le Point du Jour, a small marina situated on the W bank (km 5·6) 1 cable S of Pont d'Aquitaine (8.150) and operated by the Sport Nautique de la Gironde Yacht Club. The outermost pontoon, depth alongside 3 m, is used by visitors and provided with special berthing arms which are necessary owing to the wash of passing vessels.

2 Bassins Nos 1 and 2 (8.151); berths for 300 small craft. Capitainerie du Port (8.145) should be contacted in good time prior to arrival, to arrange entry through the lock.

Quais de Rive Gauche (8.165): double warps and good fenders are necessary owing to the strong tidal streams, see cautions at 8.95 and 8.156 for details.

Port services

8.171

1 **Repairs** of all kinds by boatyards at Bassin No 2 and Quais de Queyries (8.163); patent slip for craft up to 10 tonnes at Le Point du Jour Marina.

Other facilities: cranes from 3 to 5-tonne at Bassin No 2 and for unstepping masts at Le Point du Jour Marina; yacht club at Le Point du Jour Marina; custom house at S end of Quais de Rive Gauche.

Supplies: fuel from garage near marina; fresh water at marina pontoons and alongside berths elsewhere; provisions.

La Garonne river

Chart 1104

8.172

1 La Garonne is tidal as far as Castets-en-Dorthe, 53 km above Pont de Pierre de Bordeaux: there are no official charts of the river upstream from the bridge. It has been reported (1985) that the river has a least depth of 1·5 m at MLWN and 4 m at MHWN and that there is a vertical clearance of 9 m beneath the fixed bridges. River traffic in this section is heavy.

Thence to Agen (130 km above Pont de Pierre) there is some traffic, but very little continues farther up river to Toulouse (247 km above Pont de Pierre).

LA DORDOGNE

General information

Charts 2916 plan E, 1104 (see 1.18)

Description

8.173

1 **La Dordogne** is navigable by small vessels from its junction with La Garonne at Bec d'Ambès (45°02′N, 0°36′W) to Libourne where Pont de Pierre (44°54′·8N, 0°15′·0W; uncharted), an arch bridge whose vertical clearance is reported to be 4 m, forms the limit of navigation for sea-going vessels. La Dordogne is navigable by river craft for a further 40 miles upstream from the bridge but there are no charts. There is little commercial traffic between Bordeaux and ports on La Dordogne.

2 **L'Isle** flows into La Dordogne from the NE 2 cables downstream from Pont de Pierre de Libourne. It is navigable by river craft to Laubardemont 31 km upstream, but there are no charts.

8.174

1 **Kilometre marks** shown on the French chart and used to position points on the river bank indicate the approximate distance downstream from the railway bridge at Libourne (5 cables upstream from Pont de Pierre).

Port limits. The oil terminal at Bec d'Ambès (8.125) situated on the SW side of the entrance to La Dordogne is administered by Port Autonome de Bordeaux (8.10) whose upper limit on La Dordogne is given at 8.11.

Limiting conditions

8.175

1 **Controlling depths:** vary between 1·2 and 1·8 m over shallows at Mille-Secousses (km 37), Poupette, Tête-Rouge, Saint-Pardon (km 12) and Garros (km 7).

Vertical clearances:

2 19·5 m (at MHWS) beneath three fixed bridges (km 29, 28 and 27) spanning the river at Cubzac-les-Ponts.

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27 m (at MHWS) beneath numerous power transmission lines spanning the river between km 39 and km 8.

3 The river level may exceed the level of MHWS when the river is in spate.

Tidal Levels are given at 8.126 for La Reuille at the river entrance, and at 8.183 for Libourne.

Density of water: reported to be about 1·000 g/cm^3.

Pilotage

8.176

1 **Authority.** La Dordogne between km 40 and Libourne is one of three zones forming La Gironde Pilotage Station, see 8.12 for further details.

Local knowledge

8.177

1 Local knowledge is required for navigation upstream of the E limit of plan E on chart 2916.

Traffic regulations

8.178

1 **Prohibited anchorages.** Anchoring is forbidden in the following areas shown on the French chart:

150 m each side of submarine cables, marked by notice boards on both banks, laid across the river: at Mille-Secousses-Larue (km 35·5); 3 cables below the railway bridge at Cubzac-les-Ponts (km 29); 1½ cables above the middle bridge at Cubzac-les-Ponts (km 28).

An area extending from about 100 m below the railway bridge to about 100 m above the middle bridge at Cubzac-les-Ponts.

Tidal streams

8.179

1 The maximum rates of the tidal streams in La Dordogne can be 4 kn in-going and 5 kn out-going including the river current.

At the river entrance the in-going tidal stream begins 2 hours before and the out-going tidal stream 3 hours after HW at Pointe de Grave at springs.

At Libourne the in-going tidal stream begins 13 minutes after local LW and the out-going tidal stream 45 minutes after local HW.

Caution. A bore, locally called a *mascaret,* occurs at springs at certain times of the year especially in summer.

Directions

(continued from 8.105)

8.180

1 **Initial position** 45°02′·5N, 0°36′·0W, about 1 cable NE of Bec d'Ambès oil terminal.

The principal channel, whose position is best seen on the French chart, is marked by buoys (lateral; even numbers from E0 to E14 to port; odd numbers from E1 to E15 to starboard).

Izon

8.181

1 **General information.** Izon (44°56′N, 0°22′W; uncharted), a privately owned port, is situated about 20 km downstream from Libourne whose commercial operations it assumed in 1987.

Imports: steel billets, pyrites, bauxite, sawn timber.

Exports: china clay, timber, stone.

Port Authority: as for Libourne (8.182).

2 **Anchorage:** in the river, depth 7 m.

Berth: at quay, length 40 m, depth alongside 4·5 m; for vessels up to 120 m length over all, 4·5 m draught, 3000 dwt.

Supplies: fuel by tanker lorry; fresh water at quay; provisions.

Libourne

General information

8.182

1 **Description.** Libourne (44°45′N, 0°15′W; uncharted), is an attractive medieval town standing at the junction of the rivers La Dordogne and L'Isle and in the middle of the wine country of Saint-Emilion, Pomerol and Frontsac.

Port Authorities:

Service Maritime de la Gironde.

Chambre de Commerce de Libourne, 125 Avenue Georges Pompidou, 33503 Libourne Cedex.

Limiting conditions

8.183

1 **Controlling depths:** given at 8.175.

Tidal levels. See information in *Admiralty Tide Tables*. Mean spring range about 4·1 m; mean neap range about 3·4 m.

Density of water: reported to be about 1·000 g/cm^3.

Berths

8.184

1 **Anchorage:** at the junction of La Dordogne and L'Isle rivers; depth 5 m, mud, good holding. Swinging room is restricted; a vessel 50 m in length must moor to two anchors.

Berths:

For small craft at Port du Nouguey (8.188).

Small craft

General information

8.185

1 Berths at pontoons connected to the shore, known locally as Halte Nautiques, and other facilities are provided at several places on La Dordogne, including Ambès (45°01′·0N, 0°31′·5W) and those described below.

Bourg

8.186

1 **General information.** Bourge Halte Nautique (45°02′·3N, 0°33′·5W) is situated on the N bank at km 40·4. There is a heavy scend with strong W winds during the out-going tidal stream.

2 **Directions.** Initial position 45°02′·5N, 0°36′·0W, about 1 cable NE of Bec d'Ambès oil terminal (8.129). In 1985 depths of more than 2 m were available in the W approach by passing:

About 100 m S of the N bank of the river, and:

A similar distance N of the shallow spit extending nearly 1¾ miles downstream from Île de Croûte (km 39) to E0 Buoy (port hand) (8.180).

3 **Berths:**

Pontoons at Halte Nautique, the downstream section belonging to the municipality and the upstream section to the yacht club, provide berths for numerous small craft several reserved for visitors.

Small basin, marked by a light (red lantern on white framework structure; elevation 6 m) on W side of entrance, reported (1983) to dry 1·4 m, lies close upstream from Halte Nautique.

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4 **Repairs** to hulls and engines by local firms; patent slip for craft up to 5 tonnes; gridiron at head of basin; careening slip.

Other facilities: two yacht clubs.

Supplies: fuel; fresh water.

Cavernes

8.187

1 **Berths** on S bank (km 24), a few reserved for visitors, at public and yacht club pontoons, for craft 2 m draught; exposed to NW.

Facilities: yacht club; crane for unstepping masts.

Supplies: fresh water.

Port du Nouguey

8.188

1 **General information.** Port du Nouguey (44°55′N, 0°15′W; uncharted), the Halte Nautique for Libourne (8.182), is situated on the W bank close N of Pont de Pierre (8.173).

Berths: at two sets of pontoons; tidal streams are reported to be very strong.

Repairs of all kinds carried out by local firms.

POINTE DE LA NÉGADE TO CAPBRETON

GENERAL INFORMATION

Charts 1102, 2664

Topography

8.189

1 **La Côte des Landes,** the coast extending 110 miles S from Pointe de la Négade (45°28′N, 1°09′W) to Capbreton (43°39′N, 1°26′W), and thence a further 10 miles SSW almost to Pointe Saint-Martin (8.249) presents a uniform aspect of sandy beach backed by sand dunes covered with conifer trees, broken only by the entrance to Bassin d'Arcachon (8.200) near its mid-point.

Hazards

8.190

1 **Centre d'Essais des Landes firing danger area** used by military experimental establishments to test guided missiles and other weapons extends up to 45 miles from the coast between Pointe de la Négade and Capbreton.

Navigation may be prohibited in the sectors lying within French Territorial Waters (1.80). See 1.12 for information on warning notices.

8.191

1 **Marine exploitation.** Oil drilling rigs may be encountered off Côte des Landes (8.189).

POINTE DE LA NÉGADE TO POINTE D'ARCACHON

General information

Chart 2664

Topography

8.192

1 From Pointe de la Négade (45°28′N, 1°09′W) to Cap Ferret (44°37′N, 1°15′W), about 52 miles S, the coastline presents a uniform aspect as described at 8.189 and is devoid of prominent natural features. The following coastal villages may be distinguished:

2 Montalivet (45°23′N, 1°09′W); red-roofed houses.

Hourtin-Plage (45°13′N, 1°10′W) with a blockhouse (uncharted) N of the village.

Lacanau-Océan (45°00′N, 1°12′W) with a prominent château (uncharted).

Cap Ferret is the S extremity of a low sandy tongue of land.

8.193

1 Pointe d'Arcachon (44°33′N, 1°15′W) is low and sandy, but the E shore of the entrance to Bassin d'Arcachon is distinguished by Dune de Pyla (elevation 103 m) (3 miles NNE), said to be the highest sand dune in Europe, whose white slopes show up well against the neighbouring pine woods.

Prohibited areas

8.194

1 Navigation is prohibited from time to time in parts of the area extending from 3 miles offshore to the limit of French Territorial Waters (1.80) between Pointe de la Négade and Pointe d'Arcachon, also within the 3 mile limit between parallels 45°14′N and 45°09′N, when Centre d'Essais des Landes firing danger area is in use; see 8.190 for further details.

Rescue

8.195

1 **Coastguard station** (1.75): Cap Ferret (44°38′N, 1°15′W) (8.199).

Lifeboats (1.77) stationed at:

Cap Ferret (44°39′N, 1°14′W) (8.207).

Capbreton (43°39′N, 1°26′W).

Natural conditions

8.196

1 **Flow:** See 8.4 for general situation.

Tidal streams in positions 9 miles NW and 21 miles WSW of Cap Ferret are rotary clockwise and have a constant mean rate of ½ kn. They set as follows in the positions indicated:

Interval from HW Pointe de Grave	*Direction at 44°44′ N, 1°24′W*	*Direction at 44°32′N, 1°44′W*
–0400	095°	085°
–0200	155°	150°
HW	205°	230°
+0200	255°	270°
+0400	315°	325°
+0600	020°	040°

Principal marks

8.197

1 **Landmarks:**

Sous-Cross Soulac radio masts (45°30′N, 1°08′W) (8.55).

Cap Ferret Lighthouse (white truncated tower, red top; 52 m in height) (44°39′N, 1°15′W) with a water-tower (green; 50 m in height) standing 3½ cables N.

2 **Major lights:**

Cordouan Light (45°35′N, 1°10′W) (8.39).

Hourtin Light (square red-brick tower, grey top; 24 m in height) (45°08′N, 1°09′W); a disused lighthouse

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with a similar tower (29 m in height) and a prominent framework mast (58 m in height) stand about 1 and 3 cables S respectively.

Cap Ferret Light—as above.

Directions

8.198

1 **Initial position** WSW of G Landfall Light-buoy (45°30′N, 1°15′W) (8.55).

The coastal passage leads 58 miles S to a position W of Pointe d'Arcachon (44°33′N, 1°15′W), the S entrance point of the mouth of Bassin d'Arcachon, passing:

2 W of Banc des Olives, the coastal shoal extending about 3 miles W from Pointe de la Négade (45°28′N, 1°09′W), thence:

Clear of a prohibited area (44°39′·1N, 1°26′·8W), marked by buoys, thence:

W of Banc d'Arguin, the unstable sandbank that encumbers Bassin d'Arcachon entrance and extends from 5 cables SE to 5 miles SSW of Cap Ferret (44°37′N, 1°15′W).

3 The 20 m depth contour lies parallel to the coastline from 1 to 3 miles offshore. Apart from a number of charted unmarked wrecks and obstructions there are no known dangers, but the charted depths and depth contours within about 10 miles of the coastline between Pointe de la Négade and Cap Ferret are based on lead line surveys made between 1824 and 1925.

8.199

1 **Useful marks:**

La Grigne Beacon (black diamond shaped topmark on framework structure) (44°53′N 1°12′W).

Cap Ferret Coastguard Station (white house, tower and mast) (44°38′N, 1°15′W).

White dome (44°32′N, 1°15′W) and buildings of an observation post of Centre d'Essais des Landes (8.190), which is similar to other observation posts on the coast farther S.

La Salie Light-beacon (W cardinal) (44°31′N, 1°15′W) (8.238).

(Directions continue for Bassin d'Arcachon entrance at 8.210, and for Pointe d'Arcachon to Capbreton at 8.237).

BASSIN D'ARCACHON

General information

Chart 2750

General description

8.200

1 **Bassin d'Arcachon** (44°42′N, 1°08′W), an extensive landlocked basin, consists mainly of drying muddy sandbanks that cover at about half tide, intersected by a network of small craft channels. It is frequented by offshore and coastal fishing vessels mostly based at Arcachon (44°40′N, 1°10′W) (8.215) the principal port. There are numerous small harbours used by small craft and oyster boats. The area is a popular summer holiday resort.

8.201

1 The sinuous entrance channel leading to Arcachon may best be seen on the chart but owing to the unstable nature of the sandbanks unpredictable changes in its position, direction and depth occur, especially after storms. The buoyage is re-positioned to take account of changes in the channel; it is unlit. The bar at the entrance to the channel is impassable due to bad weather on about 50 days a year.

Topography

8.202

1 Apart from Dune de Pyla (8.193) and the adjacent dunes in the vicinity of Pointe d'Arcachon, the country surrounding Bassin d'Arcachon is flat and low-lying.

Controlling depth

8.203

1 The controlling depth over the bar averages 4 m.

Pilotage

8.204

1 **Availability:** there are no official pilots but a competent seaman is available, see 1.30 for further details. The unofficial pilot can be contacted through Affaires Maritime giving 12 hours notice. See *Admiralty Maritime Communications* for further details.

Local knowledge

8.205

1 Local knowledge is essential for vessels of more than 150 nrt. Up to date information on the controlling depths and positioning of the channel marking buoys may be obtained from Service Maritime de la Gironde which has offices at Arcachon and Bordeaux or from Cap Ferret Coastguard Station (8.199).

Traffic regulations

8.206

1 **Prohibited anchorages:**

Anchoring is prohibited in an area extending 100 m on both sides of the submarine water pipeline shown on the chart and laid across the entrance from a position 5 cables NE of Cap Ferret Light.

Anchoring and touching bottom are prohibited on any shellfish beds that may be established outside the anchorages and channels in Bassin d'Arcachon.

Nature reserve is established on Banc d'Arguin (2 miles S of Cap Ferret), a sandbank, part of which does not cover.

Rescue

8.207

1 **Coastguard station** (1.75): Cap Ferret (44°38′N, 1°15′W) (8.199).

Lifeboats (1.77): stationed at:

Bélisaire (7 cables NNE of Cap Ferret Light) (8.197).

Arcachon (44°40′N, 1°10′W) (8.215).

Tidal information

8.208

1 **Tides.** The times of HW and LW become progressively later from the outer to the inner end of the entrance channel; see *Admiralty Tide Tables* for details at Cap Ferret and Arcachon; HW in position 44°32′N, 1°19′W occurs about ¾ hour earlier than at Cap Ferret.

2 **Tidal streams.** In position 44°32′N, 1°17′W the times of commencement and direction of the tidal streams are:

Interval from HW Pointe de Grave	*Direction*
–0520	In-going
+0025	Out-going

3 The maximum spring rates are in-going 2 kn and out-going 3½ kn.

For details of tidal streams in Rade d'Eyrac (44°40′N, 1°11′W) (8.214) see the chart.

Freshets affect the tidal streams at the bar and in the channel.

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Principal marks

8.209

1 **Landmarks:**

Cap Ferret Lighthouse (44°39′N, 1°15′W) (8.197).

Cap Ferret Coastguard Station (44°38′N, 1°15′W) (8.199).

White dome (44°32′N, 1°15′W) (8.199) of Centre d'Essais des Landes observation post.

Major light:

Cap Ferret Light—as above.

Directions for entering Bassin d'Arcachon

(continued from 8.199)

Caution

8.210

1 **Depths** in the entrance channel are constantly changing and shoaling may have occurred since the buoys were last re-positioned (8.201). See 8.205 concerning up-to-date information on depths and buoyage.

Tidal streams (8.208), which are very strong, have been reported to set across the channel in places.

Onshore winds may render the bar impassable from 1 hour after HW until LW: it is inadvisable to cross the bar until 3 hours after LW.

Entrance channel

8.211

1 **Initial position** vicinity of ATT-ARC Landfall Light-buoy (safe water) (44°34′N, 1°18′W).

La Passe Nord, the entrance channel, is entered between a pair of buoys (lateral) and marked by further buoys (lateral) whose number is followed by the letter N. For controlling depth see 8.203. It leads NE to the vicinity of Cap Ferret (44°37′N, 1°15′W) (8.192), thence N and E to Port d'Arcachon, passing:

2 NW of Banc d'Arguin (8.198), and:

SE of Banc de Toulinguet which extends 2 miles SW from Cap Ferret, thence:

NNE for 3 miles through Rade du Cap Ferret (8.213), thence:

E for 2 miles through Rade d'Eyrac (8.214) to the entrance to Port d'Arcachon (44°40′N, 1°09′W) (8.215), which faces N and is marked by a light-beacon on each side (metal masts 3 m in height; green on W, red on E Breakwater head).

Southern entrance channel

8.212

1 La Passe Sud, the southern entrance channel lying S of Banc d'Arguin (8.198), is no longer useable.

Roadsteads

Rade du Cap Ferret

8.213

1 **General information.** Rade du Cap Ferret extends 3 miles N from the vicinity of Cap Ferret and has an average width of 650 m. It is sheltered but the tidal streams are strong, see 8.208 for details.

Anchorage: available on both sides of the prohibited anchorage area (8.206), clear of the disused submarine cables shown on the chart farther N, for vessels in depths of 10 to 12 m sandy bottom and for small craft close to the W shore.

2 **Landing stages** (positions given from Cap Ferret Light):

At Bélisaire (7 cables NNE); depth alongside 1 to 2 m; used by ferry boats and small craft. A mooring buoy lies close ENE.

At Le Moulleau (2 miles E).

3 **Weather** see climatic table for Cap Ferret (44°39′N, 1°15′W) at 1.164 and 1.156.

Rade d'Eyrac

8.214

1 **General information.** Eyrac roadstead fronting the town of Arcachon (44°40′N, 1°10′W) extends 2 miles W from the entrance of Port d'Arcachon (8.215) and has an average width of 500 m. Fresh NW winds produce a choppy sea during the out-going tidal stream making boatwork difficult. In summer ship's sea-water inlets tend to become blocked by seaweed. Tidal streams are strong, see 8.208 for further details.

2 **Anchorage:** available in depths from 15 to 20 m and clear of charted wrecks, bottom muddy sand good holding.

Berths: piers with T-shaped heads (positions given from Port d'Arcachon entrance) with a depth of about 3 m alongside:

3 La Chapelle (1½ miles W). Wrecks lie ½ cable E, ¾ cable N and 1½ cables NNE of the pierhead.

Thiers (7 cables W): two berthing dolphins.

Eyrac (5 cables W). Wrecks lie 2 cables NNW and 2½ cables NNE of the pierhead.An

4 La Chapell and Eyrac Piers are in poor condition: permission for vessels more than 20 m in length to berth at them must be obtained from either Service Maritime de la Gironde or Affaires Maritimes at Arcachon.

Port d'Arcachon

General information

8.215

1 **Arcachon** (44°40′N, 1°10′W), resident population 11 800 (2003) expanding to 300 000 in the holiday season, has been a seaside resort since Roman times.

Port d'Arcachon is an artificial fishing port with a large marina situated at the E end of the town. Berths at piers fronting the town are described at 8.214.

Port Authority: Capitainerie du Port, Jetée du Port, 33120 Arcachon.

Port radio: see 1.41 for further details.

Limiting conditions

8.216

1 **Controlling depths:** least charted depth in approach from Rade d'Eyrac 3·6 m; Port de Plaisance dredged to 2 m.

Tidal levels. See information in *Admiralty Tide Tables*. Mean spring range about 3·9 m; mean neap range about 2·1 m.

Basins and berths

8.217

1 Berths and facilities listed clockwise from the entrance of the artificial harbour include:

Fuelling berth and slip, in NW corner.

Port de Plaisance, the marina occupying N part of basin; berths for 2200 small craft at pontoons, 50 places at W-most reserved for visiting craft up to 15 m in length.

Boat hoist (8.219) and repair facilities, on E side.

Port de Pêche; berths for fishing vessels at:

2 Quay 100 m in length in SE corner.

Quai de Commandant Silhouette, 220 m long, at E end of S side; fish market.

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Petit Port de Pêche (lying W of Port de Pêche); berths at two pontoons orientated E–W.

Appontement Municipal, a pier with a T-shaped head, at W end of S side; managed by Services Municipaux; berth for large yachts.

Petit Port de Plaisance, both sides of Appontement Municipal; berths at 10 pontoons.

8.218

1 **Port de Service,** on the E outer side of the artificial harbour, provides berths at four pontoons reserved for service craft and vessels under repair.

Port services

8.219

1 **Repairs** of all kinds to small vessels and small craft; 2 patent slips; 180-tonne and 45-tonne boat hoists.

Other facilities: hospital; custom house; 2 yacht clubs.

Supplies: fuel; fresh water; provisions.

Small craft

Chart 2750

General information

8.220

1 Numerous small shallow or drying harbours lie on the shores of Bassin d'Arcachon. Those that are known to provide facilities for small craft are described, in clockwise sequence from the entrance to the basin, in the following paragraphs. The remainder, used almost exclusively by oyster boats, are listed at 8.230 in the same sequence.

2 The principal channels described separately in the following paragraphs have depths of more than 3 m and radiate N, NE or E from the N end of Rade du Cap Ferret (8.213) or the E end of Rade d'Eyrac (8.214). The shallower channels which branch off from their inner ends are described, only if they lead to a yacht harbour, in the Directions for the relevant harbour.

3 **Local knowledge** is required for the approach and entrance to the minor harbours on the NE and S shores of Bassin d'Arcachon.

8.221

1 **Local buoyage system.** The small craft channels are marked by a special system of beacons erected by the Syndicat Intercommunal des Communes Riveraines du Bassin d'Arcachon. The beacons consist of a post surmounted by a circular topmark inscribed with the number of the beacon and, in the case of port approaches, a single letter identifying the particular channel. Even numbered beacons mark the port hand side of the channel approaching harbour from seaward. These beacons are shown on the national large scale chart but their charted details cannot always be relied upon as they are moved to conform with changes in the channel. In general they mark the drying 0 m depth contour at the edge of the channel.

Principal channels

8.222

1 **Chenal du Piquey,** which is unmarked, is entered from the N end of Rade du Cap Ferret (45°40′·0N, 1°13′·7W) between two detached sandbanks. Thence it follows the W shore of the basin for about 3½ miles.

Anchorage may be obtained off:

Landing stages at Le Canon (44°41′·9N, 1°13′·6W) and Le Piquey (44°42′·9N, 1°12′·6W).

The entrance to the fishing port of Piraillan (44°42′·6N, 1°13′·1W) (8.230).

8.223

1 **Chenal de Mapouchet,** entered (44°40′·4N, 1°09′·7W) from Rade d'Eyrac (8.214) 5 cables N of Appontement d'Eyrac, leads nearly 2 miles NNE to the junction point of five channels.

Chenal de l'Île leads 2 miles WNW from the inner end of Chenal de Mapouchet to the inner end of Chenal du Piquey (8.222), passing NNE of Île aux Oiseaux (44°42′N, 1°11′W).

These two channels are marked by beacons numbered 6 to 10.

8.224

1 **Chenal du Teychan,** entered (44°40′·4N, 1°09′·0W) from Rade d'Eyrac (8.214) 5 cables N of the entrance to Port d'Arcachon, leads E by N for nearly 2½ miles. The channel is marked by beacons with even numbers from 12 to 18. On the S side, 3 Beacon stands 4 cables S of the main channel which passes close to 12 Beacon opposite; 5 Beacon stands opposite 14 Beacon, where the deepest water lies on the S side of the channel.

La Vigne

8.225

1 **General information.** Port La Vigne (44°40′·5 N 1°14′·3W), a marina in an artificial rectangular basin provides sheltered berths for small craft. Port Authority: Société Nautique de La Vigne, 33970 Cap Ferret.

Directions. Initial position 44°40′·0N, 1°14′·1W, at the NW corner of Rade du Cap Ferret (8.213).

The approach channel leads 5 cables N passing between the W shore and a detached drying sandbank lying about 1 cable offshore.

2 The entrance channel, controlling depth 1 m (reported 1984), is entered between two beacons (posts; lateral) and leads NW into the basin.

Useful mark:

Light-beacon (white post, red top; 3 m in height) standing on the SW side of the entrance to the basin.

3 **Anchorage:** in the approach channel.

Berths: for 270 small craft at pontoons.

Repairs of all kinds carried out; slip.

Other facilities: yacht club; 3-tonne crane.

Supplies: fuel, during the yachting season only; fresh water.

Communications: ferry service from Bélisaire (1 mile S) (8.213) to Arcachon.

Port du Bétey

8.226

1 **General information.** Port du Bétey (44°44′·2 N 1°05′·5W), the yacht harbour at Andernos-les-Bains, provides berths for 150 small craft at trots in a rectangular basin reported (1984) to dry at LW.

2 **Directions.** Initial position 44°42′·0N, 1°08′·5W, at the inner end of Chenal de Mapouchet (8.223).

Chenal de Andernos, entered between D0 and E0 Beacons, leads generally NE for 2½ miles to the vicinity of Port du Bétey. The channel is marked on its NW side by beacons with even numbers from D2 to D14.

3 **Repairs** of all kinds carried out; slip.

Other facilities: yacht club.

Supplies: fuel; fresh water; provisions.

Fontainevieille

8.227

1 **General information.** Port de Fontainevieille (44°43′·5N, 1°04′·5W), a marina in an artificial rectangular

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basin, provides sheltered berths at pontoons for 200 small craft that lie aground at LW.

Port Authority: Société Civile du Port Fontainevieille, 33148 Taussat.

2 **Directions.** Initial position 42°42′·0N, 1°08′·5W, at the inner end of Chenal de Mapouchet (8.223).

Chenal de la Mouchtalette, entered between E0 and E1 Beacons, leads generally ENE for 3 miles to the vicinity of Port de Fontainevieille and is marked on both sides by beacons numbered from E2 to E8, omitting E5.

Repairs of all kinds carried out; slip.

Other facilities: yacht club.

Supplies: fuel; fresh water.

Port de Cassy

8.228

1 **General information.** Port de Cassy (44°42′·6N, 1°03′·3W) consists of three rectangular basins with a common entrance. It is used by oyster boats and also provides berths at pontoons for 225 small craft which take the ground on a sandy bottom at LW. It has been reported (1988) that craft with a draught of 1·5 m can enter from 2½ hours before HW.

2 **Directions.** Initial position 44°41′·0N, 1°06′·0W, at the inner end of Chenal du Teychan (8.224).

Chenal de Lanton, entered between F0 and G0 Beacons, leads about 7 cables N, then 1 mile E, and is marked by F1 Beacon at the bend and by F2 and F3 Beacons farther E. The channel, marked by perches, then leads 1 mile NE to Port de Cassy entrance.

Repairs of all kinds carried out; slip.

Other facilities: yacht club; crane.

Supplies: fresh water; provisions.

Audenge

8.229

1 **General information.** Port d'Audenge (44°40′·7N, 1°01′·5W), a small drying harbour used by oyster boats also provides berths at pontoons for 200 small craft up to 11 m in length.

Directions. Initial position 44°41′·0N, 1°06′·0W, at the inner end of Chenal du Teychan (8.224).

2 Chenal d'Audenge, entered between G0 and G1 Beacons, leads generally E for 3 miles to the harbour entrance passing close S of the shore for the final mile. It is marked by beacons with even numbers from G2 to G8, and on its S side by H0 Beacon (opposite G4 Beacon) where another channel branches off S.

Supplies: fresh water; fuel in the village.

Fishing ports

8.230

1 Minor ports used almost entirely by oyster boats include:

Piraillan (44°42′·6N, 1°13′·1W); three basins.

Lège (44°46′·1N, 1°08′·9W); repairs of all kinds carried out; fresh water supplied.

Andernos (44°44′·7N, 1°06′·5W); slip.

Taussat (44°43′·0N, 1°04′·1W); a few berths for small craft; fuel available.

2 Mestras, Larros and Gujan; three separate harbours fronting the town of Gujan-Mestras (44°38′N, 1°04′W); several boatyards.

La Hume (44°38′·5N, 1°07′·0W); some berths for small craft.

La Teste (44°38′·5N, 1°08′·6W); boatyard; fuel available.

POINTE D'ARCACHON TO CAPBRETON

General information

Charts 1102, 2664

Topography

8.231

1 From Pointe d'Arcachon (44°33′N, 1°15′W) to Capbreton (43°39′N, 1°27′W), about 55 miles S, the coastline presents a uniform aspect as described at 8.189 and is devoid of prominent natural features. Landmarks are few and far between; in the N half of the area there are numerous structures, many of them connected with Centre d'Essais des Landes (8.190), which are useful marks but easy to confuse.

Hazards

8.232

1 **Weapons testing range** described at 8.190, extends up to 45 miles offshore between Pointe d'Arcachon and Capbreton.

Marine exploitation: see 8.191 for details.

Fishing with nets takes place in Le Gouf de Capbreton (43°40′N, 1°35′W) (8.239).

Traffic regulations

8.233

1 **Prohibited areas.** Navigation is prohibited from time to time in the whole or a part of the area extending from 3 miles offshore to the limit of French Territorial Waters (1.80) between Pointe d'Arcachon and Capbreton, also within the 3 mile limit between parallels 44°31′N and 44°13′N, when Centre d'Essais des Landes Firing Danger Areas are activated, see 8.190 for further details.

Entry is prohibited to an area centered on position 44°22′N, 1°25′W, as shown on the chart.

2 **Signals** denoting that navigation is prohibited in all or part of the sector between parallels 44°31′N and 44°13′N extending 12 miles offshore are shown as follows:

White ball 2 m in diameter: from a pylon (44°26′N, 1°15′W) standing on the dunes near the N limit of the sector.

Two similar balls vertically disposed: from a pylon (44°14′N, 1°17′W) standing near the S limit of the sector.

Dumping ground

8.234

1 An explosives dumping ground, which is considered safe for surface navigation but not seabed activity, lies in position 44°22′N, 1°26′W.

Rescue

8.235

1 **Coastguard station** (1.75): Messanges (43°49′N, 1°23′W).

Principal marks

8.236

1 **Landmarks:**

Conspicuous radio tower (44°22′·7N, 1°13′·8W) that exhibits red aircraft obstruction lights.

Framework mast (100 m in height) (44°17′N, 1°16′W).

Contis Lighthouse (white round tower, black diagonal stripes; 42 m in height) (44°06′N, 1°19′W) backing the village of Contis.

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Huchet Beacon (black; two triangles on metal framework structure) (43°53′N, 1°22′W) standing about S cables N of Huchet village.

2 **Major light:**

Contis Light—as above.

Passage Directions

(continued from 8.199)

8.237

1 **Initial position** WSW of Pointe d'Arcachon (44°33′N, 1°15′W) and the shoals in the vicinity of the entrance channel to Bassin d'Arcachon (8.211).

The coastal passage leads about 54 miles S to a position off the entrance to Capbreton (43°39′N, 1°27′W) (8.240).

Between these positions the charted 20 m depth contour lies from 1 to 1½ miles offshore. The only known dangers farther offshore are a few charted wrecks and obstructions of which only the following are marked:

2 Sewer extending nearly 3 miles WSW from the head of La Salie Pier (44°31′N, 1°15′W) (8.238), marked (1½ miles WSW) by La Salie Light-buoy (isolated danger).

An obstruction in position 44°23′N, 1°26′W with a light-buoy (special) close E. A wave recorder light-buoy is also moored to the E of the obstruction.

3 A light-buoy (special) is moored in position 44°20′·4N, 1°28′·6W.

8.238

1 **Useful marks:**

Cap Ferret Light (44°39′N, 1°15′W) (8.197).

Centre d'Essais des Landes observation posts (buildings surmounted by white radomes) at Pointe d'Arcachon (44°32′N, 1°15′W) (8.199) and close to the coast 6½, 13½, 14¾, 18½ and 22½ miles farther S.

2 La Salie Light-beacon (W cardinal) (44°31′N, 1°15′W) standing at the head of a pier 800 m in length carrying a sewer.

Water tower (44°27′N, 1°14′W) standing N of the village of Biscarosse-Plage.

Biscarosse Beacon (black circular topmark with a hole in its centre on black framework structure) (44°21′N, 1°15′W).

3 Water tower (44°13′N, 1°17′W) standing N of the village of Mimizan-Plage.

Water tower (43°51′N, 1°23′W) standing about 2 miles S of Huchet Beacon (8.236).

Water tower (43°47′N, 1°23′W) backing Vieux-Boucau-les-Bains (8.247).

Water towers and lights (8.243) at Capbreton (43°39′N, 1°26′W).

(Directions continue at 8.256)

Gouf de Capbreton

Chart 1102

8.239

1 **General information.** Gouf de Capbreton, a submarine canyon, extends E into the continental shelf off Capbreton (43°39′N, 1°26′W) where depths of 100 m and 50 m are found 1 mile and 3 cables WNW of the harbour entrance respectively.

In heavy westerly weather the seas do not break in Gouf de Capbreton except in depths of less than 50 m on its N and S sides.

2 **Anchorage.** In the above conditions vessels unable to take refuge in Baie de Saint-Jean-de-Luz (18 miles SSW) (8.301) or Pasajes (28 miles SW) (9.15) may as a last resort anchor in Le Gouf de Capbreton in depths of more than 60 m, bottom mud good holding. An anchor berth in 60 m with Capbreton N Breakwater Light (43°39′·4N, 1°26′·9W) (8.243) bearing 129° distant 3¾ cables is approached with Hossegor Water Tower (1 mile E of light) bearing 093° and anchorage obtained when Le Sanatorium chimney (4½ cables SSE of light; uncharted) (8.240) bears 147°.

Capbreton

Chart 1102 (see 1.18)

General information

8.240

1 **Description.** Capbreton harbour (43°39′·2N, 1°26′·2W) consists mainly of a marina with 1100 berths for small craft: it is also used by a few fishing vessels.

The harbour is approached from the E end of Gouf de Capbreton (8.239) and entered through Canal du Boucarot.

2 **Topography.** Capbreton is easily identified by the line of buildings on the seafront S of the harbour entrance terminating with the large long red-roofed building of Le Sanatorium 4 cables S.

Port Authority: Bureau du Port, Quai Georges Pompidou, 40130 Capbreton. Situated on the S side of the harbour.

Limiting conditions

8.241

1 **Controlling depth:** least charted depth in Canal du Boucarot is 0·3 m at the inner end, but the entrance channel has been dredged to 1·5 m.

Deepest berths: craft of 2 m draught can berth at the pontoons.

2 **Tidal levels** see information in *Admiralty Tide Tables.*

Mean spring range about 3·6 m; mean neap range about 2·1 m.

Maximum size of vessel handled: length 20 m; beam 5 m; draught at neaps 2 m.

Strong winds from N or W make the entrance impassable.

Arrival information

8.242

1 **Port radio:** see *Admiralty Maritime Communications,* for details.

Local knowledge is necessary to enter harbour.

Prohibited anchorage: within about 4 cables of the entrance.

Directions

8.243

1 **Initial position** 43°39′·5N, 1°27′·5W, at the E end of Gouf de Capbreton (8.239). The recommended track passes close to Digue Nord and follows the N side of the channel until the statue of the Virgin is abeam. Thereafter it lies along the centreline of the channel.

2 **Canal du Boucarot** is entered passing:

Close S of the head of Digue Nord (43°39′·4N, 1°26′·8W), the N breakwater, marked by a light-beacon (white turret, red top: 6 m in height), thence:

N of a shoal patch which dries 0·1 m (¼ cable ESE), and:

N of the light-beacon (white post, green top) (½ cable SE) at the head of the extension to Estacade Sud,

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Capbreton Harbour from WNW (8.240)
(Original dated 1995)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

a rubble breakwater surmounted by a pier on piles. A disused light-tower (grey tower, 11 m in height) which marked the former head of the breakwater stands 30 m inshore of the light-beacon. The extension is awash at mid-tide.

3 The channel then leads ESE for 3½ cables to a gap in the S training wall that forms the entrance to Bassin La Pêcherie.

Caution. It is advisable to enter on a rising tide with an under-keel clearance of at least 1 m to allow for the swell. Entry should not be attempted if the waves are breaking in mid channel.

4 A cross-current from Canal d'Hossegor, the continuation NE of the channel, may be experienced on entering Bassin La Pêcherie.

Useful marks:

Two large round water towers standing 4 cables SE and 1½ miles ESE of the entrance to Canal du Boucarot.

Basins and berths

8.244

1 **Bassin La Pêcherie,** the principal basin about 500 m long and 200 m wide, extends SE from the inner end of the S training wall of Canal du Boucarot. Numerous pontoons extend into the basin from all sides; two pontoons 100 m SE of the basin entrance are reserved for visitors. The two pontoons alongside the quay at the W end of the basin are used by fishing vessels.

The basin is dredged to 1·5 m.

8.245

1 **Bassin des Corsaires** extends about 350 m ENE from the E corner of the main basin to the entrance of Rivière Le Bourret. There are four pontoons in this basin which has been dredged to 1·5 m.

Bassin Bonamour extends about 200 m SSE from the S corner of the main basin to the entrance of Rivière Le Boudigau. Four pontoons extend WSW into the basin. A fuelling berth is situated on the ENE side of the entrance.

Port services

8.246

1 **Repairs** of all kinds carried out; 28-tonne boat-hoist; slip; careenage.

Other facilities: yacht club; 1½-tonne crane.

Supplies: fuel; fresh water; provisions.

Small craft

8.247

1 **Boat harbours** used only by local fishing boats, each situated at the mouth of a stream and sheltered by a jetty, are located at:

Mimizan-Plage (44°12′·7N, 1°17′·8W).
Contis (44°05′·4N, 1°19′·5W).
Vieux-Boucau-les-Bains (43°47′·2N, 1°24′·7W).

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CAPBRETON TO CABO HIGUER

COASTAL PASSAGE

General information

Chart 1102

Description

8.248

1 The coastal route from Capbreton (43°39′N, 1°27′W) (8.240) to Cabo Higuer (43°24′N, 1°47′W), the cape 21 miles SW, passes to seaward of Plateau de Saint-Jean-de-Luz, the chain of rocky shoals and banks that lie from about 1 to 4 miles offshore between the mouth of the river L'Adour (43°32′N, 1°31′W) (8.258) and the entrance to Baie de Fontarabie (14 miles SW), also called Rada de Higuer (8.314).

2 Saint-Jean-de-Luz approaches (8.285) lead through the various passages between the shoals on the plateau. The NE and W approaches also provide an alternative route, by day and in good conditions for those with local knowledge, between the entrances to L'Adour and Baie de Fontarabie passing inshore of Plateau de Saint-Jean-de-Luz in depths of more than 10 m.

Topography

8.249

1 Between Capbreton (43°39′N, 1°27′W) and Pointe Saint-Martin (10 miles SSW), a rocky headland that is conspicuous both visually and on radar, the coast consists of a sandy beach backed by dunes covered with conifer trees, broken only by the entrance to the river L'Adour (8 miles SSW of Capbreton) (8.258).

2 From Pointe de Biarritz (43°29′N, 1°34′W) to Pointe Sainte-Anne (10 miles SW) the narrow sandy beach is backed by rocky cliffs that are irregular, diversely coloured and broken by vegetation NE of Baie de Saint-Jean-de-Luz (3 miles ENE of Pointe Sainte-Anne) (8.301) and pale grey WSW of the bay. The tall buildings at Biarritz (8.300) are prominent.

3 Cabo Higuer (43°24′N, 1°47′W) is the NE termination of Sierra de Jaizquivel (9.8).

Inland to the S the various summits of the Pyrenees mountains (8.255) may be seen from well to seaward.

Pilotage

8.250

1 **L'Adour Pilotage District** extends 3 miles offshore from parallel 43°50′N to the boundary between French and Spanish Territorial Waters described at 8.316.

Pilotage is compulsory for vessels more than 60 m in length entering harbour.

Pilot's office is located at the signal tower (43°31′·7N, 1°31′·2W) (8.268) at L'Adour entrance.

2 **Requests** for pilots should be sent at least 12 hours in advance and before 1800 for vessels arriving the following morning.

Availability. The pilotage service acknowledges requests, giving the time and place at which the pilot will board; see 8.262 for normal times of entry to L'Adour. When approaching and within the pilotage district limits continuous watch should be kept on VHF radio, see *Admiralty List of Radio Signals Volume 6(2)* for further details.

3 **Boarding.** Weather permitting, the pilot boards W of BA Landfall Light-buoy (43°33′N, 1°33′W) (8.269). In bad weather, after consultation with the pilotage service, the pilot may be embarked off Saint-Jean-de-Luz (10 miles SW) (8.303) and conduct the vessel either to L'Adour or Saint-Jean-de-Luz anchorage (8.307).

Traffic regulations

8.251

1 Navigation is regulated in the approach channel to L'Adour, shown on the chart, that lies between the bearings of 270° and 310° and between 1 and 7 miles from Digue Jean Lesbordes Light (43°32′N, 1°32′W) (8.268), and in the entrance channel.

2 Vessels exceeding 1600 grt laden with hydrocarbons or dangerous cargo must:

Remain W of the area until entry to the approach channel is authorised by the Port Authorities.

Keep within the channel when approaching L'Adour.

3 For further details of the national regulations, which concern all vessels entering the approach and entrance channels, see 1.54: the designated signal station is Socoa Coastguard Station (43°24′N, 1°41′W) (8.289).

8.252

1 **Prohibited anchorage.** Anchoring is prohibited in an area 5½ miles wide extending 7 miles NW from the coast on either side of Bayonne, except in the designated anchorage shown on the chart.

Fishing prohibited. Laying stationary fishing tackle is prohibited within 9 cables of BA Landfall Light-buoy (43°33′N, 1°33′W) (8.269) within the area partially shown on chart 1343.

Rescue

8.253

1 **Coastguard station** (1.75): Socoa (43°24′N 1°41′W) (8.289).

Lifeboats (1.77) stationed at:

Capbreton (43°39′N, 1°26′W) (8.238).

Anglet (43°32′N, 1°30′W) (8.283).

Saint-Jean-de-Luz (43°23′N, 1°40′W) (8.309).

Hendaye (43°21′N, 1°47′W) (8.326).

Natural conditions

8.254

1 **Tidal streams** off the coast are weak; the maximum rates are about ½ kn.

Currents. The current usually sets N at a rate of ½ kn but is liable to be checked or reversed by N winds. During winter much stronger N-going currents may occur, see 8.4 for further details.

Principal marks

8.255

1 **Landmarks:**

Pointe Saint-Martin Lighthouse (white tower, black top; 47 m in height) (43°30′N,1°33′W).

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Pointe Saint-Martin Lighthouse from NW (8.255)
(Original dated 1995)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

Cabo Higuer Lighthouse (square stone tower, red cupola; 21 m in height) (43°24′N, 1°47′W).

2 La Rhune (43°18′N, 1°38′W), a mountain with buildings and a radio mast on its conical summit.

Peñas de Aya (43°17′N, 1°47′W), a mountain also called Monte Batallera or La Couronnée; from N looks like a crown due to the several peaks on its summit; bearing more than 190° it loses this appearance and shows 3 irregular peaks.

3 **Major lights:**

Pointe Saint-Martin Light—as above.

Cabo Higuer Light—as above.

Directions

(continued from 8.238)

8.256

1 **Initial position** off Capbreton (43°39′N, 1°26′W).

Coastal route: leads about 20 miles SW to the vicinity of Cabo Higuer (43°24′N, 1°47′W), passing:

NW of BA Landfall Light-buoy (43°33′N, 1°33′W) (8.269), thence:

2 NW of Herreca (43°28′N, 1°42′W), the outermost shoal of Plateau de Saint-Jean-de-Luz (8.248).

Caution: when a swell from W or NW is running Plateau de Saint-Jean-de-Luz should be given a wide berth as the sea then breaks on its many shoals; soundings give little warning of their proximity and they are unmarked.

3 **Clearing bearings:**

The summit of La Rhune (43°18′N, 1°38′W) (8.255) bearing 196°, open WNW of Pointe Saint-Martin Lighthouse (43°30′N, 1°33′W) (8.255), clears WNW of the coastal shoals between Capbreton and the entrance to L'Adour.

The summit of Pico Jaizquivel (43°21′N, 1°51′W) (9.8) bearing 222°, open NW of Cabo Higuer Lighthouse (4 miles NW) (8.255), clears about 5 cables NW of Herreca.

8.257

1 **Useful marks:**

Lights and water towers (8.243) at Capbreton (43°39′N, 1°27′W).

Church (belfry) and water tower at Ondres (43°34′N,1°27′W).

Lights, breakwater and signal station at L'Adour entrance (43°32′N, 1°31′W) (8.268).

Tour de Bordagain (43°23′N, 1°40′W) (chart 1343) (8.291).

2 Fort de Socoa (43°23′·8N, 1°40′·9W) (chart 1343) (8.301) and Socoa Light (1½ cables WSW) (8.291).

Château d'Abbadie (observation tower) (43°23′N, 1°45′W) (Chart 1343) on the summit of Pointe Sainte-Anne.

Biarritz Aero Light (43°28′N, 1°32′W) is occasional and visible only within certain small sectors due to vegetation that may also alter its characteristics.

(Directions are given for Bayonne at 8.269 and for Baie de Saint-Jean-de-Luz approaches at 8.291.

Directions continue for Baie de Fontarabie or Rada de Higuer at 8.318, and for the coastal passage farther WSW at 9.11)

BAYONNE

General information

Chart 1343 plan of L'Adour

8.258

1 **Position.** Port de Bayonne occupies the lowest reaches of the river L'Adour between its entrance (43°32′N, 1°31′W) and its confluence with La Nive river 4 miles upstream.

Function. Bayonne (43°30′N, 1°29′W), population 124 000 (2003), is the Sous-Préfecture of Département des Pyrenées-Atlantiques. It is a medium sized commercial port whose principal exports are sulphur and cereals.

2 **Topography.** The coast on each side of the entrance consists of a sandy beach backed by wooded dunes: the entrance is easily identified by the two breakwaters and the factories at Boucau-Tarnos standing on the N side of the outer reach of L'Adour.

3 The town is divided into three parts by La Nive and L'Adour rivers; Grande Bayonne and Petite Bayonne lie on the W and E banks respectively of La Nive at its confluence with L'Adour and opposite Saint-Esprit on the N bank of L'Adour.

4 **Traffic.** In 2003 the port was used by 823 vessels totalling 5 060 994 dwt.

Port Authority: Capitainerie du Port de Bayonne, 128 Avenue de l'Adour, F–64600 Anglet.

Website: www.ports-basques.com

Limiting conditions

8.259

1 **Controlling depths:**

Entrance channel is dredged constantly; in summer the depth is seldom less than 9·5 m but in winter it may be reduced to as little as 6 m following SW or W gales.

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Maize Silo



Digue du Large *Jetée Nord* *Signal Tower*

L'Adour Entrance from W (8.258)

(Original dated 1995)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

In the channel between the entrance and the dry dock at Blanc-Pignon (2½ miles upstream) there are depths of 5·8 m or more.

2 **Deepest and longest berth:** Quai Européen (8.275).

Tidal levels at Boucau. See information in *Admiralty Tide Tables*. Mean spring range about 3·5 m; mean neap range about 1·6 m.

Density of water: reported to be 1·010 g/cm^3 at HW, 1·000 g/cm^3 at LW.

8.260

1 **Maximum size of vessel handled:**

By day, length 180 m, draught 8·5 m.

By night, length 130 m, draught 7·0 m.

The maximum permitted draught varies with the range of the tide, the depths in the dredged channel and at the berth, and also the sea and wind conditions. By day the maximum draught for entry under normal conditions is 8·5 m, and for departure 9 m in favourable conditions: at night, 7 m.

8.261

1 **Local weather.** Entry may be impracticable due to heavy weather or the river being in spate. It was reported in 1979 that this situation rarely occurs from May to August and on about 3 days each year from September to April.

Movements at night are suspended when the wind reaches Beaufort force 5.

Fog is rare and normally only occurs in the early morning with E and SE winds and disperses soon after sunrise.

Arrival information

8.262

1 **Port operations and information service** is provided by Capitainerie du Port (8.258) and the pilot's office, directly on port radio. for further details see *Admiralty List of Radio Signals Volume 6(2).*

Notice of ETA and pilotage: see 8.250 for details.

Prohibited anchorage: see 8.252 for details.

Caution. Anchorage on Loutrou (43°31′N, 1°34′W), an extensive shoal that breaks in bad weather, is dangerous.

2 **Tugs:** one available.

Time of entry will be notified by the pilotage service and is normally:

By day: from 4 hours before to 1 hour after HW.

At night: at HW.

Berthing. Vessels more than 85 m in length normally berth while the flow is in-going. Berthing becomes a difficult manoeuvre when the river is in spate which normally occurs only in winter or spring.

Harbour

General layout

8.263

1 **Boucau-Tarnos,** the outer section of the harbour, extends from the entrance to the N end of the area of reclaimed land at Saint-Bernard (43°31′·0N, 1°29′·4W) about 2 miles upstream. On the N bank there are several berths (8.275), most of them equipped to handle specific cargoes, situated between 4 and 11 cables E of the signal tower (8.268). Anglet Marina (8.283) occupies the S bank. There is a tanker terminal (8.276) on the E bank close N of the area of reclaimed land at Saint-Bernard.

8.264

1 **Bayonne,** the inner section, extends upstream from N end of the reclaimed area at Saint-Bernard to the first bridge at Bayonne, Pont Henri Grenet (43°29′·9N, 1°28′·9W). Ships cannot navigate beyond this bridge which has a vertical clearance of 5·2 m.

2 At Blanc-Pignon (8.278), on the W bank opposite the N end of the reclaimed area at Saint-Bernard, there is a general cargo berth, two more that handle sulphur, and a dry dock.

General cargo berths line both banks of the river immediately downstream from Pont Henri Grenet.

Hazards

8.265

1 **Fishing** with nets is carried out in the channel by numerous small craft.

Scend. In stormy weather there is a considerable scend at the Boucau-Tarnos N bank berths. Vessels, especially those with little under-keel clearance at LW, may then have to shift berth farther upstream.

Traffic signals

8.266

1 **International Port Traffic Signals,** as described in *The Mariner's Handbook,* are exhibited from the signal tower (43°31′·7N, 1°31′·2W) (8.268). One set of lights faces seaward, another up-harbour. Only Main Signals 2 and 3 are used, to prohibit either or both entry and departure. The lights are extinguished when both entry and departure are permitted.

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Natural conditions

8.267

1 **Tidal streams.** Times of commencement and direction of the tidal streams are:

Interval from HW Pointe de Grave	*Direction*
L'Adour entrance	
–0630	In-going
–0030	Out-going
Maximum spring rates are: 2 to 4 kn in-going; 3 to 5 kn out-going	
At Bayonne	
–0500	In-going
–0030	Out-going
Maximum rate at springs: 3 kn.	

2 During equinoctial spring tides HW slack at Bayonne may be delayed until 1 hour after HW at Pointe de Grave.

Slack water periods are brief, duration about 15 minutes, thereafter the rate increases rapidly.

Flow. When the rivers are in spate there may be no in-going flow and the out-going flow may begin 1 hour earlier and increase to as much as 6 to 7 kn.

Tide gauges in L'Adour are aligned to a level of 0·91 m above chart datum.

Landmarks

8.268

1 Landmarks in the vicinity of the entrance (positions given from the signal tower (43°31′·7N, 1°31′·2W)).

Signal tower (white, black stripe; 14 m in height) standing on the S side of the entrance channel.

Digue Jean Lesbordes Light-beacon (white square tower, red top; 9 m in height) (5½ cables WNW) on the head of the principal breakwater.

2 Digue du Sud Light-beacon (W cardinal; metal framework tower 14 m in height) (4 cables WSW) on the head of the S outer breakwater.

Maize silo (11 cables E) on the N bank of L'Adour.

Directions

(continued from 8.257)

Approach

8.269

1 **Initial position**. On arrival off L'Adour entrance, vessels should await instructions from the Pilotage Authority (8.250) in the vicinity and W of BA Landfall Light-buoy (safe water) (43°32′·6N, 1°32′·7W).

Boucau Leading Lights:

Front light (white pylon, red top; 6 m in height) (43°31′·9N, 1°31′·1W).

Rear light (similar structure; 12 m in height) (250 m E of front light).

2 The alignment (090°) of these lights (intensified sector 086½°–093½°), which should not be confused with Jetée Nord Light-beacon (white metal framework tower, red top; 10 m in height) (250 m W of front leading light), leads to a position 1 cable W of Jetée Nord Light-beacon, passing:

About 125 m S of the head of Digue Jean Lesbordes (5½ cables W of front leading light), the principal breakwater.

Mariners should note the light-buoy (special) situated close to the leading line 4 miles W of the port and the 12·1 m patch 1½ miles W of the port in an area where less water than charted was reported in 2002.

3 **Caution.** During the in-going tidal steam, a vessel entering harbour is initially set S when off the head of Digue Jean Lesbordes and subsequently N when off the head of Jetée Sud, the S inner breakwater.

Entrance

8.270

1 **Leading lights**. The alignment (111½°) of the leading lights at the E end of the S training wall then leads through the entrance between Jetée Nord and Jetée Sud, the inner breakwaters, whose foundations extend 20 m into the channel:

Front light (white hut, green band; 4 m in height) (43°31′·7N, 1°30′·9W).

Rear light (white square tower, green band on NE and NW faces; 9 m in height) (149 m ESE of front light).

2 **Useful marks:**

Jetée Sud Light (white square tower, green top; 8 m in height) (43°31′·8N, 1°31′·4W) on the head of S inner breakwater.

North Training Wall Light (white turret, red top; 5 m in height) (1½ cables ESE of Jetée Nord Light) on the elbow at the junction of Jetée Nord and the training wall, a structure on piles.

South Training Wall Light (white column, green top; 4 m in height) (about 60 m E of front leading light of 111½° alignment) on E end of training wall, a structure on piles.

Boucau-Tarnos

8.271

1 The fairway within the harbour is marked by beacons and buoys (lateral; odd numbers to starboard, even numbers to port), some lighted and some marking wrecks on the edge of the fairway.

From a position abreast the signal tower (8.268), the N bank of the river should be followed at a distance of 50 to 60 m as far as the vicinity of the maize silo (8.268).

8.272

1 **Forges de l'Adour Leading Lights:**

Front (white pylon, red top) (43°31′·7N, 1°29′·8W).

Rear (white pylon, red top) (150 m NW of front light).

Leading beacons:

Front (white, red stripe, can topmark) (43°31′·1N, 1°29′·3W).

Rear (red, white stripe, can topmark) (80 m SE of front beacon).

2 The alignment (322½°) astern of Forges de l'Adour Leading Lights standing on the quay WNW of the maize silo, or the alignment (141°) ahead of the leading beacons at Saint-Gobain berth (8.276), then lead SE to the vicinity of Poste Shell (E bank; 5 cables SE of maize silo) (8.276).

Caution. Forges de l'Adour Leading Lights may be obscured by vessels berthed near the front mark.

Bayonne-ville

8.273

1 From SW of Poste Shell the channel follows the W bank of the river. In the vicinity of the quays and dry dock at Blanc-Pignon (8.278) the deepest part of the channel lies

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Quai Socadour *Quai Européen* *Quai Marcel Fergues*

Boucau-Tarnos berths from SW (8.275)
(Original dated 1995)

(Photograph – Service Hydrographique et Océanographique de la Marine, Brest)

W of the alignment and line of bearing (205° and 172½°) described in the next two paragraphs.

8.274

1 The line of bearing 172½° of Pont de l'Aveugle Light (metal column) (43°30′·1N, 1°29′·5W) then leads SSE to a position 1½ cables NNW of Pont de l'Aveugle Light.

Thence the S bank of the river should be followed at a distance of 100 m as far as Quai Edmond Foy (4 cables ESE of Pont de l'Aveugle Light) (8.279).

Berths

Boucau-Tarnos

8.275

1 **Principal berths** on the N bank of the first reach of L'Adour are:

Deep Water Quay (43°31′·8N, 1°30′·6W) length 150 m, depth alongside 8·3 m, which handles solid bulk, wood and general cargo.

Quai Européen (1½ cables E), length 185 m, depth alongside 10 m, which handles crude oil and chemicals.

2 Quai Marcel Forgues (3 cables E), length 160 m, and Quai Léon Tramut (4 cables E), length 167 m, which are both dredged to 10 m.

There are several other berths on dolphins farther E with lesser depths alongside.

8.276

1 **Oil terminal** (43°31′N, 1°29′W). There are two berths on the E bank that are connected by pipeline to Raffineries du Midi. Saint-Gobain, the S and larger berth consists of five berthing dolphins, overall length 110 m, depth alongside about 7·5 m; it is also used as a general waiting berth.

Saint-Bernard

8.277

1 Quai Saint-Bernard (43°30′·5N, 1°29′·4W), dredged depth 7.0 m, provides one timber berth, length 128 m and one Ro-Ro berth, length 160 m.

Blanc-Pignon

8.278

1 Quai Édouard Castel (43°30′·9N, 1°29′·6W), dredged depth 8·3 m, provides two berths:

N, consisting of berthing dolphins, handles liquid sulphur.

S, 200 m in length, handles dry sulphur.

Quai Armand Gommès (close S) provides a general cargo berth, alongside depth 7 m, on dolphins.

There is a dry dock entered S of the quays, see 8.280 for dimensions.

Bayonne-ville

8.279

1 **Working berths** (positioned by distance downstream from Pont Henri Grenet), include:

Quai Edmond Foy (S bank, 1 cable), length 240 m, depth alongside 5·5 m; handles general cargo; usual berth for visiting warships.

Quai Pierre Leroy (N bank, 1 cable) consists of two berths on dolphins dredged to 6·5 m.

Port services

Repairs

8.280

1 Repairs of all kinds are carried out.

Dry dock at Blanc-Pignon (8.278) length 98 m, breadth 15 m, sill 1·4 m below chart datum.

Divers available from fire brigade.

Other facilities

8.281

1 Deratting exemption certificates issued.

Hospital: Hôpital Saint-Léon at Grande-Bayonne (8.258).

Supplies

8.282

1 Fuel oil supplied at oil terminal berths (8.276), and by road tanker at other berths.

Fresh water available at berths.

Provisions available.

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Port du Brise-Lames from NE (8.283)
(Original dated prior to 1997)

Small craft

Port du Brise-Lames
8.283

1 **General information.** Port du Brise-Lames, a marina situated on the S side of L'Adour, is entered 6 cables E of the signal tower. The marina office is located on the area between the two basins of the marina. Port radio, see 1.41 for details.

Berths: at pontoons for 425 small craft maximum draught 3 m; 60 reserved for visitors; reception berth situated close N of marina office.

2 **Repairs** of all kinds carried out; 13-tonne boat-hoist, slip and careenage at NE corner of basin.

Other facilities: yacht club on W side of W basin; custom house at Grande Bayonne (8.258).

Supplies: fuel; fresh water; provisions.

River craft
8.284

1 L'Adour is navigable by river craft as far as Pouy about 40 miles from the entrance: it has several tributaries navigable for short distances, La Nive being the most important. There is little traffic above Bayonne.

APPROACHES TO BAIE DE SAINT-JEAN-DE-LUZ

General information

Charts 1343 plan of Saint-Jean-de-Luz, 1102

Description
8.285

1 **Baie de Saint-Jean-de-Luz** (43°23′N, 1°40′W) (8.301) is approached by four different passages leading either between or inshore of the various shoals forming Plateau de Saint-Jean-de-Luz (8.248).

Passe d'Illarguita (8.291), whose leading lines are shown on the charts, is the principal approach and also the only one that is practicable in rough weather.

2 **Other approaches** are:

NE approach (8.293) from the vicinity of L'Adour entrance; passes inshore of Plateau de Saint-Jean-de-Luz; unmarked and unlit.

Passe d'Herreca (8.296), the N approach; unmarked and unlit.

Passe de Belhara Perdun (8.297), the W approach; passes inshore of Plateau de Saint-Jean-de-Luz; used by local craft; should not be used in bad weather.

Topography
8.286

1 The coast is described at 8.249.

Pilotage
8.287

1 Pilotage is not normally provided for the approaches to Baie de Saint-Jean-de-Luz but they lie mainly within L'Adour Pilotage District limits, see 8.250 for further details.

Local knowledge
8.288

1 Local knowledge is required except for Passe d'Illarguita (8.291).

Rescue
8.289

1 **Coastguard station** (1.75); Socoa (43°24′N, 1°41′W).
Lifeboat (1.77): stationed at Socoa (8.313).

Principal marks
8.290

1 **Landmarks:**
Pointe Saint-Martin Lighthouse (43°30′N, 1°33′W) (8.255).
Fort de Socoa (43°23′·8N, 1°40′·9W) (8.301).
Tour de Bordagain (43°23′N, 1°40′W) (8.291).
Château d'Abbadie (43°23′N, 1°45′W) (8.257).
Cabo Higuer Lighthouse (43°24′N, 1°47′W) (8.255).

2 **Major lights:**
Pointe Saint-Martin Light—as above.
Cabo Higuer Light—as above.

Directions
(continued from 8.257)

Passe d'Illarguita
8.291

1 **Initial position** approximately 43°27′N, 1°45′W.
Leading lights:
Front: Socoa Light (white square tower, black stripes; 12 m in height) (43°23′·8N, 1°41′·1W).
Rear: Bordagain Direction Light (black rectangular daymark, white band, on white pylon, black bands; 12 m in height) (8 cables SE of front light).

2 The alignment (138°) of these lights leads SE in the intensified sector (134½°–141½°) of the rear light to a

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position 7 cables NW of the front light, passing (positions given from front light):

Close SW of Illarguita (2½ miles NW), a rocky bank on which seas break in stormy weather, thence:

Close NE of the 20 m depth contour enclosing Belhara Perdun (1¾ miles NW), a shoal on which a heavy swell from W breaks.

3 **Caution.** By day Bordagain Light-beacon, the rear leading mark, may be difficult to distinguish but Tour de Bordagain (1 cable farther SSE), which stands close SW of the 138° alignment of the leading marks, is prominent. Socoa Lighthouse, the front leading mark, must not be confused with Socoa Coastguard Station standing ½ cable farther S.

8.292

1 **Sainte-Barbe Leading Lights:**

Front (white triangular daymark on white building; 7 m in height) (43°24′·0N, 1°39′·8W).

Rear (black triangular daymark on white square tower; 15 m in height) (340 m E of front light).

The alignment (101°) to these lights then leads 8 cables E to Passe de l'Ouest (8.306), the W entrance to Baie de Saint-Jean-de-Luz, passing (positions given from front light):

2 S of Mabessin (11 to 6 cables WNW), a shoal with a least depth of 9·8 m on which the sea breaks when there is a heavy swell from W and:

N of the coastal shoal fronting Rochers des Criquas (8 cables W).

Charts 1343 plan of L'Adour, 1102

North-eastern approach

8.293

1 **Initial position** 43°32′·0N, 1°32′·5W, about 5 cables W of the head of Digue Jean Lesbordes (8.268) at L'Adour entrance.

An inshore passage leads SW, passing (positions given from Pointe Saint-Martin Light (43°30′N, 1°33′W)):

2 SE of Loutrou shoal (1¼ miles N) (8.262), thence:

NW of Pointe Saint-Martin, and:

SE of Chouroubiague (1 mile WNW), a 15 m patch on which the sea breaks, thence:

NW of the drying pinnacle rock lying 2½ cables WNW of Pointe de Biarritz (1 mile SW), and:

SE of Grande Aroquiague (2 miles W) and Basse des Esclaves (2½ miles WSW), shoals on which the sea breaks.

Charts 1343 plan of Saint-Jean-de-Luz, 1102

8.294

1 **Leading marks:**

Front: Fort de Socoa (43°23′·8N, 1°40′·9W) (8.301).

Rear: Peñas de Aya summit (8 miles SW of front mark) (8.256).

2 The alignment (214°) of these marks then leads SW, passing (positions given from Fort de Socoa):

SE of Cambo-Banco (4 miles NNE), a shoal on which a swell breaks, and:

NW of a 14 m rocky patch (4 miles NE), thence:

SE of Aroca Tiquia (2 miles NNE), a shoal on which a swell breaks.

8.295

1 The route then leads 2 miles WSW to the vicinity of the junction (7 cables NW of Socoa Light) of Passe d'Illarguita (8.291) and Passe de Belhara Perdun (8.297), passing:

NNW of Mabessin shoal (6 cables NNE of Socoa Light) (8.292).

2 **Caution:** Passe de l'Est, the more direct approach to Baie de Saint-Jean-de-Luz, is used only by local craft; it is not recommended because Les Esquilletac, rocky patches lying up to 5 cables offshore in the vicinity of Pointe Saint-Barbe, the E entrance point of the bay, are unmarked. The 214° alignment described in the preceding paragraph passes only about 1½ cables NW of the 10 m depth contour that encloses Les Esquilletac.

Passe d'Herreca

8.296

1 **Initial position** 43°28′·0N, 1°42′·5W.

Entering Passe d'Herreca. The line of bearing about 163° of La Rhune summit (43°19′N, 1°38′W) (8.255) leads SSE to a position about 2 miles NNW of Digue d'Artha, passing (positions given from Socoa Light):

WSW of Herreca shoal (4¼ miles N) (8.256), thence:

ENE of Illarguita bank (3 miles N) (8.291).

2 The route then leads about 1½ miles S to the alignment (101°) of Sainte-Barbe Leading Lights (8.292), passing:

W of Mabessin shoal (6 cables N of Socoa Light) (8.292).

Passe de Belhara Perdun

8.297

1 **Initial position** 43°25′N, 1°46′W.

Sainte-Barbe Leading Lights: (43°24′N, 1°40′W) (8.292). The alignment (101°) of these lights leads E into the inner section of Passe d'Illarguita, passing (positions given from front leading light):

N of Les Briquets (reef drying 0·4 m) (4 miles W), off which the swell breaks, thence:

Close S of the shallowest part of Belhara Perdun shoal (2½ miles W), in depths of 20 m or more.

(Directions continue at 8.306)

Anchorages

8.298

1 **Off Biarritz** temporary anchorage may be obtained in summer in fine weather with Pointe Saint-Martin Light (43°30′N, 1°33′W) (8.255) bearing 085° distant 6 cables, on the alignment (174°) of Port des Pêcheurs Leading Lights (8 cables SW of Pointe Saint-Martin) (8.300), depth 13 m good holding. Vessels should quit the anchorage immediately if the wind begins to blow from seaward.

8.299

1 **Off Baie de Saint-Jean-de-Luz** anchorage may be obtained in a depth of 36 m bottom shingle good holding at the intersection (43°25′·3N, 1°41′·6W) of:

Alignment (150¾°) of Baie de Saint-Jean-de-Luz Entrance Leading Lights (43°23′N, 1°40′W), (8.306), and:

Alignment (231°) (chart 1181, plan of Rada de Higuer) of Les Deux Jumeaux (43°23′N, 1°45′W) (8.318) and Fuenterrabia church (belfry) (2 miles farther SW).

Small craft

Chart 1102, Plan of L'Adour

Biarritz

8.300

1 **General information.** Port des Pêcheurs (43°29′N, 1°33′W), a small drying fishing harbour, is accessible only in fine weather to unmasted craft less than 15 m in length. It consists of (listed from W to E): outer harbour; two drying basins; wet dock, entrance 3 m wide, sill 0·8 m above chart datum.

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2 **Directions.** Port des Pêcheurs Leading Lights:
Front light (white mast, 4 m in height) on a spur on W side of outer harbour.
Rear light (white mast, 4 m in height) (83 m S of front light) on escarpment behind harbour.
The alignment (174°) of these lights leads into the outer harbour, passing (positions given from front light):
3 E of the knuckle of Digue de Ganaritz (½ cable NNW), the breakwater extending ½ cable N from the shore and:
W of Roche Labardin (¾ cable N), an above-water rock.
Berth. Quay on S side of outer basin dries from 0·8 to 1·0 m alongside.
Repairs to hulls and engines carried out. Supplies: fresh water at quay.

BAIE DE SAINT-JEAN-DE-LUZ

General information

Chart 1343 plan of Saint-Jean-de-Luz

Description

8.301

1 **Baie de Saint-Jean-de-Luz,** entered between Pointe Sainte-Barbe (43°24′N, 1°40′W) and Fort de Socoa (large round tower) (8 cables WSW) is sheltered by three breakwaters: Digue de Sainte-Barbe extending W from the point; Digue des Criquas extending ENE from the fort; Digue d'Artha, detached, in the centre.
Passe de l'Ouest (8.306), the channel passing W of Digue d'Artha, is the principal entrance.
Passe de l'Est (8.295), the entrance E of Digue d'Artha, is used only by local craft.

Topography

8.302

1 La Nivelle river flows into the bay through Saint-Jean-de-Luz harbour (8.309) and separates the town of Saint-Jean-de-Luz, population 13 000 (2003), on the E shore from that of Ciboure, population 5800 (2003) on the S shore.
Socoa harbour (8.313) and village lie at the NW corner of the bay N of the mouth of L'Unxin river.

Pilotage

8.303

1 Pilotage is provided by L'Adour pilots, see 8.250 for further details. The pilot boards off the W entrance to the bay.

Traffic regulations

8.304

1 **Speed limit** in the bay is 7 kn.
Reserved areas are established as follows:
SW of a line joining the head of Digue des Criquas with the head of the SW training wall at the entrance to Saint-Jean-de-Luz Harbour: three areas shown on the chart, two reserved for small craft, the third for fishing vessels; an area extending 2 cables farther SE is reserved for speed-boats and water-skiers.
In the E part of the bay: an anchorage for small craft, as shown on the chart.

8.305

1 **Tidal streams.** When the tide is rising the incoming tidal stream sets more strongly through the E entrance; thence it follows the E shore of the bay to the entrance of La Nivelle river: in the yacht anchorages in the NW part of the bay an eddy sets N at about ½ kn.
2 During the falling tide the out-going flow from La Nivelle sets through the W entrance; the rate in the yacht anchorages in the NW part of the bay is 1 kn. Heavy seas in the entrance will prevent the flow from leaving the bay and it then continues clockwise round the E part of the bay.
Climatic table: see 1.156 and 1.165.

Directions

(continued from 8.297)

Passe de l'Ouest

8.306

1 **Initial position** 43°24′·1N, 1°40′·7W.
Leading lights:
Front light (white tower, red stripe; 14 m in height) (43°23′·3N, 1°40′·1W) standing at the root of the NE training wall at the entrance to Saint-Jean-de-Luz Harbour.
Rear light (white tower, green stripe; 27 m in height) (410 m SSE of front light).
2 The alignment (150¾°) of these lights leads through the W entrance of Baie de Saint-Jean-de-Luz, passing, (positions given from front light):
NE of the head of Digue des Criquas (7 cables NW) marked by a light (green square tower 6 m in height), and;
SW of the W end of Digue d'Artha.
3 **Caution.** In stormy weather from W entry is difficult, and at night dangerous for ships in ballast. At all times larger vessels should avoid entering the bay during the out-going tidal stream and at LW.

Anchorage

8.307

1 Anchorage is available in the middle of the bay ENE of a line drawn from the W end of Digue d'Artha to the head of the NE training wall at the entrance to Saint-Jean-de-Luz Harbour. The best anchorage is found in the S part of this area in depths from 6 to 8 m where the bottom is of sand and gravel and tidal streams are weaker so that vessels ride head to swell. Use of the port anchor with 60 m (2½ shackles) of cable veered is recommended, the starboard anchor being let go if the wind freshens.
2 The mooring buoy (3 cables SW of the head of Digue de Sainte-Barbe) is reserved for the use of French naval vessels.
Cale aux Chevaux (3 cables S of Pointe Sainte-Barbe) is a landing jetty whose S side should be used if there is any swell.

Small craft

Anchorages and moorings

8.308

1 Areas reserved for small craft (8.304): it is reported that the swell can be troublesome in the two charted areas in the NW part of the bay and that the bottom, sand over rock with a rocky patch S of the W entrance, provides poor holding in places: the E charted area is less exposed to any swell.
Caution. A submerged obstruction, the remains of a pier (5 cables S of Pointe Sainte-Barbe), extends NW from the shore to the SE edge of the E yacht anchorage.

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Saint-Jean-de-Luz Harbour

8.309

1 **General information.** Saint-Jean-de-Luz Harbour (43°23′N, 1°40′W) is principally a fishing port. A small marina is located in Bassin de Larraldénia the SW corner that is separated from the main basin by Terre-plein des Récollets, a broad quay on which the Capitainerie du Port is situated.

2 **Limiting conditions:**

Maximum draught reduced from 2·5 to 1·6 m in 1991 due to shoaling at the entrance.

Tidal levels at Socoa are given at 8.313.

Stormy weather from W causes a bar to form between the training walls at the entrance; the resultant violent eddies make departure and especially entry dangerous and not to be attempted except near HW.

3 **Port radio:** see 1.41 for further details.

Regulations concerning entry:

Speed limit 5 kn.

Anchoring in the basins is strictly forbidden.

Sailing craft must proceed under power.

8.310

1 **Directions.** The dredged channel, for which the best guide is the chart, leads S from the bay into the entrance between the two training walls.

Caution. The leading lights (8.306) indicate the channel through the W entrance to the bay, not the port approach.

The out-going flow in the entrance is very strong especially when La Nivelle is in spate.

2 **Useful marks:**

Fixed red strip-light exhibited from the head of E training wall of the entrance channel.

Light-beacon (white pedestal 3 m in height) on the head of the groyne ½ cable farther E.

8.311

1 **Main basin.** Quays on NNW, NE and SW sides. depths alongside as shown on the plan. Quai Rousseu is also called Quai Élissalt.

Bassin de Larraldénia: berths for 70 small craft at pontoons, depth alongside 1·5 to 2·5 m, six places reserved for visitors.

La Nivelle: drying berths for unmasted craft upstream from the two low fixed bridges that span the river at the S end of the main basin.

8.312

1 **Repairs** of all kinds carried out; patent slip in Bassin de Larraldénia for vessels maximum dimensions, length 27 m, beam 7 m, displacement 250 tonnes.

Other facilities: hospital. custom house on Terre-plein des Récollets; yacht club at marina.

Supplies: fuel; fresh water; provisions.

Socoa Harbour

8.313

1 **General information.** Socoa (43°24′N, 1°41′W), a drying yacht harbour, is sheltered by two moles, Jetée du Sud on the SE side and Jetée du Marégraphe on the NE side with a tide gauge at its head. The inner and outer harbours are separated by a third mole.

Limiting conditions:

Charted depth in the harbour entrance: drying 0·5 m.

Tidal levels. See information in *Admiralty Tide Tables*. Mean spring range about 3·7 m; mean neap range about 1·8 m.

2 **Directions.** The line of bearing 315° of Fort de Socoa (8.301), seen midway between the heads of Jetée du Marégraphe and Jetée du Sud, leads towards the harbour entrance, 35 m wide.

Repairs of all kinds at small boatyard; slip at SE corner of inner harbour dries 2 m at its head.

Supplies: fresh water; provisions.

BAIE DE FONTARABIE OR RADA DE HIGUER

General information

Chart 1181 plan of Rada de Higuer or Baie de Fontarabie

Description

8.314

1 **Baie de Fontarabie and Rada de Higuer** are the French and Spanish names, respectively, given to the bay entered between Pointe Saint-Anne (43°23′N, 1°45′W) and Cabo Higuer (1½ miles WNW); it is also called Baie de Figuier by the French. The bottom is of sand and mud in the W part and rocky in the E.

Topography

8.315

1 Cabo Higuer, described at 9.8, is higher and more rugged than the E shore of the bay. Isla Amuitz, a rocky hummock-shaped islet, stands on foul ground extending N from the cape.

Ría de Fuenterrabía (8.321), entered at the head of the bay, is encumbered with shifting sandbanks. The buildings of Hendaye and Fuenterrabía, the towns on the E and W bank of the estuary respectively, are prominent.

Territorial waters

8.316

1 The international boundary between France and Spain passes through the bay. A neutral area for the use of vessels of both nations, whose limits are shown on the chart, has been established in the middle of the bay and marked by the alignments of a number of beacons (white pyramids) standing on the shore. The waters E and W of the neutral area are under French and Spanish jurisdiction respectively. The division of territorial waters to seaward of the neutral area is indicated by a line drawn N from a beacon on the S shore of the bay (1 mile SW of Pointe Sainte-Anne).

Principal marks

8.317

1 **Landmarks:**

Château d'Abbadie (43°23′N, 1°45′W) (8.257).

Cabo Higuer Lighthouse (43°23′·6N, 1°47′·5W) (8.255).

Major light:

Cabo Higuer Light—as above.

Directions

(continued from 8.257)

Entering Baie de Fontarabie

8.318

1 **Initial position** 43°24′N, 1°46′W approximately.

The route leads SSW to the head of the bay, passing:

WNW of Les Briquets (43°24′N, 1°45′W) (8.297), thence:

ESE of the coastal shoals surrounding Cabo Higuer (43°24′N, 1°47′W).

2 In bad weather or when there is a heavy swell it is advisable to pass WNW of the following rocky banks (positions given from Cabo Higuer Light):

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Banc Chicharvel (1 mile E).
Bajo Iruarri (7 cables ESE).

3 **Useful marks** (positions given from Cabo Higuer Light):
Les Deux Jumeaux (1½ miles ESE), two islets about 20 m high. The boundary beacon (8.316) standing on the black Pointe Sainte-Anne (1 cable farther ESE) is prominent.
Castillo de Higuer (2 cables SE), a prominent castle with reddish roof standing at the top of an escarpment.

4 Light-beacon on the breakwater head (4 cables SSE) of Puerto de Refugio de Fuenterrabía (8.320).
Light-beacon (7 cables S) (8.326) on the head of the W training wall at the entrance to Ría de Fuenterrabía.

Anchorage

8.319

1 The best anchorage in the bay lies about 1 cable W of Bajo Iruarri (8.318), in a position close NW of that shown on the chart, with the belfry of the church (43°21′·6N, 1°46′·4W) at Hendaye bearing 169° and with Cabo Higuer Light (8.255) bearing 305° just open NE of Castillo de Higuer (8.318); depth 11 to 14 m, sand and mud good holding; sheltered from winds from E through S to W but untenable in strong N winds which create a heavy swell.

Small craft

Puerto de Refugio de Fuenterrabía

8.320

1 **General information.** Fuenterrabía Harbour of Refuge (43°23′·2N, 1°47′·2W), situated at Gurutzeaundi, is protected by a curved breakwater to the NE and a mole to the SW and SE. Lights are exhibited from the head of the breakwater and the head of the mole. A light (E cardinal; 5 m in height) is exhibited from the elbow of the NE breakwater. A quay used by fishing vessels lies on the NW side of the harbour.

2 An inner basin is formed by two short moles; the entrance between their heads is 30 m wide and faces SSW. There are charted depths of 5 to 6 m in the basin. Lights are exhibited on both sides of the entrance.

3 **Anchorage:** for small craft, clear of the many moorings; depths 3 to 6 m sandy bottom.

Berths: quay, with depths of 4 to 6 m alongside for 70 m, the remainder less; moorings for fishing vessels.

Supplies: marine diesel; fresh water; no provisions at harbour.

Small craft: La Bidassoa or Ría de Fuenterrabía

General information

8.321

1 Ría de Fuenterrabía is the Spanish name given to the estuary of Río Bidasoa, the river called La Bidassoa by the French, that forms the boundary between France and Spain for the last 7 miles of its course.

The estuary is entered from the SW corner of Baie de Fontarabie or Rada de Higuer and extends 2 miles S to Puente Internacional (43°21′N, 1°47′W), the railway bridge that spans the river entrance: it is frequented by fishing vessels and small craft.

Limiting conditions

8.322

1 **Controlling depth** in the entrance varies as a result of storms and silting: the local authority should be consulted for the latest information. Normally only vessels less than 2 m draught can enter at LW.

Deepest berths: Appontement de la Floride (8.328).

Bad weather: breakers form at the entrance in stormy weather and when there is a heavy swell in the bay.

Arrival information

8.323

1 **Port radio:** Club Maritime Hendayais at Quai de la Floride (8.328) keeps watch on VHF during the sailing season, see 1.41 for frequency.

Outer anchorage for craft awaiting the tide to enter: SW of Puerto de Refugio de Fuenterrabía (8.320).

Pilotage can be provided by local Spanish fishermen.

Local knowledge is necessary due to the unstable nature of the sandbanks and bar in the entrance.

Harbour

8.324

1 **Channels.** The entrance about 1½ cables wide between training walls leads 5 cables SSW to the vicinity of Punta Roca (43°22′·4N, 1°47′·6W) on the W bank. Thence the channel leads SE for a further 5 cables into Baie de Chingoudy. The remainder of the estuary is encumbered with sandbanks that change position and configuration; the channels between them are narrow and tortuous.

2 **Anchorages:**
Off Barrio de la Marina (S of Punta Roca) (8.327); used mainly by Spanish fishing vessels.
In Baie de Chingoudy (8.328), S of Quai de la Floride (6 cables ESE of Punta Roca); used by small craft and French fishing vessels.

8.325

1 **Tidal streams.** The out-going tidal stream is very strong at half tide at springs especially in winter when the river is in spate.

Directions

8.326

1 Entering Ría de Fuenterrabía the chart is the best guide to the deepest part of the channel between:
Épi Socoburu, the E training wall, marked by a light-beacon (white column, red top; 4 m in height) at its head and:

2 W training wall extending 5½ cables NNE from Punta Roca, marked by a light-beacon (green tower, 5 m in height) standing on its head. The inner part of the channel is illuminated, if the visibility is poor, by 4 floodlights standing on the wall.

3 From the vicinity of Punta Roca the channel leads SE, passing (positions given from Punta Roca):
NE of a light-buoy (starboard hand) (1 cable E) marking outfalls and underwater rubble fronting Punta Roca, thence:
NE of a drying sandspit marked by two light-beacons (starboard hand) (3 and 5 cables SE), and:

4 SW of the inner end of Épi Socoburu (which also forms the elbow of a small craft marina breakwater), marked by a light-beacon (white column with red top 5 m in height) (3½ cables ESE), thence;

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SW of the W extremity of Appontement de la Floride (8.328) marked by a light-beacon (yellow column 4 m in height) (5 cables ESE).

Fuenterrabía

8.327

1 **General information.** Barrio de la Marina, the modern part of Fuenterrabía situated N of the old walled town, lies on the W bank of the entrance to Ría de Fuenterrabía S of Punta Roca. Most of the population of is employed in the fishing industry.

Moorings for tunny boats are laid in the main channel between Punta Roca and the vicinity of Appontement de la Floride.

2 **Berth:** small quay that dries alongside; used for unloading.

Repairs: small shipyard for wooden craft; two slips for vessels up to 200 tonnes.

Supplies: fresh water; provisions.

Baie de Chingoudy

8.328

1 **General information.** Baie de Chingoudy, situated on the E side of the estuary between Hendaye (43°21′N, 1°46′W) and Hendaye-Plage (1 mile N), is frequented by small craft and French fishing vessels.

Port Authority: Capitainerie du Port de la Floride, 64700 Hendaye. Office situated on Quai de la Floride, the quay extending S from Hendaye-Plage.

Anchorage: numerous moorings for fishing vessels and small craft are laid in the area S of Quai de la Floride.

2 **Berths.** Appontement de la Floride, the wharf at the W end of the S side of Quai de la Floride, is 340 m in length; an area 40 m wide off its entire length has been cleared of rocks to a depth of 5 m, but it silts and is not maintained by dredging. A landing stage extends 40 m S from the E end of the wharf. The entrance to a marina, sometimes called Socoburu Marina, lies immediately W of the Appontement de la Floride. The marina has 720 berths in depths of 2·5 to 3 m and facilities include a 30 tonne hoist.

3 **Repairs** to engines; boat hoist for vessels up to 300 tonnes at E end of Quai de la Floride and a 20 tonne crane.

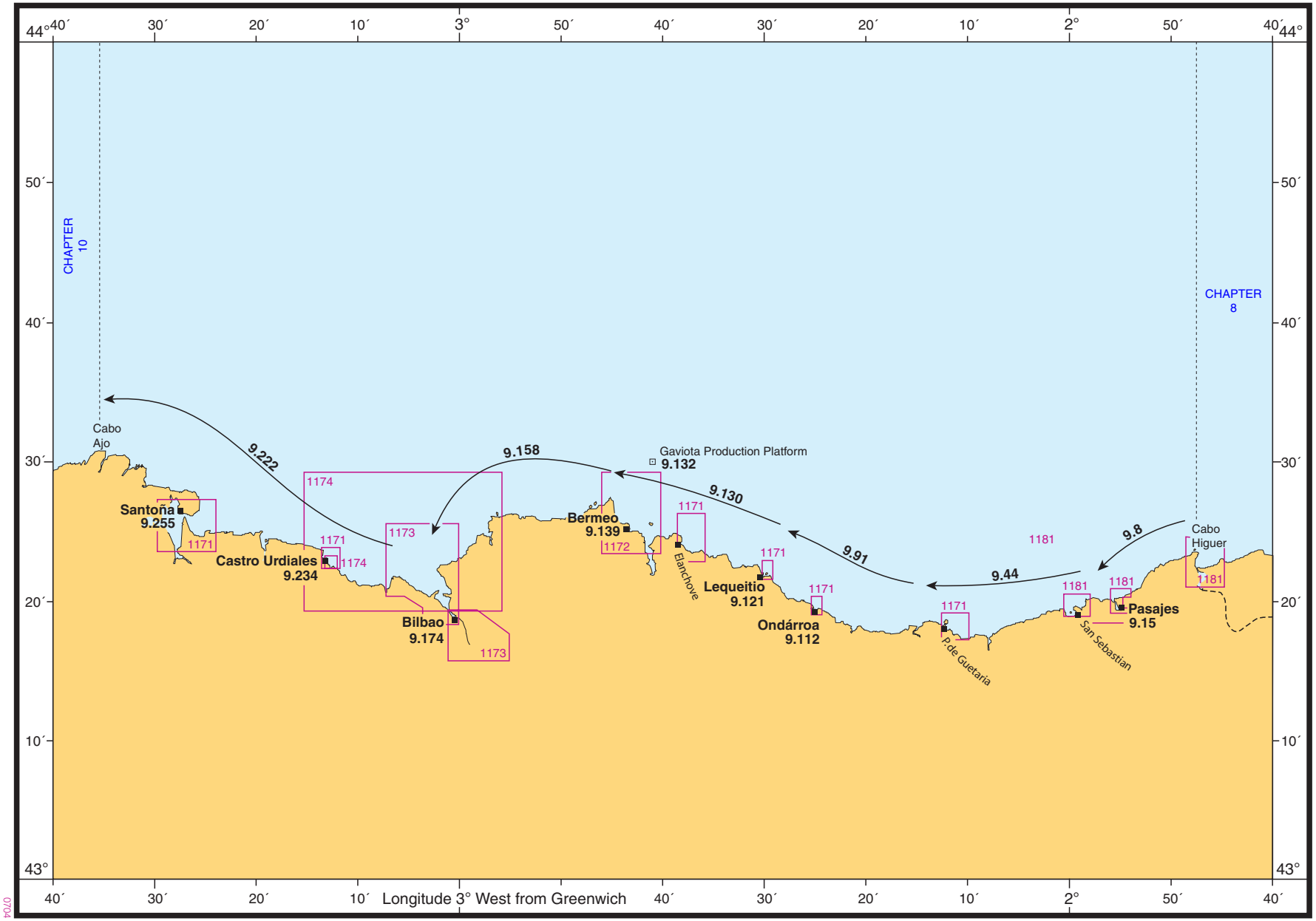
Other facilities at Quai de la Floride: custom house; yacht club.

Supplies: fuel; fresh water; provisions.

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Chapter 9 - Cabo Higuer to Cabo Ajo



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CHAPTER 9

CABO HIGUER TO CABO AJO

GENERAL INFORMATION

Chart 1102

Topography

9.1

1 The coast between Cabo Higuer (43°24′N, 1°47′W) and Cabo Ajo (43°31′N, 3°35′W), 79 miles W, is in general bold, rocky, barren and exposed. There are no outlying dangers. Inland it is notable for the numerous mountains, some close to the coast and others rising in tiers to the lofty and rugged crests of the Cordillera Cantábrica which are snow-capped for much of the year and can be seen from far out to sea in clear weather.

2 Ports and harbours are to be found at the mouths of the various rivers and in indentations in the coast. In addition to the two major ports, Pasajes (43°19′N, 1°55′W) (9.15) and Bilbao (43°21′N, 3°02′W) (9.174), there are numerous fishing ports some of them used occasionally by coastal trading vessels.

Marine Farms

9.2

1 Marine farms and fish havens (charted) are located within the waters of this chapter and should be avoided. Further farms and havens are likely to be established, see 1.8

Weather

9.3

1 Local weather patterns are described at 9.7 and 9.156 for the E and W sections of the area respectively.

2 **Caution.** North-westerly gales blow with great force on this stretch of coast; they cause strong E-going currents (9.4) and heavy seas that are hazardous in areas where there is an uneven rocky bottom; they render most of the minor ports inaccessible and Pasajes difficult to enter. In these conditions small vessels may obtain shelter at Guetaria (43°18′N, 2°12′W) (9.74); Bermeo (43°25′N, 2°43′W) (9.139); Castro Urdiales (43°23′N, 3°13′W) (9.234) and Fondeadero del Fraile (43°26′N, 3°25′W) (9.246) but there is no sheltered anchorage for large vessels except at Bilbao (9.174).

Flow

9.4

1 **Currents.** The wind is the principal cause of currents in this area which therefore tend to be very variable. The general pattern and seasonal changes are described at 1.104; local conditions at 9.7 and 9.157 for the E and W parts of the area respectively.

Caution. Strong and prolonged SW, W and NW winds can cause strong E-going currents; the E-going flow may attain a rate of as much as 5 kn off the E end of the N coast of Spain.

2 **Tidal streams** are reported to be noticeable only in narrow channels and in the vicinity of promontories.

Abnormal water levels

9.5

1 Abnormal water levels caused by the wind occur along the whole N coast of Spain, see 1.107 for details.

CABO HIGUER TO CABO MACHICHACO

GENERAL INFORMATION

Chart 1102

Topography

9.6

1 The aspect of the coast between Cabo Higuer (43°24′N, 1°47′W) and Cabo Machichaco (43°27′N, 2°45′W), 42 miles W, is generally similar to that farther W and is described at 9.1. The higher mountains lying about 5 to 7 miles inland that make useful distant landmarks when approaching ports on this stretch of coast from N include (listed from E to W):

2 Peñas de Aya (43°17′N, 1°47′W) (8.255).

Monte Urdaburu (43°14′N, 1°54′W) with two flat peaks close together and a third lower one farther E.

Monte Hernio (43°10′N, 2°09′W) whose summit has three not very pronounced peaks.

Monte Itzarraitz (43°12′N, 2°17′W); conspicuous with a sharp peak.

Natural conditions

9.7

1 **Local weather.** In winter SW and W gales which nearly always veer NW are prevalent. They are often announced 2 days in advance by calm weather and a heavy swell: the latter persists for a few days after the storm has passed. SW and W winds are accompanied by poor visibility and the coastline cannot be seen except from close inshore: with NW winds the visibility improves between rainstorms.

2 In summer NE breezes predominate accompanied by high pressure and fine weather. Inshore early morning mists, land and sea breezes are common. This pattern is sometimes interrupted by oppressive S winds with good visibility.

3 **Currents** in this region follow the general direction of the coastline. In winter when W winds predominate they usually set E and in stormy weather may reach, somewhat offshore, a rate of 3, 4 or occasionally 5 kn. In summer with the prevailing NE breezes the current is usually weak and sets W or WNW, maximum rate 1 to 2 kn.

Tidal streams. See 9.4 for general information.

CABO HIGUER TO PASAJES

General information

Charts 1102, 1181 plan of approaches to San Sebastián and Pasajes

Topography

9.8

1 Cabo Higuer (43°24′N, 1°47′W) is the bare rugged NE termination of Sierra de Jaizquivel, a long uncultivated

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humped ridge: Isla Amuitz (8.315) lies close N of the cape. From Cabo Higuer to Punta de la Turulla (3¾ miles WSW) the coast consists of dark vertical cliffs generally 20 to 30 m high rising to 40 m at the point.

2 From Punta de la Turulla (43°22′N, 1°52′W) to Punta Tambó (2½ miles SW) the cliffs are mainly 200 to 250 m high. Inland the coast rises to Pico Jaizquivel (1½ miles SSE of Punta de la Turulla), the summit of Sierra de Jaizquivel.

Principal marks

9.9

1 **Landmarks:**

Cabo Higuer Lighthouse (43°24′N, 1°47′W) (8.255).

Radio masts (uncharted) standing on Pico Jaizquivel (43°20′·8N, 1°51′·3W).

Peñas de Aya (43°17′N, 1°47′W) (8.255).

Major lights:

Cabo Higuer Light—as above.

Isla de San Antón Light (43°19′N, 2°12′W) (9.51).

Other aids to navigation

9.10

1 **Racon**: Atalaya de Pasajes (43°20′N, 1°55′W) (9.30)

Passage directions

(continued from 8.257)

9.11

1 In the coastal passage between Cabo Higuer (43°24′N, 1°47′W) and the entrance to Pasajes (7 miles WSW) the shore is steep-to and clear of dangers outside a distance of 2 cables from Isla Amuitz (1 cable N of Cabo Higuer) (8.315) and from the coast WSW of the island.

9.12

1 **Useful marks:**

Five towers (9 m in height) on Sierra de Jaizquivel; the NE-most (43°21′·8N, 1°49′·7W) is uncharted, the others stand 7 cables and 2, 2¾ and 3¼ miles SW; the SW-most is obscured from N by a spur of the mountain.

Cabo La Plata Light (43°20′N, 1°56′W) (9.29).

(Directions continue for coastal passage at 9.52, and for Pasajes at 9.31)

Small craft

9.13

1 Porto Moco (43°23′N, 1°49′W), Herencín Chico and Herencín Grande (1 and 2 miles WSW respectively), three small inlets in the coast between Cabo Higuer and Punta de la Turulla are frequented by small craft in calm conditions but only Porto Moco provides shelter in W or NW winds.

9.14

1 Cala de Asabaratza (43°21′N, 1°53′W), in which there is a beach where a landing may be effected, is approachable only in calm weather.

PASAJES

General information

Chart 1181 plan of Pasajes

9.15

1 **Position.** Puerto de Pasajes (43°19′N, 1°55′W) the E-most port on the N coast of Spain, lies about 5 miles W of the frontier with France and about 3 miles E of the city of San Sebastián (9.54).

9.16

1 **Function.** The port handles about 3½ million tonnes of cargo annually, including scrap iron, coal, petroleum products, and iron and steel. Motor vehicles are exported in large numbers.

Many fishing vessels are based at Pasajes.

Puerto de Pasajes is the only port of refuge for medium sized vessels in the SE part of the Bay of Biscay between La Gironde (8.2) and Bilbao (9.174).

9.17

1 **Topography.** Pasajes Harbour, an extensive natural basin, lies at the inner end of a pass leading 7 cables SSE through the coastal mountain range which provides it with complete shelter. Río Oyarzún flows into the E end of the harbour. There are about 4·8 km of quays of which 1·5 km is reserved for fishing vessels.

2 Two typical Basque villages, Pasajes de San Juan and Pasajes de San Pedro stand on the N shore of the harbour E and W respectively of the entrance; fish canning factories and a shipyard on the same shore lie farther SE.

Pasajes Ancho, the town on the S shore of the basin, contains most of the commercial port installations. The main Paris-Madrid railway line and motorway pass S of Pasajes Ancho.

9.18

1 **Port limits:** reported (1987) to be a line drawn from Punta del Arando Grande (43°20′·2 N′1°55′·6W) (9.31) to Punta del Arando Chico (1 cable W).

9.19

1 **Traffic.** In 2003 the port was used by 1714 vessels totalling 8 459 606 dwt.

9.20

1 **Port Authority:** Autoridad Portuaria de Pasajes, Recinto portuario s/n, 20110 Pasaia. The Harbour Master has his offices at the NW end of Muelle Buenavista (9.37).

Website: www.puertopasajes.net

Limiting conditions

9.21

1 **Controlling depths:**

Entrance channel: project depth 10 m, minimum navigable width 70 m.

Harbour: as shown on the chart.

Deepest berths: at Muelle Buenavista (9.37).

Tidal levels. See information in *Admiralty Tide Tables.* Meam spring range about 3·7 m; mean neap range about 1·5 m.

2 **Maximum size of vessels permitted entry:**

Length: 185 m LOA, but vessels more than 175 m LOA are only allowed entry in exceptional circumstances and must obtain special permission from the Port Authority.

Draught: 8·84 m but vessels of this draught must be trimmed at least 0·31 m by the stern.

3 **Weather.** In bad weather the area between Las Banchas (43°20′·3N, 1°55′·7W) and Senocozulúa (3 cables SSE) becomes hazardous and the port is closed to shipping.

Arrival information

9.22

1 **Port radio:** see *Admiralty List of Radio Signals Volume 6(2)* for details.

ETA should be sent to the Ship's Agent 24 hours in advance.

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Cabo de la Plata



Arando Grande *Bancha del Este Beacon* *Bancha del Oeste Beacon*

Entrance to Pasajes from NE (9.15)
(Original dated prior to 1997)

(Photograph – Autoridad Portuaria de Pasajes)

Pilots and tugs

9.23

1 **Compulsory pilotage:** for all vessels of 500 gt and over except those exempt by law. Request for pilot should be made 24 hours before arrival.

Availability of Pilots: 24 hour service, see *Admiralty List of Radio Signals Volume 6(2)* for further details.

2 **Boarding place:** 1 mile NNW of harbour entrance, in the vicinity of a light-buoy (pillar, safe water), as shown on the chart; in bad weather as instructed by radio.

Pilot boat: grey hull, orange superstructure with white letter 'P' on both sides.

Tugs: compulsory for berthing of vessels more than 80 m in length; ships provide lines.

Regulations

9.24

1 **Time of entry** is restricted to the times given below for vessels of the length and/or draught indicated:

Dimensions	*Interval from HW*
Length 130 m or less but draught more than 7·62 m	–0400 to +0200
Length 130–140 m	–0300 to –0100 day or night
Length more than 140 m	–0300 to –0100 by day only.

2 **Maximum length** of vessels berthing in the E basin (9.38): 160 m.

Dredged channel. Vessels are not permitted to enter the dredged channel (43°19′·9N, 1°55′·4W) if it is being used by a ship proceeding in the opposite direction. Entry to the channel is controlled by traffic signals (9.27).

Harbour

General layout

9.25

1 The principal basin extends about 8 cables E from the inner end of the entrance channel. Cargo handling berths line the S side and the E end of the N side of the basin. Tankers berth at Muelles Capuchinos and Petroleos, the E-most berths on the S side. There are Ro-Ro terminals at Muelle Avanzado Molinao (centre of S side) and Muelle Lezo–3 (E corner of basin, S of Muelle Lezo–2).

The principal shipyard occupies the centre of the N side of the basin: the berths NW of the shipyard cater for fishing vessels and front two fish processing plants.

9.26

1 **Dársena de Herrera,** the W basin, provides berths for fishing vessels on its N side and for coastal trading vessels on its S side.

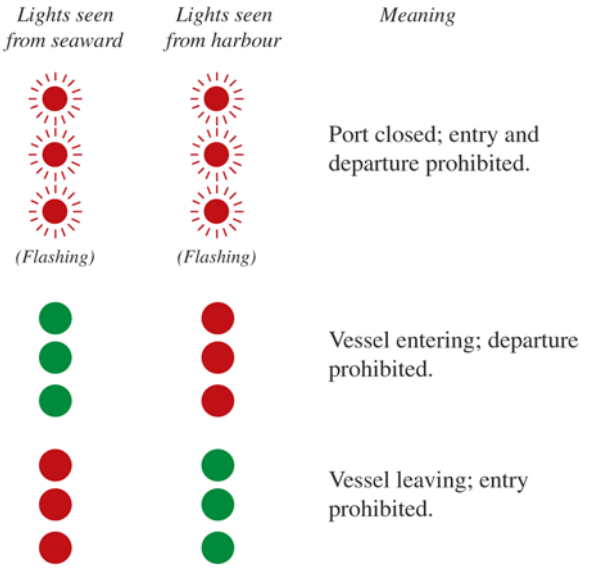
Traffic signals

9.27

1 Port traffic signals (Diagram 9.27) are exhibited from two metal towers, one standing close to Atalaya de Pasajes (43°20′·2N, 1°55′·4W) (9.29) the other close to a house

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(50 m E) farther up the slope, visible respectively from outside and inside the entrance and shown day and night.



Traffic Signals (9.27)

Natural conditions

9.28

1 **Prevailing winds:** N in spring and summer; SW to NW in autumn and winter.

Flow. Under normal circumstances the tidal streams are not very strong. At springs, especially when the flow is increased by freshets or by external currents caused by gales, the tidal stream may affect shiphandling in the narrow parts of the channel and the harbour: particular care is necessary during the out-going tidal stream in winter when the river is in spate.

2 **Fog.** The port is closed if there is thick fog which occurs around dawn on some days in spring and autumn.

Principal marks

9.29

1 **Landmarks.** The V-shaped cleft in the range of coastal mountains, formed by the entrance to Pasajes, is visible only from N or NNW; from other directions the entrance can be identified by the following landmarks:

2 Cabo de La Plata Lighthouse (white castellated building; 13 m in height) (43°20′N, 1°56′W) standing near the summit of Frontón La Plata, a prominent dark slaty bluff 148 m high; only the lantern is visible from N and E as the building is obscured by the summit.

3 Atalaya de Pasajes (white building with tiled roof) (4 cables E of Cabo La Plata Light) the signal station and pilot's lookout that stands at an elevation of 90 m on the bluff whose W end is called El Fraile because it looks like a monk's hooded cloak.

4 **Major light:**

Cabo de La Plata Light—as above.

Senocozulúa Leading Lights (9.31).

Other aids to navigation

9.30

1 **Racons:**

Atalaya de Pasajes (43°20′·2N, 1°55′·4W) (9.29)

Senocozulúa Direction Light (43°21′·0N, 1°55′·5W) (9.31)

For further details see *Admiralty List of Radio Signals Volume 2*.

Directions

(continued from 9.12)

Approach

9.31

1 **Initial position** 43°21′N, 1°56′W, about 1 mile NNW of the entrance in the vicinity of a light-buoy (safe water).

Senocozulúa Direction and Leading Lights:

Front Direction (white tower and building, 7 m in height) (43°21′·0N, 1°55′·5W).

Middle (white masonry tower 5 m in height) (about 30 m SSE of direction light).

Rear (white masonry tower 5 m in height (40 m SSE of front light).

The white sector (154½°–157°) of Senocozulúa Direction Light leads SSE into and through the outermost section of the charted fairway, passing (positions given from direction light):

2 ENE of Bancha del Oeste (4 cables NNW), a detached underwater reef on which the sea breaks, which is covered by the green sector. The E end of the bank is marked by a light-beacon (starboard hand). Thence:

WSW of Bancha del Este (3 cables N), a similar reef which is covered by the red sector. The W end of the bank is marked by a light-beacon (port hand). Thence:

3 ENE of Punta del Arando Chico (3 cables NW), a rocky spit extending about 70 m E from Frontón La Plata (9.29), that partially covers at HW, thence:

WSW of Punta del Arando Grande (2½ cables NNW), a group of rocks that have been joined together with masonry and look like an artificial breakwater, which extends 100 m W from the foot of El Fraile. Arando Grande Light (white masonry tower, red bands; 8 m in height) stands on the outermost rock.

4 The alignment (154¾°) of all three lights in line indicates the WSW edge of the charted fairway and passes about 20 m ENE of the 10 m depth contour enclosing Bancha del Oeste, which is steep-to on that side.

9.32

1 **Alternative leading marks.** At dawn or with low-lying mist the following alignment of higher and more distant marks leading to the entrance of the fairway is more visible:

Front: V in the nearer skyline formed by the slope of the hill on which stand Senocozulúa Lights (43°20′·0N, 1°55′·5W) (9.31) and a hummock on its N side.

Rear: Teta de San Marcos (uncharted) a nipple-shaped summit.

9.33

1 **Caution.** With a heavy sea from W vessels tend to take a sheer to starboard when their bows pass between the entrance points. The turn to port that is necessary to follow the channel is facilitated by favouring the W side of the fairway.

Dredged channel

9.34

1 The dredged channel, shown on the chart, then continues SSE, passing (positions given from Senocozulúa Direction Light):

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Close WSW of the 5 m depth contour which lies up to 80 m offshore between the entrance point (2½ cables N) and Ensenada de Cala Bursa, a shallow inlet 2 cables farther SE, and:

2 ENE of Dique de Senocozulúa, a breakwater with a light (white tower, green bands; 7 m in height) (1 cable NNE) on its head, and of Punta de las Cruces, the point from which it extends 60 m N, marked by a light (green and white post, 6 m in height) (½ cable E).

3 **Caution.** When a heavy sea is running in the entrance, the backwash from Dique de Senocozulúa affects steering. The best time to enter is the last quarter of the in-going tidal stream when the sea is less steep and the stream is weaker.

9.35

1 The track then continues SSE through the narrowest part of the pass, passing (positions given from Senocozulúa Direction Light):

WSW of the point surmounted by the ruins of Castillo de Santa Isabel and marked by a light (red and white metal tower; 8 m in height) (2 cables SE) of the same name, and:

ENE of several slipways in Cala Condemasti (1½ cables SSE), thence:

2 ENE of Punta Calparra marked by a light (green and white metal tower on hut 7 m in height) (2½ cables SE), and:

WSW of Punta del Mirador marked by a light (stone arch 7 m in height) (3 cables SE), thence:

ENE of Punta de la Torre, an angle in the seawall at the N end of Muelle San Pedro (quay), marked by a light (white post 7 m in height) (4 cables SSE).

3 The channel then turns S into the harbour passing W of Pasajes de San Juan where the buildings line the seafront.

After passing Castillo de Santa Isabel the sea is always calm no matter how bad the weather may be at sea.

9.36

1 **Useful marks** (positions given from Senocozulúa Direction Light):

Bancha del Oeste Light-beacon (green metal tower 16 m in height) (4 cables NNW).

Bancha del Este Light-beacon (red metal tower 16 m in height) (3 cables N).

Punta Teodoro Arroca Light (red and white metal tower, 9 m in height) (1½ cables E).

Ermita de Santa Ana Light (bracket on masonry hut) (4¾ cables SE).

Basins and berths

Central basin

9.37

1 The commercial berths are situated on the S side of the central basin.

Muelle Buenavista 1, the W-most quay, is the longest and deepest quay in the harbour with a length of 616 m and a depth alongside of 12 m.

2 **Muelle Buenavista 2,** the next berth E, is the largest Ro-Ro berth: length 145 m; depth 10 m.

Muelles Buenavista



Muelle Capuchinos *Meuelle Petroleos* *Muelle Lezo 3* *Muelle Lezo 2*

Pasajes berths from E (9.37)

(Photograph – Autoridad Portuaria de Pasajes)

(Original dated prior to 1997)

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Muelles Molinao and Capuchinos, the E-most quays have depths alongside of 10 m: they are equipped to handle general and solid bulk cargoes and Muelle Capuchinos also handles bulk liquids.

Eastern basin

9.38

1 **Muelle Lezo–3,** a Ro-Ro berth equipped with a linkspan, is situated on the SE corner of the E basin. Dimensions: length 151 m, depth 10 m.

Muelles Lezo–1 and Lezo–2, in the NE corner of the basin are both dredged to 10 m. Muelle Iberduero, the W end of the quay on the N side, serves the power station standing N.

Dársena Herrera

9.39

1 **Muelle Reloj,** the E-most quay on the S side of the W basin, has a depth of 5 m alongside and is the deepest cargo berth in the basin.

Port services

Repairs

9.40

1 **Shipyards.** Two shipyards carry out repairs of all kinds.

Floating docks. There are two floating docks, dimensions of the larger are: internal length 84·3 m, internal breadth 24·5 m, depth on blocks 6·3 m, lift 4200 tonnes.

Slips. There are six building and repair slips. Dimensions of the largest, situated at Pasajes de San Pedro are: length 142 m, width 12·5 m, depth at extremity 4·3 m; lifting capacity 1200 tonnes.

Divers: available.

Other facilities

9.41

1 **Deratting:** deratting and exemption certificates issued.

Hospital located at Pasajes.

Oily waste reception facilities available.

Supplies

9.42

1 **Fuel:** fuel oil and marine diesel supplied by pipeline at Muelles Petroleos, Capuchinos and Molinao, by road tanker at other berths.

Fresh water hydrants at all berths.

Provisions of all kinds are available.

Small craft

9.43

1 **Anchorages** for small craft are situated (positions given from Senocozulúa Direction Light):

In Ensenada de Cala Bursa (1½ cables NE) in fair weather only.

NNW of Punta de la Torre (4 cables SSE) (9.35) outside local small craft moorings; subject to wash from passing vessels.

Off Pasajes de San Juan (5 cables SE) (9.17) outside local small craft moorings.

PASAJES TO PUNTA MARIANTÓN

General information

Charts 1181 plan of approaches to San Sebastián and Pasajes, 1102

Route

9.44

1 The coastal route from Pasajes approaches (43°21′N, 1°56′W) to the vicinity of Punta Mariantón (43°19′N, 2°15′W) leads about 15 miles W.

Topography

9.45

1 From Frontón La Plata (46°20′N, 1°56′W) (9.29) to Punta Mompás (2 miles W) the coast is high, rugged and fronts the N slopes of Monte Ulía. Thence to Punta Arabicobaja (1¾ miles farther WSW) the coast is indented by Ensenada de la Zurriola and by La Concha de San Sebastián, two bays on whose shores stands the city of San Sebastián and its suburbs separated by Monte Urgull (9.51) a prominent landmark. Isla de Santa Clara (43°19′N, 2°00′W) lies in the entrance to La Concha de San Sebastián.

9.46

1 From Punta Arabicobaja (43°19′·5N, 2°00′·5W), the NE slope of Monte Igueldo (9.51), to Punta Anarri (5½ miles WSW) the coastland rises steeply to the ridge of the Sierra de Igueldo range. The coastline to Punta de la Galea (1½ miles WSW of Punta Arabicobaja), a dark coloured point, and thence to Punta Tierra-Blanca (1 mile farther WSW) is generally low; the latter point is 30 to 40 m high with white patches on it. Thence to Punta Anarri the rugged coast consists of slanting slate strata that when wet reflect the sun's rays and appear as large white patches. The village of Igueldo stands at an elevation of nearly 300 m midway between Monte Igueldo and Mendizorrotz summit (43°18′N, 2°04′W) (9.51).

9.47

1 From Punta Anarri (43°18′N, 2°07′E) to Punta Mariantón (6 miles W) the coastline is generally steep and rocky except where it is broken by (positions given from Punta Anarri):

Ría de Orio entrance (4 cables W) (9.67) which has a small sandy beach on its E side.

2 Playa de Zarauz a white sandy beach extending from the vicinity of Isla Malla-arriá (1 mile W) to Punta de Allé (2½ miles W) and backed by the prominent buildings of the holiday resort of Zarauz.

Ría de Zumaya entrance (5½ miles W) (9.81).

9.48

1 Isla de San Antón (43°19′N, 2°12′W), with Guetaria Lighthouse (9.51) on its lower N summit and a ruined castle on its higher S summit, is very distinctive from E and W and looks like a toy mouse; from N it appears conical and is less visible as it tends to merge with the higher ground farther S.

Rescue

9.49

1 **Lifeboat** (1.78): stationed at San Sebastián (43°19′N, 1°59′W) (9.54).

Flow

9.50

1 **Tidal streams** off the entrance to San Sebastián Harbour (43°20′N, 2°00′W) set E when the tide is rising and W when it is falling.

Current: described at 9.7.

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Principal marks

9.51

1 **Landmarks:**

Monte Urgull, a dark slaty promontory. On its summit (43°19′·5N, 1°59′·2W) a large statue of Christ, illuminated by night, on its N slope a white watch house, around its base the supporting wall of the cornice road are all prominent.

2 Igueldo or San Sebastián Lighthouse (white round tower on N face of house, 13 m in height) (1 mile W of Monte Urgull summit) on the N slope of Monte Igueldo: the former lighthouse now a belvedere (white tower 18 m in height) (1 cable SSE) standing on the summit close W of a large hotel is also conspicuous.

3 Mendizorrotz (43°18′N, 2°04′W), the sugarloaf shaped peak of Sierra de Igueldo (9.46), with a ruined fort on its summit.

Guetaria Lighthouse (white 8-sided tower, attached to W face of house, 14 m in height) (43°19′N, 2°12′W) standing on Isla de San Antón (9.48).

4 **Major lights:**

Cabo Higuer Light (43°24′N, 1°47′W) (8.255).

Igueldo or San Sebastián Light—as above.

Guetaria Light—as above.

Directions

(continued from 9.12)

9.52

1 **Initial position** NNW of the entrance to Pasajes (43°19′N, 1°55′W) (9.15), at least 1 mile offshore.

The coastal route leads 14 miles W, passing:

Clear of a light-buoy (special) (43°21′·0N, 1°57′·2W), marking the end of a submarine outfall, thence:

2 N of Bajo Pekachillá (43°20′·5N, 1°58′·0W), an unmarked underwater reef over which the sea breaks when there is a swell, that lies 3 cables WNW of Punta Atalayero a high sheer point, noting the ODAS buoy (1.25) moored 5½ cables WNW of Punta Atalayero, thence:

3 N of Punta Mompás (43°20′N, 1°58′W) 40 m high, which may be identified by a ruined tower (3 cables ESE) and a distinctive red house (uncharted) farther E standing on the slope of Monte Ulía, thence:

N of the 8·8 m rocky patch (43°19′·8N, 1°59′·7W) lying 2½ cables NW of Punta Calabaca, the NW point of Monte Urgull (9.51), thence:

4 N of the 6·7 m rocky patch (43°19′·8N, 2°00′·5W) lying 2½ cables N of Punta Arabicobaja, the NE point of Monte Igueldo (9.51), thence:

N of Isla Malla-arria (43°18′N, 2°09′W), 12 m high, the outermost and highest of a chain of islets extending 2 cables NNW from Punta Talaysarra, the point at the W end of the cliffs on the N side of Monte Amesti (9.67). A light-buoy (special; uncharted) marking an outfall is moored 3 cables N of the islet. Thence:

N of the 4·8 m rocky patch (43°19′N, 2°12′W) lying 2 cables N of Isla de San Antón Lighthouse (9.51).

9.53

1 **Useful marks:**

Radio mast (90 m in height; 6 fixed red lights) (43°20′N, 1°57′W) standing on the summit of Monte Ulía (9.45).

Isla de Santa Clara Lighthouse (white round tower 10 m in height on N face of house) (43°19′N, 2°00′W) near the summit of Isla de Santa Clara (51 m high).

2 Zumaya Lighthouse (blue cupola on white 8-sided tower, 12 m height, and dwelling) (43°18′N, 2°15′W) standing on Atalaya Baja, a flat-topped islet with steep sides, situated at the foot of the E slope of Atalaya Alta, also called Monte de San Telmo, which rises to an elevation of 82 m at its W end (3 cables W of the light) and whose N face forms a prominent rugged bluff terminating at Punta Mariantón.

(Directions continue at 9.97)

San Sebastián and approaches

Chart 1181 plan of San Sebastián

General information

9.54

1 **Description.** San Sebastián (43°19′N, 1°59′W) an elegant and cosmopolitan city, population 178 500 (1995), is a provincial capital (1.91) and a major tourist resort. The harbour is primarily a fishing port with a basin and facilities for pleasure craft.

2 The city stands on the shores of La Concha de San Sebastián, a bay shaped as its name implies like a sea shell, sheltered by Monte Urgull and Monte Igueldo on the E and W sides respectively of its entrance and by Isla de Santa Clara lying midway between the two mountains. The old part of the city is built on the low flat sandy strip of land lying SE of Monte Urgull between the bay and Río Urumea, the river flowing into the SW corner of Ensenada de la Zurriola.

3 La Concha is entered E of Isla de Santa Clara. Dársena de la Concha, the artificial port, lies at the NE corner of the bay.

Limiting conditions

9.55

1 **Tidal levels.** See information in *Admiralty Tide Tables.* Meam spring range about 3·6 m; mean neap range about 1·5 m.

Abnormal water levels. Strong winds between SW and NW raise the water level 0·4 to 0·5 m; those between NE and SE lower it by the same amount.

2 **Maximum size of vessels admitted** to Dársena de la Concha, in exceptionally favourable wind and sea conditions: length 60 m; beam 9 m; draught 3·3 m.

Stormy weather from W to N in winter makes entry to Dársena de la Concha and also anchorage and securing to the buoys in La Concha unsafe.

Arrival information

9.56

1 **Outer anchorage,** in fair weather: in the position (43°20′·0N, 2°00′·1W) shown on the chart, in depths of 35 to 40 m, sandy bottom. Vessels may also anchor opposite Playa de Zurriola (43°19′·6N, 1°58′·5W) in 5 to 10 m, bottom sand. This anchorage is well protected from E winds.

Regulations. Foreign vessels are required to make use of the mooring service and boat when entering Dársena de la Concha, also when securing to the mooring buoys in La Concha.

Natural conditions

9.57

1 **Strong winds** from W through N to E result in a heavy swell entering La Concha which causes an undertow that

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removes the sand from the seabed and renders the anchorage untenable.

Tidal streams in La Concha are scarcely perceptible.

Climatic table: see 1.156 and 1.166.

Directions

9.58

1 **Caution.** Approaching from NE, those without local knowledge may mistake Monte Urgull for Isla de Santa Clara which does not stand out clearly from this direction. This error has led to many vessels being wrecked at the entrance to Río Urumea (9.54) in the belief that they were entering La Concha.

Unless there is no alternative, entry should not be attempted in very rough weather when a continuous line of breakers forms across the whole entrance N of La Bancha.

9.59

1 **Initial position** 43°21′N, 2°00′W. Approaching La Concha de San Sebastián, the line of bearing 180° of Isla de Santa Clara Light (43°19′·4N, 1°59′·8W) (9.53) leads to a position 3¾ cables N of the light, where Igueldo Light (9.51) bears 238°, passing (positions given from Isla de Santa Clara Light):

W of the 8·8 m patch (5 cables NNE) (9.52).

9.60

1 **Leading lights:**

Front light (grey post, 5 m in height) (43°19′·0N, 1°59′·4W).

Rear light (similar structure, 9 m in height) (25 m SSE of front light).

2 The alignment (158°) of these lights which stand on the promenade on the S side of La Concha about 25 m W of a prominent house painted yellow with red stripes, and have been reported (1984) to be difficult to distinguish by day and also at night due to numerous street and beach lights, then leads SSE into La Concha, passing (positions given from front light):

3 ENE of La Bancha (8 cables NNW), a detached rocky shoal on which the sea breaks when there is a swell, thence:

WSW of the awash rocks lying up to ½ cable NW of Punta Martinacosulúa (6 cables NNW), and:

WSW of Punta Arrocazabala (5 cables NNW), the SW point of Monte Urgull, and:

ENE of Isla de Santa Clara (5 cables NW) (9.45).

Then, from a position where Isla de Santa Clara Light (9.53) and Igueldo Light (5 cables W) (9.51) are in alignment (274°), proceed as required to berth.

9.61

1 **Clearing bearing.** The alignment (about 137°) of Punta Arrocazabala (9.60) with the towers and cross of Convento de San Bartolomé (6½ cables SE) passes about ½ cable NE of the 10 m depth contour enclosing La Bancha.

Useful mark:

Buen Pastor Church (prominent spire 83 m in height) (43°19′·1N, 1°58′·8W).

Basins and berths

9.62

1 **La Concha.** Six mooring buoys are laid SE of Isla de Santa Clara: vessels secure head and stern to them, bows NNW, using chain cables or lines as advised by the mooring service.

9.63

1 **Dàrsena de La Concha** is formed by two outer moles with light-beacons (columns 5 m in height) on their heads and a narrow entrance between. It is divided by a jetty into a fore-port and two tidal basins, the SE-most used by pleasure craft.

Port services

9.64

1 **Repairs** to hulls and machinery carried out but it is preferable to have them undertaken at Pasajes (9.40). Patent slips for vessels up to 60 tonnes.

Other facilities: deratting and deratting exemption certificates issued; hospital.

Supplies: marine diesel fuel; fresh water; provisions in plenty.

Small craft

9.65

1 **Río Urumea,** entered over a bar at the SW corner of Ensenada de la Zurriola (43°19′·6N, 1°58′·8W), is navigable at HW by barges and launches as far as Astigarraga a village nine bridges and about 3 miles upstream. During the winter the river is often in spate.

9.66

1 **La Concha.** Moorings for pleasure craft are laid S of the W end of Isla de Santa Clara and S of Dársena de La Concha off the yacht club. The most sheltered anchorages are found in the vicinity of these moorings.

Ría de Orio

Chart 1102 (see 1.18)

General information

9.67

1 **Description.** Orio (43°17′N, 2°07′W), a small country town, lies on the E bank of Ría de Orio which is retained by two training walls at the entrance to the estuary. The W bank rises steeply to the summit of Monte Amesti (186 m high) (3 cables W of Ría de Orio entrance).

2 Ría de Orio is entered between the two training walls and is spanned by a cantilever bridge (5 cables S of the entrance; uncharted) carrying the main coastal road and by a low swing bridge at Orio. The estuary is frequented by fishing vessels and coasters.

Limiting conditions

9.68

1 **Controlling depth** in the fairway as far as Orio: 0·1 m.

Vertical clearance beneath cantilever bridge (9.67): 17·5 m.

Breakers form on the bar if there is any swell from between NW and NE, especially at LW and during the out-going tidal stream.

Arrival information

9.69

1 **Pilotage:** provided by skippers of local fishing vessels.

Local knowledge is essential.

Directions

9.70

1 **Initial position:** 43°17′·8N, 2°07′·7W.

Entering Ría de Orio the channel leads SSW, passing:

SE of the head of the W training wall (9.67).

The fairway then leads S and SSE, passing:

ENE of the cliffs on the WSW side of the entrance marked by Cruz de la Barra (prominent white stone cross elevation 10 m), and:

2 WSW of the head of Dique de Abrigo, the E training wall, marked by a light-beacon (grey cylindrical tower, 8 m in height) (1 cable E of Cruz de la Barra), and:

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ENE of three short training walls built at right angles to the W bank, thence:

WSW of a light-beacon (red rectangular post) standing 500 m SSE of the head of Dique de Abrigo.

9.71

1 After rounding Punta de la Barra (43°17′·1N, 2°07′·8W) the fairway leads SW towards the W bank, passing:

Close SE of a light-beacon (green post 8 m in height) (4 cables SSE of Cruz de la Barra) marking the head of a rocky spit, thence:

Beneath the centre span of the cantilever bridge (9.67) NW of the piers exhibiting red lights.

2 The fairway then continues S, passing:

Close to the W bank, marked by three light-beacons (green rectangular masts), standing at intervals of about 200 m.

From the vicinity of the N end of Muelle de Aizpurua (9.72), marked by a light-beacon (green rectangular mast) (9 cables S of Cruz de la Barra), the fairway turns E and leads in mid-river to the centre of the swing bridge at Orio.

Berths

9.72

1 **Anchorage,** depth 3 m mud, and moorings have been reported (2000) to lie in midstream below the swing bridge at Orio.

Quays:

Muelle de Aizpurua, length 100 m, on the SW bank (9 cables S of Cruz de la Barra) where the river turns E, used to extract sand.

At Orio (N bank, 1 cable W of swing bridge), length 269 m in total, depth alongside 1 to 2 m.

Port services

9.73

1 **Repairs:** slip for craft up to 150 tonnes.

Supplies: marine diesel fuel from pump on quay at Orio; fresh water; provisions.

Guetaria

Chart 1171 plan of Puerto de Guetaria

General information

9.74

1 **Puerto de Guetaria** (43°18′N, 2°12′W), an artificial fishing port and marina, also provides shelter for small vessels awaiting the tide or good weather to enter other minor ports in the vicinity.

2 **Villa de Guetaria** stands on the E slopes of Mendichu, a hillock at the SSW end of a reclaimed area that connects Isla de San Antón (9.48) with the mainland and forms the main quay of the inner harbour.

Guetaria is the birthplace of Juan Sebastian de Elcano the first man to circumnavigate the world (1519–22), his *Victoria* being the sole survivor of Magellan's fleet of five ships.

Limiting conditions

9.75

1 **Deepest berth:** 136 m of quayage with depths of 4 to 6 m alongside.

Tidal levels. See information in *Admiralty Tide Tables.* Meam spring range about 3·8 m; mean neap range about 1·8 m.

Arrival information

9.76

1 **Port radio:** see *Admiralty Maritime Communications* for details.

Outer anchorage: 1 cable E of N Breakwater head depth 13 m sand good holding.

Pilots. Local fishermen are prepared to act as pilots and their boats will assist ships to moor.

Directions

9.77

1 **Approaching** Guetaria from E or W, Isla de San Antón (9.48) is distinctive; from N the most outstanding feature is Playa de Zarauz (2 miles SE) (9.47).

Entrance to outer harbour is about 50 m wide and faces SSE. A shoal depth of 5·4 m exists close NE of the head of the S breakwater.

2 **Useful marks** (positions given from head of Dique de Abrigo Norte):

Puerto de Guetaria Dique de Abrigo Norte, the N breakwater, marked by a light (masonry tower 3 m in height) (43°18′·3N, 2°11′·8W) on its head and another light on its elbow (1 cable NNE).

3 Dique de Abrigo Sur Light (masonry tower) (¼ cable WSW), on the head of the S breakwater.

Light-beacons (concrete masts 5 m in height) on the head of Dique Norte and of Muelle Sur (1½ cables WNW) (9.79).

Church tower (2½ cables W).

Ermita de Santa Bárbara (43°17′·4N, 2°10′·9W), a chapel.

Basins and berths

9.78

1 **Outer basin.** The outer harbour is formed by Dique de Abrigo Norte and Dique de Abrigo Sur, a breakwater extending about 100 m SE from the spur on the SE side of Muelle Sur then about 175 m NE towards the head of Dique de Abrigo Norte. There are 12 mooring buoys for fishing vessels in the N part of the basin and a marina lies in the SW corner.

9.79

1 **Inner basin.** The inner harbour is entered between Dique Norte, the N mole of the old harbour, and Muelle Sur the former S mole whose N and E sides have been extended to form a berthing pier. It has been reported (1979) that there are depths of more than 4 m alongside the W side of Dique Norte and a little less than 4 m on the W side of Muelle Sur. The quays on the W side of the basin and the W side of Muelle Sur are usually occupied by fishing vessels which at times fill most of the S part of the inner basin. Yachts and fishing boats secure stern to the W side of Dique Norte.

Port services

9.80

1 **Repairs:** ramp at NW corner of inner basin.

Other facilities: ice factory; yacht club.

Supplies: marine diesel fuel; fresh water; provisions in limited quantities.

Ría de Zumaya

Chart 1102 (see 1.18)

General information

9.81

1 **Zumaya** (43°18′N, 2°15′W), a town of Roman origin, lies on the W bank of Ría de Zumaya. Five cement

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factories employ most of the workforce, the remainder being employed at the small shipyard or in fishing.

Puerto de Zumaya, situated at the junction of Río Larrondo and Río Urola in the SW corner of Ría de Zumaya, is entered 2½ cables NE of Zumaya Light (9.53) through a canalised section of the estuary. The harbour is used mainly by small coasters loading cement.

Limiting conditions

9.82

1 **Controlling depth:** 0·6 m in the channel. Parts of the channel dry at MLWS but depths frequently vary due to storms and freshets.

Deepest berth: Muelle Commercial (9.88).

Tidal levels at Guetaria (2 miles E): see 9.75.

Abnormal water levels. HW times may be advanced or retarded by 1 hour or more, especially at neaps, depending on the level of the rivers which are low in summer but subject to freshets in the rainy season.

Breakers form on the bar with the slightest swell.

Arrival information

9.83

1 **Waiting anchorages:**

When entry is impracticable due to rough seas, Guetaria anchorage (2 miles E) (9.76) is recommended.

In fair weather the best anchorage is 3 cables N of Zumaya Light (43°18′N, 2°15′W) (9.53), depth 13 m sand.

2 **Local knowledge** is essential for entry.

Harbour

9.84

1 **General layout.** Muelle Commercial (4 cables SW of Zumaya Light) (9.88), used by fishing vessels and yachts, lies at the S end of the W side of the estuary: Muelle de Santillana, its continuation S, is used by yachts. Muelle Urola on the S bank at the entrance to Río Urola handles cargo.

9.85

1 **Flow:** In-going weak; out-going may attain 2 kn and set towards Punta Izustarri (5 cables NE of harbour entrance).

Directions

9.86

1 From position 43°20′·0N, 2°14′·5W the track leads S to the vicinity of the harbour entrance, passing:

W of Punta Izustarri (6 cables NE of Zumaya Light) off which the sea breaks for a considerable distance owing to the area of rocky bottom that extends NW from the point.

9.87

1 **Entering harbour** the fairway leads 6 cables SW to the dredged area off Muelle Commercial (9.88), passing (positions given from Zumaya Light):

Close SE of the breakwater head (3 cables NE) marked by a light (masonry tower, 7 m in height), thence:

2 NW of the head of the training wall (2 cables NE) which is marked by a light (masonry tower 3 m in height), thence:

Between the seawall on the NW bank and the training wall lying parallel to and about 60 m apart from it: the deepest part of the channel normally lies on the NW side for about the first 400 m and then leads across to the SE side but is liable to change.

Berths

9.88

1 Muelle Commercial (S end of W side of estuary): length 210 m, dredged (1968) to a depth of 2·5 m alongside.

Muelle Urola (W end S side of estuary): length 127 m; has a charted depth of 0·3 m alongside.

Port services

9.89

1 **Repairs:** shipyard on the N bank of Río Urola close W of the cantilever bridge has five slips, the largest 73 m long 14 m wide has a lifting capacity of 800 tonnes but see 9.82 for maximum size of vessel handled by the port.

Supplies: marine diesel fuel; fresh water by hose at the quays; provisions.

Small craft

9.90

2 There is a marina on the E bank of the Río Urola, opposite Muelle Commercial (9.88).

PUNTA MARIANTÓN TO CABO DE SANTA CATALINA

General information

Chart 1102

Route

9.91

1 The coastal route from the vicinity of Punta Mariantón (43°19′N, 2°15′W) to that of Cabo de Santa Catalina (43°23′N, 2°30′W) leads about 12 miles WNW.

Topography

9.92

1 Between Punta Mariantón and Punta Aitzandi (3½ miles W) the coast consists of cliffs whose faces consist of diagonally tilted strata of white slate. The white vertical NE face of Punta Aitzchuri (43°18′N, 2°19′W), also called Peña Blanca, is outstanding and can be seen from a great distance.

9.93

1 Between the entrances to the harbours of Deva (43°18′N, 2°21′W) (9.99) and Ondárroa (3 miles WNW) (9.112) the smooth grey coastline sloping back at an angle of 45° is interrupted only by the entrance to Motrico harbour (1¼ miles WNW of Deva) (9.105). Thence to Punta Bastararría (43°22′N, 2°29′W) the coast is hilly, tree covered and unremarkable. The three harbours mentioned above and Lequeitio (S cables W of Punta Bastararría) (9.121) are each situated at the entrance of a valley facing NE and the tall buildings surrounding them are prominent from that direction.

Rescue

9.94

1 **Lifeboat:** stationed at Lequeitio (43°22′N, 2°30′W).

Principal marks

9.95

1 **Landmarks:**

Zumaya Lighthouse (43°18′N, 2°15′W) (9.53).

Monte Anduz (43°16′N, 2°19′W); from N appears conical, from E or W shows two well separated peaks the S and higher having a broad-backed summit.

Monte Arnó (43°16′N, 2°24′W).

Cabo de Santa Catalina Lighthouse (grey truncated conical tower on 8-sided base, 13 m in height)

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(43°23′N, 2°30′W) above which stands a hermitage on the summit of the promontory.

2 **Major lights:**

Guetaria Light (43°19′N, 2°12′W) (9.51).

Cabo de Santa Catalina Light—as above.

Other aids to navigation:

9.96

1 Racon; Ondarroa breakwater head Lighthouse (49°19′·5N, 2°24′·9W).

Directions

(continued from 9.53)

9.97

1 **Initial position** N of Punta Mariantón, the NW spur of Atalaya Alta (43°18′N, 2°15′W) (9.53).

The coastal route leads about 12 miles WNW, passing:

NNE of Punta Aitzchuri (43°18′N, 2°19′W) (9.92) which should be given a wide berth in bad weather when the irregular depths off this part of the coast cause heavy seas, thence:

2 NNE of Punta de Cardal (43°19′N, 2°23′W), the barren rocky N entrance point of Motrico Harbour (9.105), on which a prominent bungalow with a red roof stands. In fresh breezes the sea breaks heavily over a rocky bank that extends NNE from the point which should be given a berth of 3 or 4 miles in a NW gale. Thence:

3 NNE of Isla de San Nicolás (43°22′N, 2°29′W), 49 m high with a ruined battery on its summit, that is prominent from E being then silhouetted against the red-roofed houses of Lequeitio (9.121) but is indistinct from N, thence:

NNE of Cabo de Santa Catalina (43°23′N, 2°30′W) a steep sided promontory that projects NE from Monte Negro and terminates in bluff cliffs 44 m high on which Cabo de Santa Catalina Lighthouse (9.95) stands.

9.98

1 **Clearing bearing.** The line of bearing 290° of Cabo Ogoño (43°25′N, 2°39′W) (9.135), well open NNE of Cabo de Santa Catalina (6 miles ESE) clears NNE of the rocky bank extending NNE from Punta de Cardal.

Useful marks:

2 Monte de Santa Catalina (197 m high) (43°18′N, 2°20′W) with a prominent white chapel (5 m in height) on its summit and tree covered slopes, situated on the E side of Ensenada de Deva (9.99).

Ondárroa Breakwater Light (43°20′N, 2°25′W) (9.118), with Santa Clara Chapel, a radio station and a watch tower (three prominent white buildings) (3½ cables NW) at an elevation of 100 m on Punta de Santa Clara.

(Directions continue at 9.135)

Deva

Chart 1102 (see 1.18)

General information

9.99

1 **Description.** Deva (43°18′N, 2°21′W) stands on the flat ground at the rear of Ensenada de Deva, a small bay entered between Punta Aitzandi (9.92) and Punta Arrilabán (5 cables W), and on the E bank of Río Deva which flows into the SW corner of the bay. The sandy beach fronting the town is outstanding. A pool in Río Deva on the N side of the bridge, entered between training walls, forms the small and little used harbour.

Limiting conditions

9.100

1 **Controlling depth.** The bar within the entrance of the canalised mouth of Río Deva is unstable and mostly dries at LW; at HW it has depths over it of 3·8 m at springs and 2·5 m at neaps.

Tidal levels at Lequeitio (7 miles NW) are given at 9.122.

Rough weather makes the waiting anchorage untenable and entry impracticable.

Arrival information

9.101

1 **Outer anchorage** for vessels awaiting the tide to enter the river: about 4 cables N of the river entrance, depth 12 m sand.

Local knowledge is essential for entry.

Directions

9.102

1 **Initial position** 3 cables NNW of the river entrance.

Caution. Entering the bay, the breakwater extending 175 m E from Punta Arrilabán should be given a wide berth as it has been reported (1983) that its head has collapsed, covers and is unmarked.

2 **Ría Deva entrance,** 50 m wide between two parallel training walls, leads nearly 4 cables S to a position 1 cable N of the bridge where the river widens to about 100 m. It has been reported (1983) that the E training wall should be followed at a distance of 15 to 20 m until abreast the beach on the E side, thence a mid-channel track.

Berth

9.103

1 The pool N of the bridge has a diameter of about 75 m between the charted drying 0 m depth contours and a depth of about 3 m mud in the middle. The W-most section of the bridge can be raised. During freshets the out-going flow is reported to attain 8 kn.

Port services

9.104

1 There are no facilities or supplies provided specifically for vessels.

Motrico

General information

9.105

1 **Description.** Puerto de Motrico (43°18′N 2°23′W), a small artificial fishing port, lies at the head of a rocky inlet. The white houses of Motrico stand on the steep slopes at the rear of the port.

Limiting conditions

9.106

1 **Deepest berths.** In 1976 the main basin was dredged to 4 m but it has been reported (1983) that silting occurs.

Tidal levels at Lequeitio (6 miles NW) are given at 9.122.

Heavy seas off the entrance are prevalent in winter and render the harbour unsafe due to the resultant undertow and surging: it should be used only during the summer months.

Arrival information

9.107

1 **Anchorage** outside the entrance to the basin, in depths of 7 to 8 m muddy sand, is safe only in settled weather.

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Local knowledge is required to approach and enter the harbour.

Harbour layout

9.108

1 The main basin about 250 m long and 100 m wide is sheltered by two moles extending respectively ESE and NNW from the shores of the inlet leaving an entrance 23 m wide between their heads. A drying boat camber on the NW side of the main basin is formed by a mole extending NE from the W corner of the basin. Outside the main basin, on the NW side of the inlet, there is a wave basin formed by the mole and a breakwater extending 158 m ESE from the shore 150 m farther NNE. There is a swimming pool at its NNE end and a spending beach at its SSW end.

Directions

9.109

1 **Initial position** 43°19′N, 2°22′W, 2 cables N of Punta Alcolea, the SE entrance point of the inlet.

Leading lights (uncharted):

Front light (mast 6 m in height) on the head of Dique Sur, the mole on the SE side of the harbour entrance (4 cables W of Punta Alcolea).

2 Rear light (clock tower 15 m in height) (3 cables WSW of front light) at the NW corner of Ermita de San Miguel (large square red-roofed building standing at an elevation of 60 m), reported (1983) to be difficult to distinguish by day.

The alignment (236½°) of these lights leads WSW to the harbour entrance, passing (positions given from front light):

3 SSE of the 5 m depth contour enclosing the reef extending 1¾ cables E from Punta de Cardal (2 cables N) (9.97), thence:

SSE of the breakwater head (1 cable NNE) protecting the wave basin (9.108).

4 **Useful mark:**

Light (mast 6 m in height) (40 m NW of front leading light; uncharted) on the head of Malecón de Poniente, the mole on the NW side of the harbour entrance.

Berths

9.110

1 Eighteen mooring buoys for the use of local fishing vessels are attached to a network of chains laid on the bottom of the main basin.

A quay on the SE side of the main basin is used primarily by fishing vessels.

Port services

9.111

1 **Supplies:** marine diesel fuel and fresh water at quay; provisions.

Ondárroa

Chart 1171 plan of Puerto de Ondárroa

General information

9.112

1 **Puerto de Ondárroa,** an important fishing port, lies on the W side of a small shallow bay entered between Punta Saturrarán (43°19′·5N, 2°24′·6W) and the breakwater extending ENE from Punta Barracomuturra (3 cables WNW).

Villa de Ondárroa stands on the W bank of Río Artibay, also called Ondárroa or Ubilla, which flows into the sea through the outer harbour.

Limiting conditions

9.113

1 **Controlling depth:** 5·7 m in the fairway leading to the inner harbour.

Deepest berths: the outer harbour and the S part of the inner harbour have been dredged to 6·0 m

2 **Tidal levels** at Lequeitio (4 miles NW) are given at 9.123.

Breakers can occur on the bar if there is a swell but it is sheltered from NW, can always be crossed at HW and is usually passable when those at nearby ports are not.

Arrival information

9.114

1 **Local knowledge** is necessary as the fairway is very narrow and the bar shifts.

Harbour

9.115

1 **General layout.** The outer harbour is situated between the breakwater extending N from Punta Arrigorri (3½ cables WSW of Punta Saturrarán) and the breakwaters enclosing the inner harbour.

Dársena Eguidazu, the inner harbour, lies to the N and W of the inner harbour entrance and has quays on all sides. Reclaimation works are in progress (2002) in the W part. A basin lies to the W of the breakwater extending S from the inner harbour entrance.

9.116

1 **Flow** from the river is normally slight, but in winter freshets may affect vessels in the outer harbour.

Other aid to navigation

9.117

1 **Racon:**

Punta Barracomuturra breakwater head (43°19′·6N, 2°24′·9W) (9.112); for further details see *Admiralty List of Radio Signals Volume 2*.

Directions

9.118

1 **Initial position** close E of Punta Barracomuturra Breakwater head Light (green tripod 3 m in height).

Entry should be made after half-flood.

The fairway, for which the best guide is the chart, leads generally W, passing

2 S of Punta Barracomuturra breakwater, thence:

N of the head of the breakwater extending N from Punta Arrigorri, marked by a light (white tower, 5 m in height) (1¼ cables WSW of NE Breakwater head), thence:

Through the inner harbour entrance (about 40 m wide) between the heads of Muelle Norte and Muelle de la Cofradia (Sur), each marked by a light (tripod 6 m in height, and white metal mast, also 6 m in height).

Port services

9.119

1 **Repairs** of all kinds carried out. Five patent slips, the largest for vessels up to 600 tonnes.

Supplies: marine diesel fuel; fresh water; provisions.

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Ensenada de Saustán

Chart 1102

9.120

1 Ensenada de Saustán, the wide bay between Punta Isabalz (43°20′N, 2°26′W) and Punta Bastararría (3 miles NW), has a steep-to shore off which the bottom is level and soft.

Anchorage with good holding and well sheltered from winds between SE and WNW may be obtained:

Between Punta Isabalz and Punta Planchaganía (1¾ miles NW) in depths of 20 to 25 m, or:

NNW of Punta Mococoburúa (43°20′N, 2°27′W) 3 cables offshore in a depth of 18 m muddy sand.

Lequeitio

Chart 1171 plan of Puerto de Lequeitio

General information

9.121

1 **Puerto de Lequeitio** (43°22′N, 2°30′W) an artificial fishing port that handles a little commercial traffic, lies in the SW corner of a small shallow natural basin entered by a narrow channel W of Isla de San Nicolás.

Villa de Lequeitio stands on the S and W sides of the harbour.

Limiting conditions

9.122

1 **Controlling depths:**

4·0 m in the area of the artificial port, which was dredged in 1997.

Tidal levels. See information in *Admiralty Tide Tables.* Meam spring range about 3·6 m; mean neap range about 1·6 m.

Arrival information

9.123

1 **Outer anchorages.** Small vessels can anchor under the lee of Cabo de Santa Catalina (1 mile NNW of Lequeitio) (chart 1102) in a depth of 12 m sand. They can also anchor about 1½ cables E of the NE end of Isla de San Nicolás in about 12 m sand but this anchorage is not considered safe and should only be used temporarily.

Harbour

9.124

1 **General layout.** The artificial port is formed by Muelle del Tinglado and Muelle Sur, two moles with an entrance 35 m wide between their heads. There is about 270 m of quay with depths of 2·5 to 3·5 m alongside. The N part of the basin is used by small coasters and fishing vessels. The S part contains numerous moorings and berths for small craft.

2 The outer harbour, used as a temporary anchorage mainly by pleasure boats, is formed by Muelle Sur and the training wall that connects the S end of Isla de San Nicolás with the mainland SSW. The latter covers at HW but prevents Río de Lequeitio from silting the harbour.

9.125

1 **Natural conditions.** The in-going tidal stream is very weak; the out-going stream is stronger especially in the entrance channel. The outer harbour is somewhat exposed to N: although N winds do not prevent vessels entering, some swell enters and vessels with little under-keel clearance must seek shelter in the inner basin.

Directions

9.126

1 **Initial position** about 3 cables N of Isla de San Nicolás (9.97).

Leading marks. The alignment (about 202°) of the following marks leads SSW towards the entrance of the dredged channel:

Front: Rompeolas de Amandarri Light (grey conical masonry tower 5 m in height) (43°22′·1N, 2°29′·9W) standing on the head of the breakwater extending E from Punta Amandarri.

2 Rear: summit of Monte Calvario (3¾ cables SSW) a prominent conical hill surmounted by three crosses.

The track then leads SSW, passing:

About 3 m ESE of the head of Rompeolas de Amandarri, and:

3 WNW of Bajo de la Barra, the reef awash in places which extends ½ cable W from Punta Gaizparensaldiya the W point of Isla de San Nicolás.

Useful mark:

Ermita de San Juan (¾ cable WNW of Rompeolas de Amandarri Light), a chapel.

9.127

1 The track then leads through the dredged channel lying between Muelle del Tinglado, on the head of which stands a light (aluminium mast, 4 m in height), and Dique Aislado, a small detached breakwater surmounted by a light-beacon (grey conical masonry tower, 5 m in height) (½ cable E).

9.128

1 **Entering the inner harbour,** the head of Muelle del Tinglado should be rounded at a distance of about 3 m.

Useful mark:

Light (black metal mast 4 m in height) (¼ cable W of Muelle del Tinglado Light) on the head of Muelle Sur.

Port services

9.129

1 **Repairs** carried out by three small shipyards situated on Río de Lequeitio; patent slips for vessels up to 60 tonnes.

Supplies: marine diesel fuel; fresh water; provisions.

CABO DE SANTA CATALINA TO CABO MACHICHACO

General information

Chart 1102

Route

9.130

1 The coastal passage from the vicinity of Cabo de Santa Catalina (43°23′N, 2°30′W) to that of Cabo Machichaco (43°27′N, 2°45′W) leads about 12 miles WNW.

Topography

9.131

1 The coastland from Cabo de Santa Catalina to Cabo Machichaco is high and irregular, being indented with fissures and ravines: it terminates at the sea in cliffs, some of which are of a considerable height, fringed with rocks.

2 Monte Negro (43°22′N, 2°32′W) is a distinctive landmark. Farther W, Cabo Ogoño (43°25′N, 2°39′W) (9.135) and Isla de Izaro (1½ miles WNW) (9.135) together with Playa de Laga (6 cables SW) and Arenal de Laida (2 miles WSW), two outstanding sandy beaches, form an unmistakable group of features. Pico Burgoa, the summit of Monte Solluve (43°22′N, 2°46′W) is prominent.

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Offshore oil and gas field

9.132

1 An offshore oil and gas field lies N and E of Cabo Machichaco (43°27′N, 2°45′W). Gaviota production platform (3¾ miles NE) (9.134) is connected to the shore on the E side of the cape and to a well (8½ miles NW) by submarine pipelines.

Traffic regulations. Anchoring and trawling are prohibited within 500 m of Gaviota platform and within 250 m of the submarine pipelines connecting it with the shore and with the well. For further information see *The Mariners Handbook* and also the notes on the chart.

Rescue

9.133

1 **Lifeboat** (1.78): based at Bermeo (43°25′N, 2°43′W) (9.139).

Principal marks

9.134

1 **Landmarks:**

Cabo de Santa Catalina Lighthouse (43°23′N, 2°30′W) (9.95).

Cabo Machichaco Lighthouse (masonry tower and building, aluminium lantern; 20 m in height) (43°27′N, 2°45′W). The former lighthouse (¾ cables N) and a watch tower (4 cables S) standing respectively lower down and higher up the slope of Cabo Machichaco are prominent and help to identify the cape.

2 **Offshore mark:**

Gaviota Platform (43°30′N, 2°41′W); exhibits a light from each corner at an elevation of 25 m.

Major lights:

Cabo de Santa Catalina Light—as above.

Cabo Machichaco Light—as above.

Directions

(continued from 9.98)

9.135

1 **Initial position** N of Cabo de Santa Catalina (43°24′N, 2°30′W) (9.97).

The coastal route leads about 12 miles WNW, passing:

NNE of the reefs fringing Punta de Apical (43°24′N, 2°33′W) an inconspicuous rocky point identified by a house surrounded by conifer trees standing on its summit, and of Islote Cay-arri (4 cables W), a steep rocky islet. In rough weather heavy seas occur off the point and in Ensenada de Oguello, the bay E, due to the uneven rocky nature of the bottom. Thence:

2 NNE of Cabo Ogoño (43°25′N, 2°39′W), the bold vertical N extremity of a reddish coloured headland whose summit Monte Ogoño (302 m high) is surmounted by a watch tower, thence:

NNE of the rocks fringing Isla de Izaro (43°26′N, 2°41′W) on whose summit, at the SE end of the island, the ruins of a convent are visible amidst some vegetation, thence:

Either SSW or NNE of Gaviota production platform (43°30′N, 2°41′W) (9.134) at a distance of more than 500 m.

3 NNE of Cabo Machichaco (43°27′N, 2°45′W) that extends NNE from high ground, slopes gradually to the coast on its E side, is cliffy on its W side and terminates in three above water rocks. A ground swell often occurs over the rocky bottom off the cape which therefore should be passed at a distance of not less than 1 mile. And:

4 **Useful marks:**

Elanchove Dique Sur Light (43°24′N, 2°38′W) (9.138).

Rosape Light (43°25′N, 2°43′W) (9.144) at Puerto de Bermeo.

(Directions continue at 9.166)

Anchorages and small craft harbours

Ría de Ea

9.136

1 **General information.** The shore of Ensenada de Ea, the bay between Punta de Apical (43°24′N, 2°33′W) (9.135) and Punta Ermicho (1¾ miles W), is rocky except for a small sandy beach lying midway between the two points at the entrance to the narrow shallow Ría de Ea that leads 4 cables S through a ravine to Pueblo de Ea.

Limiting conditions. Local knowledge is necessary to enter Ría de Ea. The bar at its mouth dries and is passible only by small craft at HW in fair weather.

Berths. Local craft shelter under the lee of a mole inside the bar.

Chart 1171 plan of Fondeadero de Elanchove

Elanchove

9.137

1 **General information.** Puerto de Elanchove (43°24′N, 2°38′W), a small artificial fishing port, lies on the SE side of Cabo Ogoño (9.135) at the foot of Pueblo de Elanchove, whose houses are built on steeply rising ground and are outstanding from NE.

2 **Anchorage** may be obtained in winds between SW and NW in the position (3 cables NE of harbour entrance) shown on the plan, depth 15 to 20 m, sand. There is a mooring buoy, for the use of craft awaiting the tide to enter harbour, in the vicinity of the anchorage. Strong gusts descend from Monte Ogoño with W winds.

9.138

1 **Harbour** is formed by Dique Norte, a breakwater extending 120 m SE from the base of the cliffs of Cabo Ogoño with a light (green metal tripod 5 m in height) on its head, and by Dique Sur, a mole extending 180 m N from the shore with a light (red metal tripod 6 m in height) on its head. The entrance, width 12 m, depth 1·3 m, faces SE.

2 The outer basin has a depth of 2·5 m in the centre: the bottom shoals gradually towards the SE end of the basin which dries 0 m.

A small drying inner basin, the original port, is formed by two short moles. It is reported (1999) that this basin is disused and is being filled in.

3 **Berths** in outer basin: 145 m of alongside berths in depths of 1 m; the W side of Dique Sur has a projecting ledge that uncovers at MLWS; four pairs of mooring buoys used by fishing vessels.

Repairs: patent slip for vessels up to 60 tonnes.

Supplies: fresh water; provisions.

Puerto de Bermeo and approaches

Chart 1172 plan of Puerto de Bermeo and Mundaca

General information

9.139

1 **Puerto de Bermeo** (43°25′N, 2°43′W) is an important fishing port on which an expanding fleet is based.

Traffic. In 2003 the port was used by 222 vessels totalling 652 554 dwt.

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Bermeo from WSW (9.139)
(Original dated 1996)

(Photograph – Dirección de Puertos y Asuntos Maritimos del Gobierno Vasco)

Villa de Bermeo is built on low ground behind the harbour: blocks of flats, standing above and N of the town, and the breakwater are prominent when viewed from N.

The best approach is NW of Isla de Izaro (1½ miles ENE of the port) (9.135) as the passage S of the island is shallow and unmarked. The harbour lies in Ensenada de Arza.

Limiting conditions

9.140

1 **Deepest and longest berth:** Muelle de Ribera (9.147).

Tidal levels. See information in *Admiralty Tide Tables.* Meam spring range about 4·0 m; mean neap range about 2·1 m.

Maximum size of vessel handled: length 110 m.

Arrival information

9.141

1 **Port radio.** There is a port radio station, see *Admiralty List of Radio Signals Volume 6(2)* for details.

Outer anchorage: Six cables NNE of breakwater head, depth about 24 m sand.

2 **Pilots and Tugs.** Pilotage is compulsory for vessels over 90 m in length. There is a licensed pilot who also provides pilotage for Ría and Puerto de Mundaca (9.149). Tugs are compulsory for vessels over 100 m in length. If winds are stronger than Beaufort force 3 then vessels over 90 m in length must take a tug and vessels over 100 m without bow thruster two tugs.

Harbour

9.142

1 **General layout.** Puerto de Bermeo consists of: the Antepuerto or outer harbour; Dársena de Arza, the outer basin of the inner harbour; Puerto Viejo the innermost basin. Anchorage and moorings are available in the Antepuerto, moorings in Dársena de Arza. The principal alongside berths are at the quays in the Antepuerto and the Dársena de Arza.

Natural conditions

9.143

1 **Tidal streams.** In Ensenada de Arza the incoming tidal stream sets SE, the out-going tidal stream NNW.

Breakers and a ground swell occur in rough weather in the approaches NW and S of Isla de Izaro.

Directions

9.144

1 **North-eastern approach.** Initial position 43°26′N, 2°42′W, about 1 mile NE of Bermeo Breakwater head.

The white sector (204°–232°) of Rosape Light (white building) (43°25′·1N, 2°42′·7W) leads SW to the harbour entrance, passing (positions given from light):

2 NW of Isla de Izaro (1¼ miles ENE) (9.135). A rocky bank extends NW from the island; the latter should be given a berth of more than 1 mile in rough weather. Thence:

SE of the breakwater head (3 cables NNE) which is covered by the red sector of Rosape Light and marked by Dique Rompeolas Light (grey conical masonry tower 3 m in height).

9.145

1 **Eastern approach.** Initial position about 2 cables N of Cabo Ogoño (43°25′N, 2°39′W) (chart 1102) (9.135).

An inshore passage, dangerous in rough weather, leads about 3 miles W to the harbour entrance, passing:

Close N of Piedras Otzarri, also called Las Lobas (43°25′·0N, 2°40′·5W), a group of four rocks, three above-water and one drying, which are steep-to on their N side, thence:

2 S of the reef, partly above water, that extends 3 cables S from the SE end of Isla de Izaro to the S limit of the surrounding 5 m depth contour (1¾ cables NW of Otzarri), thence:

N of the rocky patches lying ½ cable off the bluff extending from Punta Bergua Mayor (43°25′N, 2°42′W) to Punta Lamiaren (4 cables WNW), and:

S of Bermeo Breakwater head (9.144).

9.146

1 **Entering Dársena de Arza** the fairway leads WSW through the middle of the outer harbour, passing (positions given from breakwater head):

2 NNW of the head of the inner breakwater extending NNW from Punta Lamiaren, marked by Contradique Light (red metal tripod 3 m in height) (1¼ cables SW), thence:

SSE of the head of El Martillo, a short mole extending SSE from the outer breakwater, marked by a light (green metal tripod 3 m in height) (2½ cables WSW), thence:

3 Between the head of Espigón Norte, marked by a light (green metal tower, 3 m in height) (4 cables WSW) and the NW corner of Muelle de Ribera, also marked by a light (red post, 3 m in height), on the N and S sides, respectively, of the 36 m wide entrance to Dársena de Arza.

Basins and berths

9.147

1 **Antepuerto** lies within Dique Rompeolas and Contradique, the outer and inner breakwaters.

Muelle de Ribera, the quay on the S side, extends 400 m E from the entrance of Dársena de Arza and has a depth of 5·5 m alongside. On the W side of the inner breakwater there is a quay 140 m long.

2 Three quays total length 160 m, backed by an ice factory, cold stores and repair shops, line the NW corner of the basin.

Ten mooring buoys are laid in the basin, four of them S of the outer and six W of the inner breakwater.

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3 **Dársena de Arza.** There are numerous patent slips on the W side of the basin; the remainder is quayed, depth alongside 3 m, and equipped to meet the needs of the fishing fleet. There are numerous moorings for the use of fishing vessels.

4 **Puerto Viejo.** The innermost basin, whose entrance on the N side of Dársena de Arza is 35 m wide, dries alongside the quays at LW and is used as a boat harbour.

Port services
9.148

1 **Repairs** of all kinds by shipyards that build fishing vessels and a company that manufactures diesel engines; numerous patent slips, several of the largest for vessels up to 250 tonnes.

Supplies: marine diesel fuel and fresh water at some quays; provisions.

Ría de Mundaca

Charts 1172, plan of Puerto de Bermeo and Mundaca, 1102

General information
9.149

1 **Description.** Ría de Mundaca, formerly of considerable importance but now obstructed by drying sandbanks, is entered between Punta de Santa Catalina (43°24′·7N, 2°41′·7W) and Punta Ansora (8 cables E): its approaches are the same as those of Puerto de Bermeo (9.139).

2 Puerto de Mundaca (2 cables S of Punta de Santa Catalina) (9.152) lies on the W side of the entrance just within the bar and is identified by the prominent church () standing 1 cable S of the harbour entrance. Thence the tortuous fairway leads to Murueta (3 miles SSE of Mundaca) where there is a shipyard that builds coasters up to 700 tonnes. Río Mundaca is navigable at HW by boats as far as Guernica (uncharted).

9.150

1 **Controlling depth** over the bar varies: in 1989 it was reported to be 0·8 m.

Pilotage is compulsory and provided by the Puerto de Bermeo Pilot (9.141).

Local knowledge is essential as the position of the channel through the bar varies, especially after NW gales.

2 **Tidal streams** are strong: at springs the out-going tidal stream attains a rate of 3 kn or more.

Tidal levels at Bermeo (1 mile NW of the entrance) are given at 9.140.

Breakers occur for a considerable distance outside the bar with N or S winds.

Directions
9.151

1 **Initial position** about 1 cable E of Punta de Santa Catalina, a rugged rocky point surmounted by a prominent hermitage.

The fairway leads SSW, passing (positions given from the hermitage):

Close ESE of Peñón de la Barra (1 cable ESE), an above-water rock that indicates the beginning of the entrance channel about 12 to 15 m wide, whose position and depth change, thence:

2 WNW of the extremity of Arenal de Laida, the drying sandbank that encumbers the remainder of the entrance of Ría de Mundaca, and:

Close ESE of a breakwater (1 cable SSE) at the N side of the entrance to Puerto de Mundaca.

Thence vessels must be guided by local knowledge.

Puerto de Mundaca
9.152

1 **General information.** Mundaca harbour (43°22′·N, 2°41′·8W), frequented by a few small coastal craft and local boats, is entered between the breakwater on the N side and a mole on the S side and mostly dries.

Berths. It has been reported (2000) that small craft can moor inside the entrance, depth 2 m sand, or dry out alongside the mole.

Repairs: patent slip for vessels up to 70 tonnes.

Supplies: marine diesel fuel supplied in cans; fresh water from tap near mole; provisions.

CABO MACHICHACO TO CABO AJO

GENERAL INFORMATION

Chart 1102

Topography
9.153

1 The general characteristics of the coastland between Cabo Machichaco (43°28′N, 2°45′W) and Cabo Ajo (43°31′N, 3°35′W), 36 miles W, are similar to those farther E and are described at 9.1. The spurs of the Cordillera Cantábrica range descend towards the coast in a series of peaks many of which appear as perfect cones when seen from NW. Individual summits which make useful distant landmarks when approaching from seaward include:

2 Monte Jata (43°24′N, 2°50′W) (9.164).

Monte Cerredo (43°23′·5N, 3°16′·5W) (9.223).

Monte Nuestra Señora de las Nieves (43°19′N, 3°21′W) on whose summit is a well defined knoll, named El Castro, surmounted by a chapel; it is not visible from inshore.

Outlying bank
9.154

1 **Heavy seas** are experienced over Bajo Castro Verde (43°33′N, 3°13′W) in bad weather, and breakers form over it in a S gale.

ODAS buoy
9.155

1 ODAS buoys are moored in positions 43°38′·0N, 3°02′·4W and 43°23′·9N, 3°07′·9W respectively.

Local weather
9.156

1 In summer N and NE breezes predominate; in Abra de Bilboa they back to N or NNW. These winds alternate with W to NW breezes that give way to offshore winds at night. Severe squalls may occur in the hot season, see 1.139 for details.

2 In autumn the regime changes: S winds, generally very strong, blow for 2 or 3 and sometimes as many as 9 days and bring good visibility; but as soon as they veer SSW

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the sky becomes overcast. This is followed by SW winds and thick weather, succeeded after some days by NW winds, heavy showers and rough seas, that may continue for weeks interrupted only by 2 or 3 days of good weather. During NW gales the wind force decreases as the coast is approached.

3 From mid-December to late February or early March periods of N or NNE winds of short duration bring cloud and continuous precipitation which obscures the shore. In spring more gentle rain-laden winds from S through W to N predominate and in some years continue until July.

Strong S winds may be intensified in coastal waters, see 1.136 for details.

Flow

9.157

1 **Currents.** In winter the currents set E or NE; they are weaker close to the coast than offshore where they may attain a rate of about 3 kn during W and NW gales. In summer the currents are less perceptible and predominantly set W or NW.

Tidal streams: described at 9.4.

CABO MACHICHACO TO PUNTA GALEA

General information

Charts 1102, 1174

Route

9.158

1 The coastal passage from the vicinity of Cabo Machichaco (43°28′N, 2°45′W) to that of Punta Galea (43°22′N, 3°02′W) leads about 8 miles W to the vicinity of Cabo Villano (43°26′N, 2°56′W) then 7 miles SW.

Topography

9.159

1 The coast between Cabo Machichaco and Punta Ustrikotsek (43°25′·4N, 2°57′·2W), the NE entrance point of Ría de Plencia (9.172), is generally high and cliffy, rising to a maximum elevation of 280 m at Monte Ermua, also called Monte Gorliz, about 7 cables E of Cabo Villano. Baquio village (3 miles WSW of Cabo Machichaco) stands on rising ground at the head of a small bay with a sandy beach; elsewhere the whole of the aforementioned stretch of coast is fringed with rocks lying up to 2 cables offshore.

9.160

1 Between Chicharropunti (43°25′N, 2°58′W), the SW entrance point of Ría de Plencia, and Punta Galea (4 miles SW) (9.168) the coast consists of mainly white cliffs. There are a number of small and foul indentations, with beaches at their heads, separated by promontories with an average height of 60 m fronted by rocks lying up to 3 cables offshore.

Heavy seas

9.161

1 When the wind is blowing onshore, rough steep seas are experienced inshore from Cabo Machichaco to Punta Galea and the whole of this stretch of coast should be given a wide berth, see 9.166 and 9.168 for further details.

Prohibited anchorage

9.162

1 Anchoring and trawling are prohibited, due to submarine cables, within the area shown on the charts that extends NNW from the coast between Punta Galea and a position 3 miles ENE to the 200 m depth contour.

Natural conditions

9.163

1 See 9.156 and 9.157 for information on local weather and flow.

Principal marks

9.164

1 **Landmarks:**

Cabo Machichaco Lighthouse (43°27′N, 2°45′W) (9.134).

Monte Jata (43°24′N, 2°50′W), known locally as Alto de Plencia, the highest point on this stretch of coastland, forms a good landmark when offshore.

2 **Major lights:**

Cabo Machichaco Light—as above.

Punta Galea Light (43°22′N, 3°02′W) (9.168).

Castillo de Santa Ana Light (43°23′N, 3°13′W) (9.233).

Gorliz Light (white tower, 21 m in height) (43°26′·1N, 2°56′·6W).

Other aid to navigational

9.165

1 **Racon:**

Dique de Punta Lucero Light (43°23′N, 3°05′W) (9.205), see *Admiralty List of Radio Signals Volume 2* for further details.

Directions

(continued from 9.135)

Cabo Machichaco to Cabo Villano

9.166

1 **Initial position** N of Cabo Machichaco (43°27′N, 2°45′W) (9.135) at least 1 mile offshore.

The coastal route leads about 8 miles W, passing (positions given from Cabo Machichaco):

N of Islote Villano (8 miles W), a low islet with a jagged outline, fringed with rocks.

Caution. Winds between NE and NW produce very steep seas inshore; in these conditions the coast should be given a berth of 2 or 3 miles.

9.167

1 **Useful marks** (positions given from Cabo Machichaco Light):

Isla Aqueche (1 mile W), a high steep-sided barren rock.

lsla de San Juan Gastelugache (1½ miles WSW), a similar islet with a hermitage on its flat summit, connected to the mainland by a bridge with two spans.

Puerto de Arminza Light (43°26′·2N, 2°54′·0W; uncharted) (9.170).

Cabo Villano to El Abra de Bilbao entrance

9.168

1 The coastal route continues SW for about 7 miles to the entrance to El Abra de Bilbao (43°23′N, 3°05′W), passing:

NW of Cabo Villano (5 cables SW of Islote Villano) a high precipitous headland that slopes to Punta de Ormenza its low and foul W extremity. Gorliz Light (9.164) is exhibited from near the extremity of the cape. Thence:

2 NW of Punta Galea (43°22′N, 3°02′W) a flat topped promontory about 75 m high with white cliffs. Standing on the point are Punta Galea Lighthouse (stone tower, with dwelling, grey cupola; 8 m in height), and a former lighthouse (tower, 7 m in

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height) (1 cable NNW) from which a fog signal is sounded. Thence:

3 NW of Dique de Punta Galea (9.205) that extends 2 miles WNW from Punta Galea. Several light-buoys (special), some of them wave recorders, are moored off the NNE side of the breakwater.

Caution. Rough steep seas occur off this stretch of coast when there is a swell from NW due to the shoaling uneven rocky bottom: in these conditions it should be given a wide berth.

9.169

1 **Useful marks:**

Dique de Punta Lucero Light (43°23′N, 3°05′W) (9.205).

Dique de Punta Galea Light (3 cables ENE) (9.205).

(Directions continue for Bilbao at 9.205, and for Punta Lucero to Cabo Ajo at 9.230)

Small craft

Chart 1102 (see 1.18)

Puerto de Arminza

9.170

1 **General information.** Puerto de Arminza (43°26′N, 2°54′W), a little artificial harbour that dries, occupies the SE corner of Ensenada de Arminza, the small rocky bay lying about 4 cables ESE of Punta Monte Grande de Arminza a high steep point. It is frequented only by local fishing boats. Arminza village lies on the S side of the harbour and is visible from N.

2 Local knowledge and good weather are necessary for entry. The harbour is approached from NE, passing SW of the rocky ledges extending 160 m NE from the W shore of the bay: it is entered close W of the breakwater that extends 150 m SW then 80 m NW from the E entrance point of the bay. A light-beacon (aluminium coloured metal tower 4 m in height; uncharted) stands on the breakwater head.

9.171

1 **Basins.** The outer basin is formed by a short spur extending S from the knuckle of the breakwater and a mole extending NW from the shore: the inner basin by another short spur extending S from the inner section of the breakwater.

Chart 1174

Ría de Plentzia

9.172

1 **General information.** Ría de Plentzia is entered between Chicharropunti (43°24′·9N, 2°57′·6W), a low rugged point also called Punta de Barrica, and Punta Ustrikotsek (4½ cables NNE), high and sheer, on which the ruins of Castillo de Gorliz can be seen.

2 Playa de Plentzia, a sandy beach clearly visible from NW, lines the head of the bay: an imposing and conspicuous childrens' sanatorium stands at the back of the N end of the beach and another smaller sanatorium stands on a spur 3 cables farther S that divides the beach into two sections.

The alignment of the head of a training wall (W side of entrance to Río de Plentzia, see 9.173) with the smaller sanatorium (white building) on approximately 127°, leads into the bay.

3 **Anchorage** may be obtained:

In the middle of the entrance to Ría de Plentzia, depth 10 m, sand, good holding; even with NW winds the sea seldom breaks.

Off the N end of Playa de Gorliz, E of Malecón de Astondo a breakwater that extends 80 m S from Punta Astondo, depth 2 m sand; several small craft moorings.

9.173

1 **Río de Plentzia** is entered over a drying bar at the SE corner of the bay, between a breakwater at the S end of Playa de Plentzia and a training wall that extends 300 m N from the coast across rocks to the little Islote de San Valentín. There is a light (green pillar, 10 m elevation) at the head of the training wall and another light (red pillar, 6 m elevation) at the head of the breakwater. The winding river, frequented by a few local fishing boats and yachts, is navigable as far as a bridge with nine arches about 5 cables S of the entrance: it has depths from 0·2 to 2 m in the fairway but is subject to silting. Plencia village stands on the E bank of the river.

2 **Berths:** A small drying basin used by fishing boats and small yachts lies on the E bank of the river about 2 cables N of the bridge. The best anchor berth has been reported (1983) to lie opposite the entrance to the basin.

Facilities: yacht club.

Supplies: provisions.

BILBAO

General information

Charts 1173, 1174

Position

9.174

1 **Puerto de Bilbao** occupies El Abra de Bilbao, the bay entered between Punta Galea (43°22′N, 3°02′W) (9.168) and Punta Lucero (3¼ miles W), and Ría de Bilbao, entered at the head of the bay. The latter is a continuation of Río Nervión and its banks are bordered with quays for a distance of about 7 miles.

Function

9.175

1 Puerto de Bilbao is a major commercial port, handling over 25 million tonnes of cargo per year. Principal imports are crude oil, iron ore, pyrites, scrap iron, coal and soya beans; principal exports petroleum, iron and steel products.

2 **Villa de Bilbao,** the provincial capital of Vizcaya, is a major industrial and commercial centre. The population of the city, which does not include the towns standing on the shores of the bay and the outer reaches of the river, was 371 000 in 1995.

Topography

9.176

1 **El Abra de Bilbao.** The outer part of the NE shore of the bay consists of white flat-topped cliffs fronted by foul ground. Algorta, Neguri and Las Arenas, smart mainly residential districts stand on the inner part of the same shore.

2 The steep-to SW shore is formed by the steeply sloping flanks of Monte Lucero and Monte de Serantes, two mountains separated by a deep valley at whose entrance lies the small fishing village and harbour of Ciérvana (43°21′N, 3°05′W). The industrial district of Santurtzi lies 2 miles SE at the head of the bay.

9.177

1 **Ría de Bilbao** is lined on both banks by industrial installations which include steel smelting plants and ship building and repair yards. On a clear night the glare from the blast furnaces may be seen from a distance of 60 miles or more. Villa de Bilbao (43°16′N, 2°56′W) lies on the SW bank at the head of the navigable section of the river.

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Port limits
9.178

1 The outer port limit has been reported (1983) to extend 2·3 miles N from Punta Galea Lighthouse (43°22′N, 3°02′W) (9.168); thence 3·3 miles W to position 43°24′·65N, 3°06′·60W; thence 2·65 miles S to Punta Lucero.

Approach and entry
9.179

1 El Abra de Bilbao is approached between Cabo Villano (43°26′N, 2°57′W) (9.168) and Punta del Rabanal (12 miles WSW) (9.230), and entered between the heads of two breakwaters (43°23′N, 3°05′W), Dique de Punta Galea and Dique de Punta Lucero.

Traffic
9.180

1 In 2003 the port was used by 3396 vessels totalling 50 299 483 dwt.

Port Authority
9.181

1 Autoridad Portuaria de Bilbao, Campo del Volantin 37, 48007 Bilbao. Head office is situated on the E bank of Ría de Bilbao above Puente de la Salvé (43°16′·3N, 2°55′·6W) (9.211); there are port offices at Canal de Deusto (9.217) and Muelle Reina Victoria Eugenia, Santurtzi (9.216).

Website: www.bilbaoport.es.

Limiting conditions

Controlling depths
9.182

1 **Santurtzi.** The chart is the best guide to depths in the Santurtzi Docks (43°20′N, 3°02′W).

Ría de Bilbao fairway is maintained at the following minimum depths by constant dredging (positions given by distance from the entrance):

8·0 m , from the entrance to the mouth of Río Galindo (1¾ miles), thence:

2 6·0 m to the mouth of Río Cadagua (2¾ miles), thence:

4·5 m to Diques de Astilleros Españoles (4¾ miles), thence:

4·0 m to Puente del Arenal (6 miles), the limit of navigation.

These depths are subject to siltation; for the latest depth information the Port Authority should be consulted.

Vertical clearance
9.183

1 **Ría de Bilbao.** Puente de Vizcaya, the transporter bridge close within the river entrance, has a vertical clearance of 45 m beneath the superstructure.

Deepest and longest berths
9.184

1 **Punta Lucero:** Petronor Oil Terminal Berth 1 (9.213).
Santurtzi Docks: Muelle No1 (9.216).
Ría de Bilbao: Canal de Deusto (9.217).

Tidal levels
9.185

1 **Tidal levels** in El Abra de Bilbao. See information in *Admiralty Tide Tables.* Meam spring range about 3·6 m; mean neap range about 1·6 m.

Abnormal water levels
9.186

1 At the head of El Abra de Bilbao strong winds from SW or NW raise the water level by 0·5 m; gales from between NE and S lower the water level by 0·5 m.

In Ría de Bilbao NE winds tend to reduce the range of the tide and S winds tend to increase it.

Density of water
9.187

1 The density of the water is reported to be:
1·025 g/cm^3 in El Abra de Bilbao.
1·016 g/cm^3 at Sefanitro Berth (43°17′·7N, 2°58′·3W) in Ría de Bilbao.

Maximum size of vessel handled
9.188

1 **Punta Lucero:**
Limiting dimensions of vessels berthing at Petronor Oil Terminal Berth 1 are given at 9.213.
Maximum dimensions of the largest vessels berthed (1996) are: tonnage 421 681 dwt; length 378 m; draught 26 m.

Santurtzi. Limiting dimensions are: tonnage 85 000 dwt; length 250 m, possibly more; draught 13·7 m.

Local weather
9.189

1 Strong NW to W winds can produce a considerable swell in El Abra de Bilbao and its approaches that makes shiphandling difficult and causes surging at Punta Lucero berths.

Arrival information

Port operations and information service
9.190

1 The pilot's office controls the berthing of vessels, allocates anchor berths and provides information on ship movements within the port. The pilot's office, Bilbao Signal Station and Petronor Refinery Terminal are equipped with VHF radio, see *Admiralty List of Radio Signals Volume 6(2)* for further details. Vessels should make radio contact at least 1 hour before arrival and again when 7 miles from the harbour entrance.

Vessel Traffic Service
9.191

1 Traffic control systems operate in the approaches to the port, see *Admiralty List of Radio Signals Volume 6(2)* for further details.

Notice of ETA
9.192

1 Vessels should report their ETA 72, 24 and 6 hours in advance.

Vessels calling at Petronor Oil Terminal should report their ETA 72, 48 and 24 hours in advance and subsequently any alteration of more than 2 hours.

Vessels less than 20 m draught can berth at any time; vessels of deeper draught normally berth in the period lasting 2 hours each side of HW.

Outer Anchorages
9.193

1 Vessels waiting to berth may anchor outside El Abra de Bilbao, N of Dique de Punta Lucero and W of the prohibited anchorage area (9.162), as shown on the chart. Anchor position D is reserved for small vessels. Smaller vessels may anchor inside El Abra de Bilbao as directed by the pilot.

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2 An ODAS buoy (lighted) (43°23′·9N, 3°07′·9W) and Wave recorder buoys (lighted) (43°24′·0N, 3°08′·5W and 43°24′·0N, 3°08′·6W respectively) (1.25) are moored close to, or within, the charted anchorage areas;

Pilotage and tugs

9.194

1 **Pilotage** is compulsory for all vessels over 500 gt entering or leaving the port and is available at all times. Pilots board 2 miles off the harbour entrance or just inside Dique de Punta Lucero head.

If the weather is too bad for the pilot to board in the outer position the pilot boat will lead vessels into harbour and the pilot will board in the shelter of the breakwaters.

2 **Pilot boats** display the usual Spanish pilot flag (1.33) by day; they have a yellow funnel with a similar emblem painted on it. At night they exhibit the regulation lights. They are equipped with VHF radio; see *Admiralty List of Radio Signals Volume 6(2)* for further details.

3 **Tugs.** Numerous tugs, equipped for fire fighting and with VHF radio, are available. The minimum number and horse-power of tugs required for berthing, depending on a vessel's grt, are prescribed; the Port Authority or the pilot may order additional tugs if abnormal conditions exist. Ships provide towing lines.

Mooring launches are normally employed for berthing but their use is not compulsory.

Restricted areas

9.195

1 Restricted areas, as shown on the chart, lie adjacent to the port approaches. Entry to these areas should not be made without reference to local regulations.

Quarantine

9.196

1 The Health Officer boards vessels on berthing or anchoring. The Ship's Agent should be informed by radio of suspected disease or fever on board.

Puerto de Bilbao

General layout

9.197

1 **Punta Lucero** berths (43°22′N, 3°06′W) (9.213) forming the Petronor Oil Terminal in the W corner of El Abra, sometimes referred to as Superpuerto, handle all the crude oil and refined petroleum cargoes discharged and loaded at Bilbao.

9.198

1 Dique de Ciérvana extends 5 cables NNE thence 1¼ miles ESE from the SW shore of El Abra. Lights are exhibited at the NW knuckle and at the head of this breakwater which provides protection for the extensive deep-water docks under construction (2004) in the enclosed area S of Dique de Ciérvana. Some works have been completed (2004) but are uncharted.

An area is being reclaimed (2003) S of the outer section of Dique de Ciérvana, as shown on the chart.

9.199

1 **Santurtzi** berths (43°20′N, 3°02′W) (9.216), at the artificial harbour at the head of El Abra, handle the major proportion of all other cargoes, all the deeper draught vessels other than oil tankers, and most Ro-Ro vessels.

9.200

1 **Ría de Bilbao** (9.217) has numerous basins, quays and wharves on its banks. In addition to several important private berths handling specific cargoes, the principal public berths are (listed from seaward):

2 Muelles del Canal de Deusto (43°16′·5N, 2°57′·6W); berths for medium sized vessels on both sides of Canal de Deusto Basin.

Muelles de Zorroza (W bank; 43°16′·7N, 2°58′·0W); includes a Ro-Ro berth for vessels of between 4 500 and 10 000 dwt.

Muelles de Bilbao, which extend 2 km upstream along the S bank from the dry docks (43°16′·1N, 2°56′·7W); used by small vessels and coasters and include a Ro-Ro berth.

Traffic signals

9.201

1 Vessels intending to pass beneath Puente de Vizcaya (9.203) shall sound one prolonged blast on the siren when within about 4 cables of the transporter bridge to alert the operator.

Natural conditions

9.202

1 **Local weather.** Attention is drawn to the prevalence of days on which fog is recorded. Morning fog is more likely during the summer but in winter fog may last for 2 or 3 days. El Abra de Bilbao has a funnelling effect on the winds which blow with great force during storms; the S and SW winds are the strongest.

2 **Tidal streams.** In the entrance to Ría de Bilbao the out-going tidal stream attains a rate of 3 kn at springs, 1½ kn at neaps; the in-going tidal stream is weaker.

Climatic table. See 1.156 and 1.167.

Principal marks

9.203

1 **Landmarks:**

Punta Galea Lighthouse (43°22′N, 3°02′W) (9.168).

Puente de Vizcaya (43°19′·5N, 3°00′·9W), the transporter bridge (black framework tower, 65 m in height, on each bank of Ría de Bilbao joined by framework superstructure).

Two conspicuous chimneys (red and white bands at top, encircled by four or five strip lights; 230 and 200 m in height) (43°20′·4N, 3°03′·1W) of Iberduero Power Station: numerous prominent silver-coloured round or cylindrical shaped fuel tanks that are floodlit at night stand from 1 to 4 cables NNW.

2 **Major light:**

Punta Galea Light—as above.

Other aid to navigation

9.204

1 **Racon:**

Dique de Punta Lucero Light (43°23′N, 3°05′W) (9.205), see *Admiralty List of Radio Signals Volume 2* for further details.

Directions

(continued from 9.169)

9.205

1 **Initial position** 43°23′N, 3°05′W.

Entering El Abra de Bilbao the channel leads SSE, passing:

WSW of the completed outermost section of Dique de Punta Galea (43°22′·8N, 3°04′·6W) marked by a light (red metal column 14 m in height). Construction work on the remainder of the

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breakwater extending 1¾ miles WNW from Punta Galea has been suspended. And:

2 ENE of Dique de Punta Lucero (2½ cables WSW), on the head of which stands a light (green tubular tripod, 4 m in height). . The breakwater is 14 m high and prominent from N.

9.206

1 **Approaching Punta Lucero berths.** The following navigational aids are provided for vessels berthing at Dique de Punta Lucero Berths Nos 1 and 2:

Lights in line bearing 239° (red and white masts) (43°21′·9N, 3°06′·1W; uncharted) situated close S of the root of the oil terminal jetty.

2 Blue vertical strip lights exhibited from the inner wall of Dique de Punta Lucero at intervals of 200 m between the head of the breakwater and Berth No 1 and at intervals of 100 m between Berths 1 and 2.

Nereides radar and sonar system. A luminous panel at each berth indicates the vessels distance in metres from each end of the berth and her speed of approach in centimetres per second.

9.207

1 **Approaching Santurtzi berths.** The white sector (134°–149°) of Contradique de Algorta Direction Light (white tower on house, 21 m in height) (43°20′·4N, 3°01′·2W), situated near the root of Contradique de Algorta leads SE into the fairway passing (positions given from the direction light):

2 SW of a light-buoy (port hand) (1½ milesNNW). thence:

NE of the head of Dique de Ciérvana, (1½ miles NW); a light (green cylindrical tower, 5 m in height) is exhibited from its head. thence:

3 SW of Piedra Peña del Piloto (rock awash) (1 mile NNW) and Restinga de Algorta, the reef extending SE from it to Punta de San Ignacio (8 cables NNW), thence:

NE of W extremity of Contradique de Santurtzi, (1 mile WNW); a light (green cylindrical tower with red band, 5 m in height) is exhibited fron its head, thence:

SW of a light-buoy (port hand) (9 cables NNW), thence:

4 NE of the E extremity of Contradique de Santurtzi (6 cables WNW), a light (grey round tower, 14 m in height) is exhibited from its head.

SW of a light-buoy (port hand) (5cables NNW).

9.208

1 The fairway then leads S into the artificial harbour, passing (positions given from the head of Contradique de Algorta (43°20′·6N, 3°01′·6W)):

W of the head of Contradique de Algorta, the 3·5 m high E Breakwater, marked by a light (white stone tower 15 m in height), and:

2 E of the head of Espigón No 1 (2 cables W) marked by a light (green metal tripod on hut, 9 m in height) at its NE corner and another light (green metal tripod on building, 9 m in height) at its SE corner, the E end of Muelle Princesa de España, thence:

3 E of the head of Espigón No 2, also called Muelle Principe de Asturias, marked by a light (green column, red band, 6 m in height) (2 cables SW) at its NE corner and another light (green framework tripod on hut, 8 m in height) (3 cables SSW) at its SE corner, thence:

E of the head of Espigón No 3 (5 cables S), also called Muelle Vizcaya, marked by a light (green metal tripod, red band, 9 m in height) at its NE corner and another light at its SE corner.

9.209

1 **Ría de Bilbao** dredged channel, best navigated at HW in daylight, then leads SE, passing (positions given from the head of Muelle de Portugalete (43°20′·0N, 3°01′·5W)):

NE of Muelle de Portugalete, a breakwater whose head is marked by a light (green masonry tower, red band, 8 m in height) and:

2 SW of C Light-buoy (port hand) (1½ cables ESE) marking the extremity of La Mojijonera, a ledge extending NNW from the E entrance point of the river, on whose inner section there is a breakwater with a light-beacon (red metal tripod on hut, 8 m in height) (3 cables SE) on its head, thence:

Beneath the superstructure of Puente de Vizcaya (7 cables SE) (9.203), see 9.183 for vertical clearance.

3 Vessels entering the river with the in-going tidal stream secure a tug astern and, if they have little under-keel clearance, an additional tug ahead.

9.210

1 **Leading lights.** The alignment (115°) of Axpe-Portugalete Leading Lights then leads ESE through the next reach to the vicinity of Dársena de Axpe entrance (NE side of channel, 4 cables NW of front light):

Front light (grey diamond-shaped daymark on metal tripod; 16 m in height) (43°18′·6N,2°58′·5W).

Rear light (similar structure, 8 m in height) (650 m ESE of front mark) standing on higher ground.

2 Thence to the limit of navigation the best guide to Ría de Bilbao is the chart. Numerous light-beacons (lateral; metal tripods 8 m in height) stand on both banks of the river, those marking the entrances to the various basins and to Canal de Deusto are sectored.

9.211

1 Vessels bound for Canal de Deusto may be swung at the entrance to Dársena de Axpe and then towed stern-first to their berth.

Puente de Róntegui (43°17′·7N, 2°58′·4W;), a fixed motorway bridge estimated vertical clearance 48 m, spans the river 1 mile upstream from Dársena de Axpe.

2 The upper reaches beyond the entrance to Canal de Deusto are spanned by Puente de Deusto (43°16′·1N, 3°56′·8W), a double bascule bridge, and Puente de la Salvé (4 cables farther upstream), a high level bridge. Beyond this point there are three further bridges.

Caution. During freshets the flow sets E across the entrance to Canal de Deusto.

Basins and berths

9.212

1 **Moorings.** Two pairs of mooring buoys, Nos 1 and 2 and Nos 5 and 6, are laid E of the fairway through the artificial harbour as shown on the chart. These moorings are laid in a depth of 10 m and are used for lightening and LASH vessel operations.

Punta Lucero

9.213

1 **Petronor Terminal** (43°22′N, 3°06′W) has six berths.

Berths Nos 1, 2 and 3 are situated on the SE side of the inner part of Dique de Punta Lucero (9.205). Berth 1, the NE-most and largest, length 140 m depth alongside 32 m, can berth vessels up to 500 000 dwt and 400 m in length: it handles crude oil only. Berth 2, the largest handling refined

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Punta Lucero berths from SW (9.213
(Original dated 1996)

products, depth alongside 19 m, can berth vessels up to 150 000 dwt and 400 m in length.

2 The pier extending NE from the shore 1 cable SE of the root of Dique de Punta Lucero has three berths; Berth 4 the outer and Berth 6 the inner on its NW side, and Berth 5 at the outer end of its SE side.

Punta Ceballos

9.214

1 Punta Ceballos Terminal (43°21′·9N, 3°05′·3W) consists of a jetty extending NE from the shore 5 cables E of the root of Dique de Punta Lucero. There are two berths, each 330 m in length and with a depth of 18 m alongside.

The terminal is used for bulk liquids and can accept vessels up to 50 000 dwt.

Punta Sollana

9.215

1 Muelle de Punta Sollana extends 470 m from the shore 8 cables ESE of the root of Dique de Punta Lucero. There is 390 m of berthage along the SW side of the breakwater from the head of which a light is exhibited.

Santurtzi

9.216

1 Santurtzi Docks (43°20′N, 3°02′W) have nearly 5 km of quay. They handle general and dry bulk cargoes and containers; some berths are multi-purpose but most are dedicated to handling specific categories of cargo. Muelle No 1, with 15 m depth alongside, is the deepest.

2 **Quays** (listed from N to S) are:

Name	*Location*
Muelle No 1	SW of Contradique de Santurtzi
Muelle Nemar 1	Extends NNE from Espigón No 1
Muelle Nemar 2	N side of Espigón No 1
Muelle Princesa de España	S side of Espigón No 1
Adosado	Between roots of Espigón Nos 1 and 2
Muelle Principe de Asturias Norte, Este & Sur	N, E & S sides respectively of Espigón No 2
Muelle Reina Victoria Eugenia	Extends ESE from root of Dique de Santurtzi
Muelle Vizcaya Norte, Este & Sur	N, E & SE sides respectively of Espigón No 3

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Santurtzi berths from SE (9.216)
(Original dated prior to 1997)

3 **Ro-Ro berths** are situated at the inner end of Muelle Reina Victoria Eugenia and at the inner end of Muelle Vizcaya Sur.

Puerto Pesquero (43°19′·8N, 3°01′·7W), the fishing port, occupies the SW part of the basin that lies W of Muelle de Portugalete (9.209).

Ría de Bilbao

9.217

1 There are about 10 km of quays and wharves on the river of which about 25% is devoted to fitting out and repair berths:



Canal de Deusto from SE (9.217)
(Original dated 1997)

Canal de Deusto (43°16′·5N, 2°57′·6W) the principal basin contains 2·5 km of quay with a depth of 8 m alongside providing the deepest and longest berths in the river.

Ro-Ro berth: at La Helguera (43°16′·2N, 2°56′·4W) on S bank.

Port services

Repairs

9.218

1 **Shipyards:** several carry out repairs of all kinds.

Dry docks. Astilleros Españoles operate two dry docks; the largest, at Sestao, can take vessels up to 15 000 dwt and has the following dimensions on the bottom: extreme length 154 m, breadth 20·1 m, depth over sill 6·5 m at MHWS.

Slips: several; maximum lift 1100 tonnes.

Other facilities

9.219

1 **Deratting** and deratting exemption certificates issued.

Floating crane 400 tonnes lift.

Hospital: at Basurto (43°15′·8N, 2°57′·0W).

Oily waste reception facilities.

Supplies

9.220

1 **Fuel:** fuel oil and marine diesel fuel available; supplied by pipeline at some Petronor Terminal and Santurce berths, by fuel barge or road tankers at other berths.

Fresh water: available at most Santurce and some Petronor Terminal berths; supplied by water barge if not laid on at berth.

Provisions: available.

Small craft

9.221

1 **Marinas:** There is a large marina at Puerto Deportivo de Getxo (43°20′·4N, 3°01′·0W), and moorings and alongside berths at Embarcadero de Las Arenas (6 cables S). Further marina facilities exist in the fishing harbour fronting the village of Ciérvana (9.176).

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Boat yard: situated in Dársena de Axpe (43°18′·7N, 2°58′·7W).

PUNTA LUCERO TO CABO AJO

General information

Charts 1174, 1102 1105

Route

9.222

1 The coastal passage from the vicinity of Punta Lucero (43°22′N, 3°06′W) to that of Cabo Ajo (43°31′N, 3°35′W) leads about 24 miles WNW.

Topography

9.223

1 Between Punta Lucero and Canto de Laredo promontory (14 miles WNW) the coastline is formed mainly by the lower slopes of a series of mountains. The principal summits close to the coast are:

2 Monte Lucero (43°21′·5N, 3°06′·1W), Monte de Serantes (2¼ miles SE), Pico de Montaño (1½ miles S) and Monte Camposquerra (3¾ miles W). From NW all four appear as perfect cones; the first two named, when seen in alignment (128°) from some distance, appear to be a single mountain. Monte de Serantes has a tower on its summit.

3 Monte Cerredo (43°23′·5N, 3°16′·5W), the highest and most rugged summit on this stretch of coast.

Monte Candina (43°24′·5N, 3°20′·7W), which has several peaks and distinctive white limestone patches that stand out against the dark background of the trees that cover the rest of the mountain.

9.224

1 Distinctive features of this stretch of coastline are:

Playa de la Arena (43°21′N, 3°07′W), the yellow sandy beach at the head of Ensenada de de Muskiz, visible from 15 miles offshore. It is backed by numerous oil storage tanks andtall chimneys.

Castro Urdiales (43°23′N, 3°13′W) (9.234) whose buildings show up well against the dark green background of the ridge extending ESE from Monte Cerredo.

2 Ría de Oriñón ravine (43°24′N, 3°19′W) between Monte Cerredo and Monte Candina, and Playa de Oriñón the white sands that extend from the river entrance some distance W up the slope of Monte Candina, are both visible from far offshore.

Playa de Laredo, the sandy beach extending 2 miles NW from Canto de Laredo (43°25′N 3°25′W) (9.243). Numerous tall buildings of an expanding holiday resort stand along the seafront.

9.225

1 Monte de Santoña (43°27′N, 3°26′W), a peninsula that at a distance resembles an island, can be confused with Monte Candina (5 miles ESE) (9.223) as it has similar white patches on a dark background: it is distinguished by its more numerous peaks and by Atalaya de Santoña, a prominent disused round watch tower standing on a summit 6 cables N of Monte Ganzo the highest peak.

2 Monte de Santoña has high white and reddish coloured cliffs on its seaward sides. El Dueso village and the buildings of a prison stand on its NW slope which is connected W to the base of wooded Monte del Brusco (43°28′N, 3°29′W) by Playa de Berria, a low sandy isthmus with modern buildings on it. All these objects stand out clearly.

9.226

1 Between Punta del Brusco, the NE termination of Monte del Brusco, and Cabo Ajo (5½ miles WNW) the promontories are barren and rocky: Ensenada de Noja and Ensenada de Isla, the bays between, contain sandy beaches and are encumbered with numerous above and below-water rocks.

2 The village of Noja (43°29′N, 3°31′W) contains a prominent church. Quejo village (1¼ miles WNW; uncharted) is clearly visible from seaward due to its several hotels and apartment blocks.

Ría de Ajo (43°30′N, 3°35′W) and the inlet at the head of Ensenada de Isla (2 miles E) fronting Quejo village are accessible to boats only in fair weather at HW.

Measured distance

9.227

1 Between Punta Cerdigo (43°24′N, 3°15′W), bluff and fronted by a whale-backed above-water rock named La Ballena, and Punta de Islares (2½ miles W) the low E entrance point of Ensenada de Oriñón (9.242), there is a measured distance:

2 Limit marks: two pairs of beacons (black-striped truncated pyramids 8 m in height) (1 and 2 miles W of Punta Cerdigo respectively) standing on low ground behind white shale cliffs.

Distance: 2213 m.

Running track: 109½° or 289½°, passing between 7 cables and 2 miles NNE of the ESE limit front mark.

Principal marks

9.228

1 **Landmarks:**

Punta del Pescador Lighthouse (white truncated tower 13 m in height) (43°28′N, 3°26′W) on the NE point of Monte de Santoña: Atalaya de Santoña (9.225) stands 3 cables farther S.

Cabo Ajo Lighthouse (white round tower 8 m in height) (43°31′N, 3°35′W).

2 **Major lights:**

Punta Galea Light (43°22′N, 3°02′W) (9.168).

Castillo de Santa Ana Light (43°23′N, 3°13′W) (9.233).

Punta del Pescador Light—as above.

Cabo Ajo Light—as above.

Other aid to navigation

9.229

1 **Racon:** Dique de Punta Lucero Light (43°23′N, 3°05′W) (9.165).

Directions

(continued from 9.169)

9.230

1 **Initial position** N of the entrance to El Abra de Bilbao (43°23′N, 3°05′W) (9.205).

The coastal route leads about 24 miles WNW, passing:

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2 NE of Punta del Rebanal (Rabanal) (43°24′N, 3°13′W) a low rocky point easily identifiable by the cemetery on it.The mariner is cautioned that this area has irregular depths closer inshore which cause a steep dangerous sea when there is a heavy swell from the NW. Thence:

Clear of Bajo Castro Verde (43°33′N, 3°13′W) (9.154), thence:

3 NE of Cabo Cebollero (43°25′N, 3°19′W) a spit 23 m high connected to the mainland by a narrow neck that is covered partially at HW and entirely when there is a heavy sea; from a distance it appears to be an island well detached from the shore; its extremity is rocky and in any sea should not be approached within 5 cables. Thence:

4 NE of El Ahorcado (2¼ miles W of Cabo Cebollero) a high rugged promontory whose summit is saddle-shaped when seen from N, thence:

NE of an extensive marine farm (9.2) centred on 43°29′N, 3°21′W (4 miles NE from Punta del Pescador, thence:

9.231

1 NE of Punta del Pescador (43°28′N, 3°26′W), with a light (9.228) on its point, and of Punta del Aguila (6 cables farther W) which terminates in higher cliffs and rises steeply to the 198 m high summit of La Corona (2½ cables S of the point), thence:

2 NE of Los Hermanos (43°29′N, 3°29′W), a group of three rocks awash, and in heavy weather also of Bajo El Doble (1¾ miles farther NE) as steep seas and occasional breakers then occur over the shoal and in the channel between these two dangers. Steep seas, but not breakers, also form over Bajo El Mazo (3½ miles NE of Los Hermanos); thence:

3 NE of Punta de la Mesa (1¼ miles WNW of Los Hermanos) and of Punta Garfanta (3 cables farther WNW) which rises to an elevation of 21 m 1 cable S; reefs that dry near their extremities extend 3 cables NNE and N, respectively, from each point; thence:

4 NE of Cabo Quejo (43°30′N, 3°33′W), red, rocky, rising to 80 m elevation 1 cable from its NE extremity and terminating in broken cliffs and its N side, thence:

NE of Cabo Ajo (43°31′N, 3°35′W), with steep-to cliffs on its N side that from E or W appear as steps, surmounted by Cabo Ajo Lighthouse (9.228).

9.232

1 **Clearing bearing.** The line of bearing 130° of Monte Candina (43°24′·5N, 3°20′·7W) (9.223), open NE of the peaks of Monte de Santoña (5 miles NW) (9.225), passes NE of Los Hermanos (43°29′N, 3°29′W) (9.231).

9.233

1 **Useful marks:**

Castillo de Santa Ana (43°23′N, 3°13′W), a castle with a round tower at each of its four corners. The SE tower surmounted by a major light (white conical tower 16 m in height) and Santa María Church (tower) (½ cable W of the light) (chart 1171, plan of Puerto de Castro Urdiales) stand out amongst the buildings of Castro Urdiales (9.234).

TV mast (aluminium coloured metal framework pylon 70 m in height) (43°30′·2N, 3°33′·0W; uncharted) standing 3½ cables SSW of the NE point of Cabo Quejo (9.231) close to the summit of Monte Casilla (elevation 124 m).

2 Tower (43°29′·5N, 3°34′·5W) standing on the top of a hill SW of Isla village; prominent from E or W.

(Directions continue at 10.16)

Castro Urdiales

Chart 1171 plan of Puerto de Castro Urdiales

General information

9.234

1 **Description.** Puerto de Castro Urdiales (43°23′N, 3°13′W), a fishing port with limited commercial facilities, provides shelter and a berth for small vessels that must use their own gear for cargo handling. The principal trade of Castro Urdiales was the export of iron ore but this and the fishing industry are in decline in this location.

Limiting conditions

9.235

Tidal levels. See information in *Admiralty Tide Tables.* Meam spring range about 3·6 m; mean neap range about 1·4 m.

Maximum size of vessel handled: reported (1989) to be 6 m draught to enter harbour; length 105 m, draught 5 m for berthing at Muelle Commercial.

Arrival information

9.236

1 **Outer anchorage.** The best anchor berth is reported to lie 4 cables 045° from the breakwater head light (9.238), charted depth 26 m bottom sand and gravel.

Harbour

9.237

1 **General layout.** The harbour is sheltered by Dique del Este, a breakwater extending SE from the vicinity of Castillo de Santa Ana and by Muelle Commercial, a mole extending NE from the shore towards the breakwater head. Muelle Commerical, the quay on the outer half of the NW side of the mole, provides the only cargo handling berth. The SW side of the harbour is lined at the NW end by a seawall named Muelle del Oeste and at the SE end by Muelle de Ocharan Mazas a promenade on piles built on drying rocks.

2 A small basin at the head of the harbour, formed by two moles, is used only by fishing boats.

Directions

9.238

1 The harbour is entered by rounding the head of Dique del Este (43°22′·9N, 3°12′·5W), surmounted by a light (8-sided tower 7 m in height), passing (positions given from light):

N of Punta de Cotolino (3 cables S), a low rocky point, thence:

NE of the head of Muelle Commercial (1½ cables SW) surmounted by a light (red column).

2 **Caution.** A wreck with an unlit mooring buoy close SE lies 2 cables WNW of Dique del Este. A drying patch lies close SE of the entrance to the boat basin.

Berths

9.239

1 **Anchorage** may be obtained in the harbour in depths of 9 to 10 m; bottom a thin layer of sand and mud over rock. A mooring buoy is laid in the centre of the outer basin.

Muelle Commercial length 150 m, can accommodate a small vessel: a mooring buoy is laid about 75 m off the inner end of the berth for a sternfast for holding off purposes when a swell is running.

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Port services

9.240

1 **Repairs** of a minor nature carried out; patent slip for fishing vessels in N corner of harbour.

Other facilities: hospital.

Supplies: marine diesel (light) from pump on Muelle del Oeste; freshwater hydrants at Muelle Commercial; provisions.

Small craft

9.241

1 **Moorings** for yachts are laid in the N corner of the harbour and in the vicinity of the yacht club built on a pier supported on piles extending from the SE end of Muelle del Oeste.

2 **Berths.** It has been reported that berthing is possible in calm weather on the SW side of Dique del Este. In 2003 depths of 2·7 m and 3·2 m were reported alongside the SW side.

The boat basin dries except in the vicinity of the entrance. Berths alongside the moles within 20 m of their extremities have been reported (1983) to have depths of 2 m on the NE side of the entrance, 1 m on SW side.

Ensenada de Oriñón

Chart 1102

9.242

1 Ensenada de Oriñón (43°25′N, 3°19′W), the bay entered between Punta Islares (9.227) and Cabo Cebollero (9.230), although shallow is clear of dangers and provides a safe anchorage in WNW winds for coasters.

Ría de Oriñón, entered at the SE corner of the bay, is navigable with local knowledge by small craft but is little used and accessible only at HW in fair weather due to its shifting bar that nearly dries.

Ría de Santoña and approaches

Chart 1171 plan of Ría de Santoña

General information

9.243

1 **Description.** Ría de Santoña is approached between Canto de Laredo (43°25′·2N, 3°24′·6W), a rocky promontory 50 m high, and the SE coast of Monte de Santoña (1½ miles NNW) (9.225). It is entered between Punta del Pasaje (2 miles NW), the N extremity of El Puntal, a low flat tongue covered with sand dunes, and the S front of Santoña town (3 cables farther N).

2 Within the entrance the channel branches in various directions, the two most important being that leading N into Santoña Harbour and Canal de Colindres leading 2½ miles S to Colindres.

9.244

1 **Topography.** Monte de Santoña dominates the approach and shelters the outer anchorage of El Fraile (9.246) and the bar from NW winds: Santoña town is built on level ground extending SW from the foot of the mountain. Monte Ano, a conical mountain with the building of Convento de San Francisco at its base, on the W shore of the estuary 1½ miles WSW of the town, is prominent when seen from the approach. Playa de Laredo fronting El Puntal is described at 9.224.

9.245

1 **Controlling depth.** The least charted depth over the bar (43°26′N, 3°26′W) at the entrance to Ría de Santoña is 2·3 m. However breakers have been reported (1994) at certain states of the tide and in certain weather conditions, indicating shoaling. Extreme caution should be exercised when crossing the bar. Depths shoaler than charted exist within the entrance to Ria de Santoña, Canal de Colindres and Canal de Ano. The port authority should be consulted for the latest information.

Tidal levels. See information in *Admiralty Tide Tables.* Meam spring range about 3·6 m; mean neap range about 1·5 m.

9.246

1 **Outer anchorage**. Fondeardero del Fraile (43°26′·2N, 3°25′·5W), is used by vessels seeking shelter in a NW gale. The anchor berth shown on the chart, depth 8 m sand, is approached with Santoña Front Leading Light (9.251) bearing 276° just open S of the fort on Punta de San Carlos (9.250), and anchorage obtained when Punta del Caballo(43°27′N, 3°25′W) is hidden by Punta del Fraile (9.249) bearing 005°.

9.247

1 **Pilotage** is compulsory for all vessels of more than 50 grt. ETA must be reported. Boarding place: off Punta del Fraile (43°26′·7N, 3°25′·5W) or in bad weather closer to the entrance in the vicinity of El Fraile anchorage (9.246).

Local knowledge is essential as the fairway across the bar and within the estuary is unmarked, and the former is liable to change.

9.248

1 **Tidal streams.** The out-going tidal stream attains a rate of about 3 kn at springs off Punta del Pasaje whence it sets SE towards Canto de Laredo: freshets increase the rate. The in-going tidal stream is weaker; the greatest rate occurs off Punta del Pasaje beyond which the tidal stream divides into the various channels.

Directions

9.249

1 **Initial position** approximately 43°26′N, 3°25′W.

Abra de Santoña, the roadstead off the entrance to Ría de Santoña and to Puerto Laredo (9.252), is entered passing:

2 SE of Punta del Fraile (43°26′·7N, 3°25′·5W), the SE point of Monte de Santoña, which terminates in El Fraile a remarkable pillar of rock 40 m high partly detached from the coast, and of La Merana (¾ cable NE of El Fraile) a rock that dries about 1 m (charted as two rocks awash) and is usually marked by breakers, and:

N of the reefs that extend ½ cable N and 1½ cables NW from Canto de Laredo (1½ miles SSE of El Fraile) (9.243).

9.250

1 **Crossing the bar.** The fairway called Canal Costanero leads WNW, passing:

SSE of the coast between Punta de San Carlos (43°26′·3N, 3°26′·2W), on which there is a prominent fort, and a point 2 cables ENE.

In heavy weather this channel is sheltered and relatively calm whereas farther offshore there are steep seas and sometimes breakers on the bar.

2 **Caution.** The bar consists of sand and the channel which is dredged periodically is liable to change, see 9.245 for controlling depth.

9.251

1 **Leading lights:**

Front light (two inverted triangles on metal framework) (43°26′·4N, 3°27′·5W) standing near

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the W end of Muelle del Pasaje, the seawall on the S front of Santoña.

Rear light (circular daymark on similar structure) (7½ cables WNW of front light) standing at the SW end of Puente de Argoños, a cantilever road bridge.

2 The alignment (283½°) of these lights, which are difficult to distinguish by day, leads WNW through the entrance from a position 1 cable S of Punta de San Carlos to the vicinity of the landing pier (2¼ cables E of front light) marked by lights, passing (positions given from front light):

3 Close NNE of the N extremity of Banco del Pitorro (5½ cables ESE), the shoal extending ESE from Punta del Pasaje, and:

SSW of Muelle del Pasaje which extends W from Punta San Martín (6 cables E) and whose foreshore is steep-to.

Laredo

9.252

1 **General information.** Puerto de Laredo (43°25′N, 3°25′W) situated on the SW side of Canto de Laredo (9.243) is a small artificial fishing port, sometimes used in summer by small coasters. Villa de Laredo is a fishing village and holiday resort whose resident population of 12 500 is increased by more than 50 000 in summer.

9.253

1 **Directions.** From Abra de Santoña (43°26′N, 3°25′W) (9.249) the approach leads S, passing:

W of the reef extending 2 cables N from the root of Espigón Norte breakwater (43°24′·9N, 3°25′·1W), noting rocks awash extending 1 cable N of the reef thence:

Close W of the head of Espigón Norte, the breakwater extending 1 cable W from the N side of the harbour, marked by a light (masonry column 3 m in height on white hut).

2 The route then leads ESE through the entrance channel, which is only 10 to 15 m wide and had a depth of about 1 m at its inner end in 1966, passing (with positions given from Espigón Norte Light (43°24′·96 N, 3°25′·12 W)):

3 N of a light-buoy (starboard hand) (1 cable W) marking the W extremity of a submerged groyne, thence:

Clear of a mooring buoy (1 cable WNW), thence:

N of a light-beacon (starboard hand) (½ cable SSW), thence:

S of Espigón Norte from where a light is exhibited, thence:

N of a rubble training wall (1 cable ESE) that covers at half tide.

4 **Clearing bearing.** The alignment (about 175°) of the following objects has been reported (1983) to pass W of El Rastrillar reef:

Front: Espigón Norte Light (43°25′N, 3°25′W).

Rear: white cylindrical-shaped 14 storey tower-block standing on a hillock (uncharted; about 8 cables S of front mark).

9.254

1 **Anchorage** for small craft: ¾ cable WNW of Espigón Norte Light, depth 4 m sand, in the vicinity of several mooring buoys used by fishing vessels awaiting the tide to enter harbour.

Berths: alongside the moles and quays forming the basin.

Repairs: patent slip for small craft up to 100 tonnes.

Supplies: marine diesel fuel; fresh water; provisions.

Santoña

9.255

1 **General information.** Puerto de Santoña (43°26′·5N, 3°27′·5W), a busy artificial fishing port, lies on the W side of Villa de Santoña, a garrison town with numerous fish processing plants. Christopher Columbus's *Santa María* was built at Santoña.

2 **Directions** (positions given from front leading light (9.251)). The entrance channel has been reported (1983) to lie about 25 m off Muelle del Pasaje (9.251) where it turns NNW around the bullring (½ cable NW), a masonry structure that looks like a fort, and the same distance off the moles enclosing the S and N basins of the harbour, passing ENE of a 0·7 m rocky patch (1 cable W).

9.256

1 **Anchorage:** at the inner end of the entrance channel between a position 1½ cables SE of front leading light and a position 1 cable farther W, depth 7 to 10 m bottom muddy sand; it has been reported (1986) that small craft are no longer allowed to anchor S of the town owing to increased fishing vessel traffic. The rocky bottom farther E off Punta del Pasaje is unsuitable for anchoring.

2 **Berths** (positions given from front leading light):

Dársena Vieja, or del Sur, the S basin; narrow entrance (1 cable WNW) marked by lights faces W; quay 146 m long used by coasters, otherwise basin is reserved for fishing vessels. Depth alongside quays about 3·5 to 4 m.

Dársena Nueva, or del Norte, the N basin; entrance (3 cables NNW) 70 m wide, marked by lights, faces W; used by fishing vessels, yachts and only in exceptional circumstances by merchant vessels.

3 **Developments.** Works were in progress (2003) in an area close SE of the bullring.

9.257

1 **Repairs:** two patent slips, in NW corner of N basin, the larger for vessels up to 500 tonnes.

Supplies: marine diesel fuel and fresh water supply points at SE corner of N basin; provisions.

Canal de Colindres

9.258

1 **Description.** Canal de Colindres, the principal channel within Ría de Santoña, leads 2½ miles S to Colindres where Puente de Treto (43°23′·7N, 3°27′·8W), a swing-bridge that no longer works, forms the limit of navigation for sea-going vessels and masted craft. The marked channel is aligned 192°-012° and navigable at HW springs by vessels with a maximum draught of 3 to 4 m.

9.259

1 **Directions.** From the inner end of Ría de Santoña entrance channel, the fairway leads S, passing (positions given from Santoña Front Leading Light (9.251)):

W of the light-buoys (special) marking the outer limit of Club Nautico de Laredo moorings (5 cables SSE) (9.260), thence:

E of Playa de Cicero, the tidal flats lining the W side of the channel, and:

2 W of the seawall fronting reclaimed land, marked at its N end by a light (red truncated conical masonry tower 5 m in height) (1¾ miles S), and extending S to Colindres Harbour, thence:

W of Colindres Harbour breakwater head (2½ miles S) marked by a light (white truncated conical masonry tower, red bands; 5 m in height).

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Laredo Marina

9.260

1 **General information.** Club Náutico de Laredo Marina (43°26′N, 3°27′W), situated on the W side of Punta del Pasaje, provides numerous moorings which occupy the area marked by four light-buoys (special) (9.259).

Port services: repairs of all kinds carried out; slipway; cranes; yacht club; fuel.

Colindres

9.261

1 **General information.** Puerto de Colindres (43°23′·7N, 3°27′·7W) is a small fishing port that may be used by small coasters.

Anchorage for small craft: in the pool N of Puente de Treto (9.258), depth 4 m, mud.

2 **Berths:**

Jetty extending 90 m N from E pier of Puente de Treto, marked by a light (white truncated conical masonry tower, green bands; 5 m in height) at its head; depth 2 m alongside; used by fishing vessels.

Quay on S side of basin, depth 2 m alongside W end; used by vessels handling cargo.

3 Quay on E side of basin, 210 m long, dries alongside.

Repairs: slips for fishing vessels.

Supplies: marine diesel fuel; fresh water.

Small craft

Ría de Somorrostro

9.262

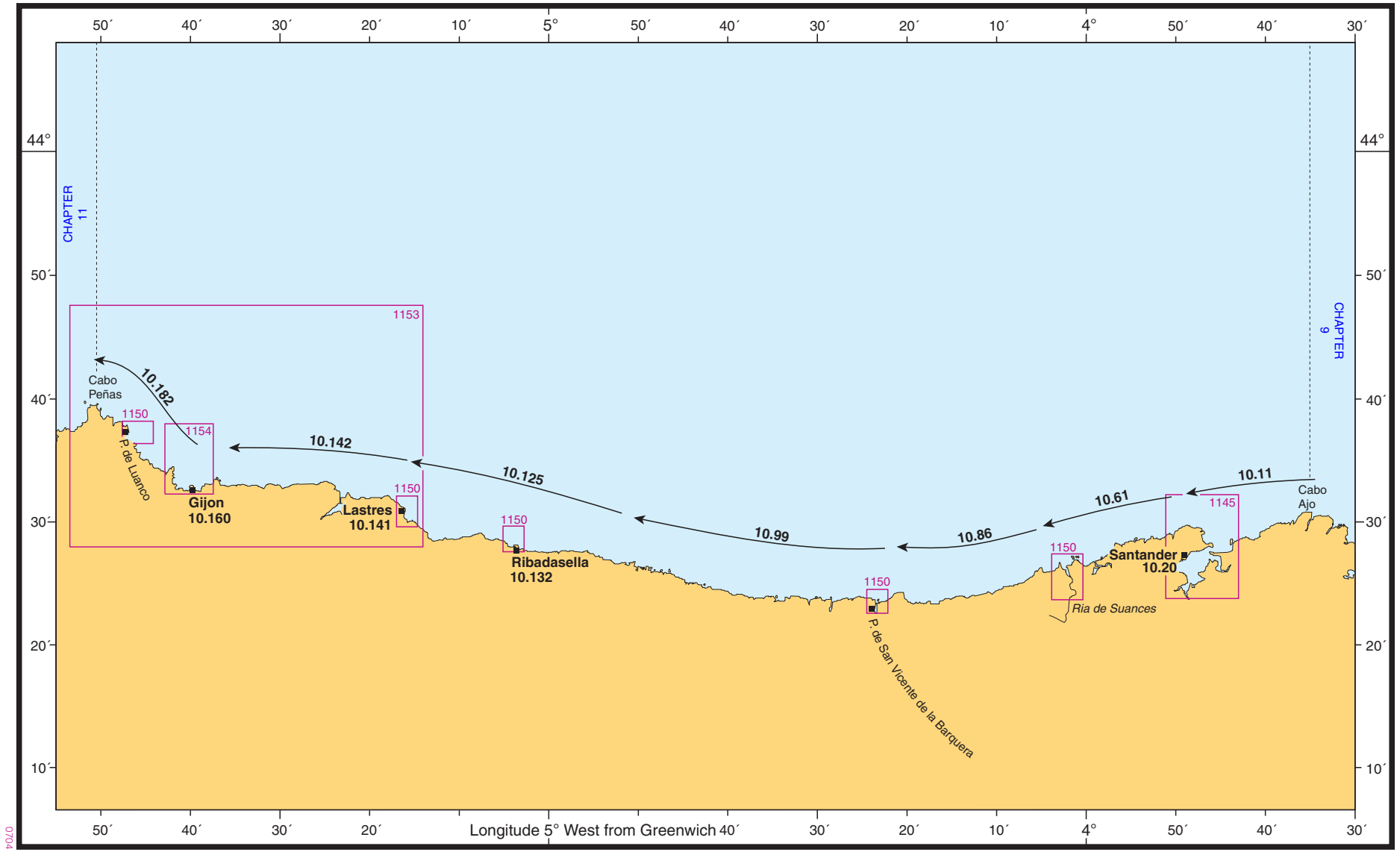
1 **Ría de Sommorrostro.** Entered at the SW corner of Ensenada de Muskiz (43°21′N, 3°07′W), was frequented by barges that carried iron ore to various smelting works in the Basque country. The bar at the river mouth dries; at HW springs there is a depth of 2·2 to 2·5 m over it. Local knowledge and fair weather are essential for entry.

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NOTES

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CHAPTER 10

CABO AJO TO CABO PEÑAS

GENERAL INFORMATION

Chart 1105

Topography

10.1

1 The coast between Cabo Ajo (43°31′N, 3°35′W) and Cabo Peñas (43°39′N, 5°51′W), 99 miles W, is in general cliffy but there are few distinct promontories. There are no charted dangers with depths of less than 20 m lying more than 2 miles offshore, but in bad weather breakers or heavy seas may be found farther offshore over banks and areas of uneven rocky bottom.

2 Inland this section of coast is distinguished by the Picos de Europa (10.97) a mountain range whose highest peaks (uncharted; 43°12′N and from 4°49′ to 4°58′W) are visible from a considerable distance out at sea in clear weather.

Ports and shelter

10.2

1 The two major ports of Santander (43°27′N, 3°48′W) (10.20) and Gijón (43°34′N, 5°41′W) (10.160) are the only harbours of any commercial importance in the area. There are several small fishing ports but apart from Lastres (43°31′N, 5°16′W) (10.141) all are either shallow or have shallow bars and are inaccessible in heavy weather.

Marine farms

10.3

1 Marine farms and fish havens are located within the waters of this chapter and should be avoided. Further havens and farms are likely to be established, see 1.8

Swell

10.4

1 A heavy NW swell, locally called a Vaga de Mar, is a particular hazard of the W part of the N coast of Spain as it breaks heavily over any banks or foul ground and closes those ports which have bars. Although normally associated with strong NW winds it occasionally sets in quite suddenly in calm weather.

Weather

10.5

1 Local weather patterns are described at 10.10 and 10.144 for the E and W sections of the area respectively.

Winds. Galernas or NW gales and S squalls can blow with great force off this stretch of coastline, see 1.138 and 1.136 respectively for further details. The winds E and W of Cabo Peñas often blow from different directions as described at 10.186.

Flow

10.6

1 **Currents.** The wind is the principal cause of the currents in this area which therefore tend to be rather variable. In winter they generally set E and may attain a rate of 3 to 4 kn during NW gales. In calm weather an E-going current is often the precursor of a NW gale. In summer the current near the coast is generally W-going and weak but at some distance offshore, especially off Cabo Peñas, it is often E-going.

2 **Tidal streams.** It has been reported that close inshore and off capes the tidal stream sets E when the tide is rising and that it can be strong enough to reverse the flow when the current is setting W.

Abnormal water levels

10.7

1 Abnormal water levels caused by the wind occur along the whole N coast of Spain, see 1.107 for further details.

CABO AJO TO CABO ORIAMBRE

GENERAL INFORMATION

Chart 1105

Topography

10.8

1 Between Cabo Ajo (43°31′N, 3°35′W) and Cabo Oriambre (43°24′N, 4°20′W) the coast consists generally of low cliffs backed by hills and intersected by a few river estuaries; its points and capes are in general inconspicuous.

Ría de Santander (43°27′N, 3°48′W) (10.22) forms the largest estuary on the N coast of Spain: Peña Cabarga (43°23′N, 3°47′W), the 567 m summit of Sierra Gandara that extends E and W at its head, is a useful landmark for vessels heading for Santander.

Off-lying banks

10.9

1 Numerous rocky banks lying up to 4 miles offshore between Cabo de Lata (43°30′N, 3°49′W) and Cabo Oriambre (24 miles W) are not normally a danger except in some cases to deep-draught vessels, but heavy seas and sometimes breakers form over them in bad weather when they should be given a wide berth. The 100 m depth contour running parallel to the shore passes N of all these banks but close to some of them.

2 Bajo El Castro (43°36′N, 3°38′W), Bajo Maruca (2 miles N) and Cabezo Coraje (43°30′N, 4°08′W) (10.89), detached banks lying farther offshore are not reported to be a hazard.

Local weather

10.10

1 In summer NE winds predominate: inshore these are modified by the sea breeze by day and the land breeze at night.

From October to February the prevailing winds are S to NW. The normal sequence is: a period of S wind and good visibility; cloud and rain rapidly followed by wind veering SW; further wind shift to W almost always accompanied by heavy showers and heavy swell. Storms usually begin with a rising S wind: the stronger it gets before it starts to rain the worse the gale.

2 Should a strong NW wind veer N or NNE it produces dangerous confused seas and closes all the minor ports in the area covered by this section.

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If after 2 or 3 days of N winds the wind backs W, it increases in strength, but if it veers NE several days of good weather may be anticipated.

In spring the weather follows a similar pattern but onshore winds are less fierce and rain more abundant.

CABO AJO TO CABO MAYOR

General information

Charts 1102, 1105

Description

10.11

1 The coastal passage from the vicinity of Cabo Ajo (43°31′N, 3°35′W) to that of Cabo Mayor (43°30′N, 3°47′W) leads about 9 miles W. Puerto de Santander (10.20) is entered from the W end of this passage.

Topography

10.12

1 From Cabo Ajo to Cabo Quintres (2½ miles WSW) the coast is bold and barren. Thence to Punta Concabrera (2 miles farther SW) the rocky cliffs are lower but are backed by the steep slopes of Monte Galizano (3 miles SW of Cabo Ajo).

2 Between Cabo Galizano (43°29′N, 3°42′W) and the vicinity of Isla de Santa Marina (1½ miles WSW), a low uninhabited scrub-covered island with a beacon-tower near its centre, on the E side of Ría de Santander entrance, the cliffs are of moderate height and backed by level ground.

The white sands of Arenal del Puntal that form the S side of Ría de Santander entrance are clearly visible at LW.

10.13

1 Península de la Mágdalena (43°28′N, 3°46′W), on the W side of Ría de Santander entrance, is surmounted by Palacio Real (10.37) and joined by a low isthmus to the E end of Paseo del General Dávila, a wooded ridge extending WSW on which there are a number of outstanding buildings but which hides the city of Santander from view N.

2 El Sardinero, a holiday resort fronted by the sandy beach at the head of Ensenada del Sardinero the bay NW of Península de la Mágdalena, is easily identifiable from NE.

3 From Cabo Menor (43°29′N, 3°47′W) which terminates in a low flat point on the NW side of Ensenada del Sardinero, the cliffs increase in elevation to Cabo Mayor (10.16). The houses and tall buildings at Cueto (1 mile W of Cabo Menor) are prominent when seen from the offing. Radio masts (chart 1145) stand 5 cables W of Cabo Mayor Light (43°29′N, 3°47′W) (10.14).

Rescue

10.14

1 **Lifeboat** (1.78): based at Santander (43°27′N, 3°48′W) (10.20).

Principal marks

10.15

1 **Landmarks:**

Cabo Ajo Lighthouse (43°31′N, 3°35′W) (9.228).

Isla de Mouro Lighthouse (tower on dwelling, 18 m in height) (43°28′·4N, 3°45′·3W) on islet 25 m high.

Cabo Mayor Lighthouse (white round stone tower, 30 m in height) (43°29′N, 3°47′W).

Peña Cabarga (43°23′N, 3°47′W) (10.8).

2 **Major lights:**

Cabo Ajo Light—as above.

Cabo Mayor Light—as above.

Directions

(continued from 9.233)

10.16

1 **Initial position** N of Cabo Ajo (43°31′N 3°35′W) (9.231).

The coastal route leads about 9 miles W, passing:

N of Cabo Quintres (43°30′N, 3°38′W) which rises close within its extremity to an elevation of 131 m. The ruins of a watch house and of a tower stand on its summit and SW side respectively. Cabezo de Cabo Quintres, a 18 m rocky patch, lies 8 cables NW of the cape. Thence:

2 N of Cabezo de Galizano (43°30′N, 3°42′W), a reef with depths of less than 20 m over it on which the sea breaks in rough weather from N or NW, that extends 1¼ miles NW from Punta Concabrera, a point of moderate elevation with a rocky foreshore, thence:

3 N of Bajo Santoñuca (43°29′N, 3°44′W), a detached rocky bank on which the sea breaks in rough weather, lying 6 cables NNW of Isla de Santa Marina (10.12), thence:

4 N of Cabo Mayor (43°30′N, 3°47′W) an abrupt point whose N side consists of large slate slabs: its upper part has an irregular face named Pico del Gallo on account of its resemblance to a cock's beak. Cabo Mayor Lighthouse (10.15) stands 2½ cables WSW of the point.

10.17

1 **Useful mark:**

Tower (43°29′·5N, 3°34′·5W) (9.233).

(Directions continue at 10.67; directions for Puerto de Santander are given at 10.39)

Small craft

Chart 1105 (see 1.18)

Río de Galizano

10.18

1 The entrance to Río de Galizano (43°29′N, 3°40′W) is obstructed by a bar: in 1983 it was reported that small craft could enter the river at HW but that it dried out at LW.

Ensenada de Galizano

10.19

1 **Anchorage.** Cabo Galizano (43°29′N, 3°42′W), formed of cliffs terminating in steps, provides shelter from SW and W winds in Ensenada de Galizano, a bay with a sandy bottom and a clean level beach extending 5 cables E from the point.

PUERTO DE SANTANDER

General information

Chart 1145

Position

10.20

1 Puerto de Santander is entered between Cabo Menor (43°29′N, 3°47′W) (10.13) and Isla de Santa Marina (2¼ miles ESE) (10.12) and extends 5 miles SW. The principal berths (43°27′N, 3°49′W) lie on the NW side of Ría de Santander fronting the city.

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Function

10.21

1 Ciudad de Santander, population of about 200 000), the capital of the province of Cantabria, has grown up around the port. There is a steel works at Nueva Montana and a chemical plant at Maliaño on its S outskirts.

2 Most of the port's trade is with foreign countries, about half of it consisting of solid bulk cargoes. Principal imports are: coal, soya beans and flour, scrap iron, minerals. Principal exports are: iron and steel products, cereals, minerals.

Trade with other Spanish ports consists mainly of imported petroleum products.

A fleet of 70 fishing vessels is based on the port.

Topography

10.22

1 Ría de Santander is encumbered with extensive sandy tidal flats and surrounded by hills. The main channel follows the NW shore to the head of the estuary which is named Ría de Astillero.

Ciudad de Santander extends up the S slopes of Paseo del General Dávila (10.13) from the harbour front. Parayas Airport is built on reclaimed land S of the port on the W bank of the entrance to Ría de Astillero, which leads to the shipyards at Astillero (43°24′N, 3°49′W) (10.54) 1½ miles farther S.

Port limits

10.23

1 The outer limit of Puerto de Santander is a line drawn from Cabo Menor (43°29′N, 3°47′W) to Cabo Galizano (3¾ miles ESE) (chart 1105).

Approach and entry

10.24

1 Puerto de Santander is approached from N or ENE passing either W or SSE respectively of Bajo Santoñuca (43°29′N, 3°44′W) (10.16).

The port is entered between Península de la Mágdalena (43°28′N, 3°46′W) and Isla de Santa Marina (1½ miles E). The principal channel passes E of Isla de Mouro (4 cables ENE of Península de la Mágdalena), and thence through Canal del Carrejo the channel leading SW between Península de la Mágdalena and Arenal del Puntal (5 cables S) (10.44).

Traffic

10.25

1 In 2003 the port was used by 1480 vessels totalling 12 414 001 dwt.

There is a regular Ro-Ro vehicle and passenger ferry service to Plymouth.

Port Authorities

10.26

1 Autoridad Portuaria de Santander, Paseo de Pereda 33–1 E–39004 Santander.

Website: www.puertosantander.com

Limiting conditions

10.27

1 **Controlling depths.** The entrance channel is maintained to 12 m although depths and banks in the entrance channel are liable to change due to silting and scouring. The navigable channel between Punta Rabiosa and the main berths is dredged to 11·5 m.

Deepest and longest berths: Muelle Raos No 3 together with Muelle Gabriel Huidobro (Raos No 2) (10.52).

2 **Tidal levels.** See information in *Admiralty Tide Tables.* Meam spring range about 4.4 m; mean neap range about 1.4 m.

Abnormal water levels. Gales from SW to NW raise the water level by 0·3 to 0·5 m, gales from NE to SE reduce the water level by the same amount.

Density of water: reported to be 1·025 g/cm^3.

Maximum size of vessel handled: 36 584 grt.

Arrival information

Port radio

10.28

1 The port radio is operated from the pilot's office, see *Admiralty List of Radio Signals Volume 6(2)* for further details.

Notice of ETA

10.29

1 ETA, draught and requirements should be reported 24 and 12 hours in advance.

Outer anchorage

10.30

1 The outer anchorage (43°29′N, 3°46′W) is divided into two zones. The N area, Zone B, is used from October to June by vessels carrying non-dangerous cargo; the S area, Zone A, is for vessels carrying dangerous cargo, and for vessels carrying non-dangerous cargo during the months of July, August and September.

Pilots and tugs

10.31

1 **Pilotage** is compulsory for vessels over 500 gt and available throughout the 24 hours, see *Admiralty List of Radio Signals Volume 6(2)* for further details.

Boarding places: in fair weather 9 cables NE of Isla de Mouro (43°28′N, 3°45′W) (10.15); in rough weather 8 cables ENE of Isla Horadada (8 cables SW of Isla de Mouro) (10.44).

2 **Pilot boat:** white hull with black letter 'P' on each bow; by day shows the usual Spanish pilot's flag (1.33).

Tugs: several available; ship's tow ropes are used.

Local knowledge

10.32

1 Local knowledge is necessary due to uncharted depth changes caused by silting, dredging and scouring.

Harbour

General layout

10.33

1 The principal commerical berths, listed in sequence from the entrance (positions given from cathedral (43°27′·7N, 3°48′·4W)), are:

Muelles del Almirante, the quays on the W bank extending 8 cables SSW from the N end of Muelle de Albareda (2 cables E) to the S end of Muelle de Maliaño (7½ cables SSW).

2 Quays on the N and S sides of the outer section of Dársena de Maliaño (8½ cables SSW).

Quays on the N and S sides of Dársena Norte de Raos (1 mile SSW), the dredged basin.

Pantalán de Repso (1¼ miles S), a tanker berth on the E side of the channel to Astillero.

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Puerto de Santander from NE (10.33)

(Original dated 1997)

(Photograph – FOAT, S.L.)

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3 The fishing port is situated in the inner section of Dársena de Maliaño (9 cables SW).

Anchorage is possible in most of the main channel within the narrows.

Farther up harbour the channel leads past Marina del Cantábrico (10.59) to the shipyards at Astillero (43°24′N, 3°49′W) (10.55).

Hazards

10.34

1 **Dredgers** are constantly at work in the narrows (10.45) between Isla Horadada (43°28′N, 3°46′W) and Punta Rabiosa (4 cables SW).

Ferries operate a frequent service between their terminals at Santander (43°27′·8N, 3°48′·0W) and Punta del Rostro (1½ miles SE).

Traffic and storm signals

10.35

1 Traffic and storm signals are shown by day and exhibited at night from the pilot's lookout on Punta del Caballo (43°28′·2N, 3°45′·9W).

Natural conditions

10.36

1 **Tidal streams** are strong, especially the out-going stream which is reported to attain a spring rate of 5 kn off the entrance to Dársena de Maliaño and 3 to 4 kn in the narrows off Punta Rabiosa. During the rainy season the out-going flow is considerably increased. The slack water period is very brief especially at springs.

2 **Weather.** The prevailing winds are NE in spring and SW to NW during the rest of the year. The strongest winds are those from S. They are comparatively frequent at the beginning of spring and in the autumn, they also occur in winter and very occasionally in summer. Their onset is sudden; exceptionally clear visibility and the appearance of long leaden clouds with a hard outline are warning signs.

See also 1.156 and climatic table for Santander (43°28′N, 3°49′W) (1.168).

Principal marks

10.37

1 **Landmarks** (positions given from first named):

Isla de Mouro Lighthouse (43°28′·4N, 3°45′·3W) (10.15).

Palacio Real (5 cables WSW), the former royal palace now a university, standing on the summit of Península de la Magdalena.

La Cerda Lighthouse (white square tower 9 m in height) (5 cables SW).

Palacio Real



La Cerda Lighthouse from SE (10.37)

(Original dated 2000)

(Photograph – G Denslow)

Hotel Real (1¼ miles WSW) on the crest of Paseo del General Dávila.

2 **Major light:**

Cabo Mayor Light (43°29′N, 3°47′W) (10.15).

Other aids to navigation

10.38

3 **Racon:**

Punta Rabiosa Front Leading Light (10.44).

Directions

(continued from 10.17)

East-north-east approach

10.39

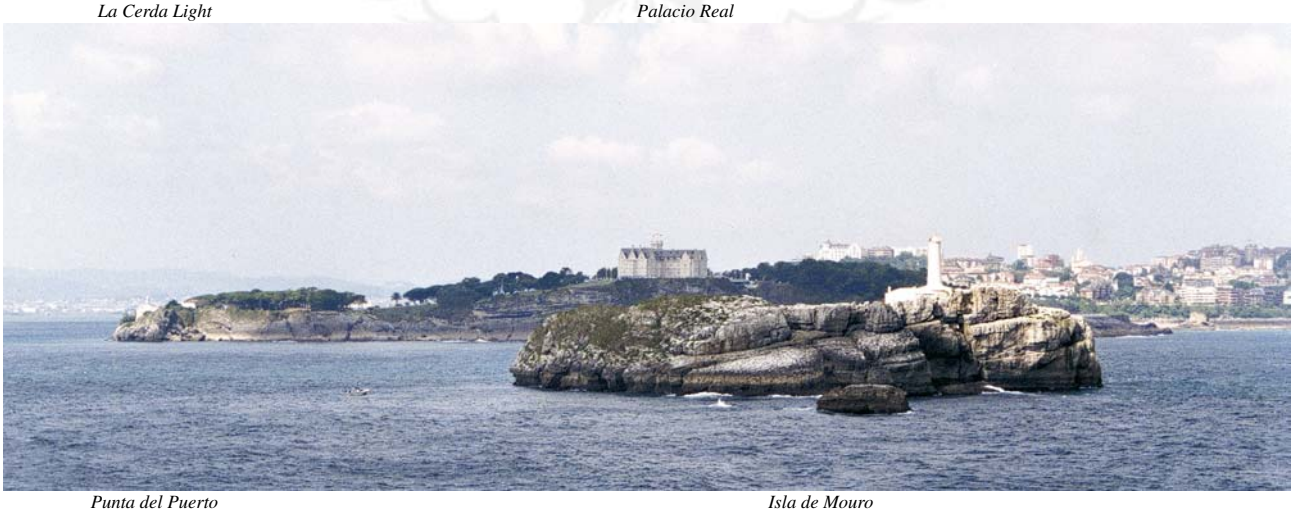
1 **Initial position** 43°29′·2N, 3°43′·5W.

Leading marks:

Front: Isla de Mouro Lighthouse (43°28′·4N, 3°45′·3W) (10.15).

Rear: Palacio Real (5 cables WSW of front mark) (10.37).

La Cerda Light *Palacio Real*



Punta del Puerto *Isla de Mouro*

Isla de Mouro Lighthouse from ENE (10.37)

(Original dated 2000)

(Photograph – G Denslow)

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2 The alignment (241°) of these marks leads to a position 5 cables ENE of the front mark, passing (positions given from front mark):
SSE of Bajo Santoñuca (1¼ miles NE) (10.16), thence:
NNW of the N point of Isla de Santa Marina (1 mile E) (10.12).
Caution. ENE of the initial position the alignment passes over Cabezo de Galizano (3 miles ENE of front mark) (10.16) (chart 1105).

10.40

1 The line of bearing 197° of Alto de Contrajón summit (43°26′·8N, 3°45′·4W) then leads 3 cables SSW into the entrance of Canal del Carrejo (10.44).

North approach

10.41

1 **Initial position** 43°30′N, 3°45′W approximately.
The N approach to the channel between Isla de Mouro (43°28′·4N, 3°45′·3W) and Isla de Santa Marina (1 mile E) (10.12) leads S to the entrance of Canal del Carrejo (10.44), passing (positions given from Isla de Mouro):

2 W of Bajo Santoñuca (1¼ miles NE) (10.16), and:
E of Cabo Menor (1¼ miles NW) (10.13) from which a rocky ledge extends a short distance ENE, thence:
E of La Corbera, a flat topped islet with steep sides standing at the extremity of a reef extending ½ cable NE from the E point of Isla de Mouro.

10.42

1 **Clearing marks.** The alignment (about 193°) of the following marks passes WNW of Bajo Santoñuca:
Front: summit of Alto de Contrajón.
Rear: summit of Peña Cabarga (43°23′N, 3°47′W) (10.8) (chart 1105).

Entrada de la Barra

10.43

1 **Initial position** 43°29′N, 3°46′W.
The passage W of Isla de Mouro (43°28′·4N, 3°45′·3W) may be used by vessels of light draught in fair weather. In rough weather from NW, the sea breaks on the bar that extends SW from the island to Península de la Magdalena.

2 **Crossing the bar,** the line of bearing 316° of Cabo Mayor (43°29′·6N, 3°47′·0W) (10.16) just open NE of Cabo Menor (5 cables SE) (10.13), astern, leads SE into Canal del Carrejo, passing:
SW of Bajo de El Calo, an underwater reef extending 1 cable W from Isla de Mouro, and:
NE of Bajo de La Garma (3 cables SW of Isla de Mouro).

3 Small craft can pass W of Bajo de La Garma but local knowledge is necessary to keep in the deepest part of the channel. The in-going tidal stream sets towards Punta del Puerto (5 cables SW of Isla de Mouro).

Canal del Carrejo

10.44

1 **Leading lights.**
Front light: (post on metal tower) (43°27′·6N, 3°46′·3W).
Rear light: (similar structure), 100 m SW of front light.



Punta Rabiosa leading lights from NE (10.44)
(Original dated 2000)
(Photograph – G Denslow)

2 The alignment (235¾°) of these lights leads through Canal del Carrejo passing:
SE of Isla de Mouro Light (10.15), thence:
SE of Punta del Puerto, surmounted by La Cerda Light (10.37), thence:
SE of Isla Horadada, on which is Peña Horadada No 1 Light (black and white chequered round masonry tower 5 m in height).



Isla Horadada from SE (10.44)
(Original dated 2000)
(Photograph – G Denslow)

3 Canal del Carrejo leads directly into the main buoyed channel.
Caution. A branch of the out-going tidal stream turns SE towards the S shore of Canal del Carrejo.

Narrows

10.45

1 Between Isla Horadada (43°28′N, 3°46′W) and Punta Rabiosa (4 cables SSW), the W extremity of Arenal del Puntal, the channel is constricted by a reef extending 2 cables SW from the SW end of Isla La Torre (1½ cables WNW of Isla Horadada), a low rocky flat-topped islet, and by the edge of the sandbank fronting Punta Rabiosa which is steep-to and scoured by the tidal stream.

2 The channel is maintained by constant dredging and its limits are marked:
On the N side by No 1 and No 3 La Osa Light-buoys (starboard hand), and:
On the S side by Nos 2 and 4 Light-buoys (port hand).
The track shown on the chart changes direction (2 cables S of Isla Horadada) to 259½° where it joins the alignment of the fairway leading lights (10.46).

Fairway

10.46

1 **Leading lights:**
Front (metal tower 16 m in height) (43°27′·4N, 3°48′·5W) on Muelle de Maliaño.
Rear (building 19 m in height) (160 m W of front light).

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2 The alignment (259½°) of these lights leads in the fairway from the narrows to the vicinity of Muelle de Maliaño, passing (positions given from front light):

N of the tidal flats whose N edge is marked by No 6 Las Hueras Light-buoy (port hand) (7 cables E) and No 8 El Dorao Buoy (port hand) (3½ cables ESE), and:

S of the shoals extending S from the vicinity of the Dársena de Molnedo (8 cables ENE) and SE from Muelle Maria Albareda (4 cables NE) and marked by No 5 and No 7 Light-buoys respectively.

10.47

1 The fairway then turns S, passing (positions given from the head of Pantalán de Repsol (43°26′·5N, 3°48′·4W)):

W of the tidal flats marked by light-buoys (port hand), and:

E of the entrance to Dársena Norte de Raos (4 cables WNW) marked by No 11 Light-buoy (preferred channel to starboard), thence:

Close W of Pantalán de Repsol (10.53) marked by lights.

Ría de Astillero

10.48

1 The channel continues generally S for a farther 2½ miles to Astillero (43°24′N, 3°49′W) (10.55). The fairway has a maintained depth of 4·5 m as far as the shipyard at Astillero, and is marked by light-buoys (lateral).

Basins and berths

Anchorage

10.49

1 The anchorage at Fondeadero de los Mártires (43°26′·7N, 3°48′·6W) has a dredged depth of 11·5 m ; holding ground moderate, vessels liable to drag anchor in S or NW winds; used by vessels proceeding to or from Astilleros or those carrying explosives or dangerous cargo.

2 Due to the restricted swinging-room vessels generally moor to two anchors: the heavier anchor is usually laid to the W or SW due to the tidal stream (10.36). Southerly gales (10.36) are a frequent cause of dragging.

Muelles de Ribera

10.50

1 The quays on the W bank of the fairway that handle cargo total about 1250 m in length. Tramos 10 and 11 at the N end of Muelle de Maliaño, combined length 242 m, depth alongside 10·5 m, are the deepest and longest berths: they handle general and solid bulk cargoes. There is also a Ro-Ro berth on Muelle de Maliaño.

Muelle del Almirante (1½ cables SSE of the cathedral) is a Ro-Ro berth, depth 9·5 m, with a linkspan and a ferry terminal for passengers and vehicles.

Dársena de Maliaño

10.51

1 Muelle de la Margen Norte, the quay on the N side of the outer basin, is 538 m in length, 9·5 m in depth

Pantalán de Repsol

Pantalán de Terquisa

Marina del Cantábrico



Dársena de Raos

Ría de Astillero from NW (10.48)

(Original dated 1997)

(Photograph – FOAT, S.L.)

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alongside; it handles general and bulk cargoes including grain, molasses and edible oils.

Dársena de Raos

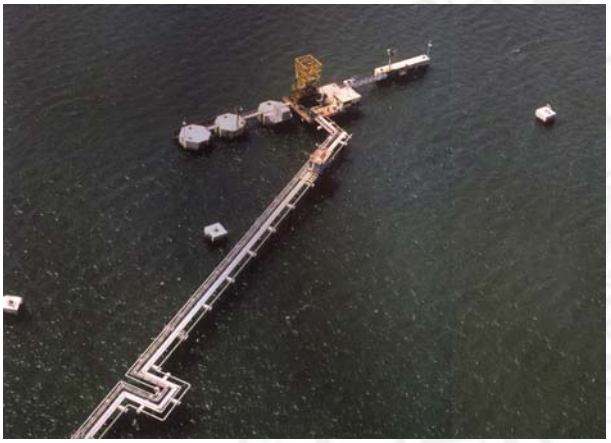
10.52

1 Dársena de Raos is a basin dredged to 11·5 m (1992). The longest quay is Muelle No 2 (Gabriel Huidobro) and Muelle No 3, with a combined length of 760 m. All berths are dredged to 13·0 m except Muelle Jesús González, a Ro-Ro berth dredged to 10.0 m (1992).

Other tanker berths

10.53

1 **Pantalán de Repsol** (43°26′·5N, 3°48′·3W), a berth for tankers up to 34 000 dwt at dolphins, length 244 m between the outermost, depth about 9·5 m, handles petroleum products and liquid gases.



Pantalán de Repsol (10.53)
(Original dated 1997)

(Photograph – FOAT, S.L.)

Ría de Astillero

10.54

1 Muelle de Equipos Nucleares SA, on the W bank of the channel at the entrance to Ría de Boo, length 130 m depth alongside 5 m, is equipped to handle loads weighing up to 800 tonnes.

Astilleros de Santander SA Antedique 2 (43°24′·5N, 3°48′·9W), length 175 m depth alongside 3 m, provides the longest and deepest repair berth.

Port services

Repairs

10.55

1 **Shipyard** at Astillero carries out repairs of all kinds.

Docks and slips. At Astillero there are two dry docks and three slips; details of the largest are:

Astilleros de Santander Dock 2: length 231 m; width 32 m; sill 4·2 m below chart datum; maximum capacity 55 000 dwt.

Astilleros de Santander Slip 2: can accept vessels up to 3500 dwt, length 80 m, beam 14·0 m.

Other facilities

10.56

1 Compass adjustment.

Deratting and deratting exemption certificates issued.

Hospital.

Oily waste reception facilities.

Supplies

10.57

1 **Fuel oil:** supplied by pipeline at berths in Dársena de Maliaño, by road tanker at other quays.

Fresh water: supply points at quays; supplied by lighter at other berths.

Provisions: available.

Small craft

10.58

1 **Dársena de Molnedo** (43°27′·8N, 3°47′·5W), also called Puerto Chico, provides numerous berths for port service craft and local yachts at quays and pontoons with depths from 2 to 3·5 m alongside.

Dársena de Maliaño: the innermost section of the basin provides berths and repair facilities for fishing vessels.

10.59

1 **Marina del Cantábrico** (43°25′·8N, 3°48′·5W) is an artificial basin with pontoon berths for about 1300 yachts and the usual marina facilities. The approach channel leads WSW from the Ría de Astillero main channel to the marina entrance, and is marked by leading lights (235½°) and a light-buoy (special) (uncharted) moored on the NNW side of the channel entrance.

10.60

1 **Ensenada de la Barquería** (43°26′·9N, 3°45′·9W) is a marina situated in a small cove NE of Pedreña. The approach is through a marked channel which is entered close W of Punta Rabiosa (10.45).

CABO MAYOR TO PUNTA BALLOTA

General information

Chart 1105

Route

10.61

1 The coastal route from the vicinity of Cabo Mayor (43°30′N, 3°47′W) to that of Punta Ballota (43°26′N, 4°05′W) leads about 13 miles WSW.

Topography

10.62

1 Between Cabo Mayor and Punta Ballota the coastline is generally low and rocky and the points inconspicuous: it is fronted in many places by rocks and rocky islets. In contrast Playa de Valdearenas, a sandy beach extending 7 cables SW from La Peñuescas (43°27′N, 3°58′W) backed by Arenal de Valdearenas, extensive light red sands extending inland more than 50 m up the NW slopes of Altos de Liencres (10.63), can be seen from a considerable distance.

10.63

1 Inland at the E end of the area the ground rises to an even ridge extending WSW from Cabo Mayor; farther inland the parallel ridge of Paseo del General Dávila (10.13) can be seen from offshore as well as Peña Castillo (43°27′N, 3°51′W), the 144 m summit at its W end.

Farther W Altos de Liencres, dark coloured hills extending 1½ miles SSW from the vicinity of Liencres village (43°28′N, 3° 55′W), are a distinctive feature as they form the only high land near the coast between Cabo Mayor and the entrance to Ría de Suances (12 miles WSW) and cannot be confused with any other hills.

Breakers

10.64

1 In bad weather breakers or heavy seas form over the numerous rocky patches (10.67) lying off this stretch of

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coast which should be given a wide berth in these conditions.

Rescue

10.65

1 **Lifeboat** (1.78): based at Santander (43°27′N, 3°48′W) (10.20).

Principal marks

10.66

1 **Landmarks:**:

Cabo Mayor Lighthouse (43°29′N, 3°47′W) (10.15).

Peña Cabarga (43°23′N, 3°47′W) (10.8).

Monte Picota (43°26′N, 3°56′W) the S-most and higher of two well defined peaks resembling a saddle that form the summit of Altos de Liencres (10.63).

Pico de Mogro (43°25′N, 3°58′W) a distinctive isolated conical hill.

Isla de los Conejos (43°27′·2N, 4°01′·5W), a steep-sided island 51 m high, the NW-most and largest of the five Islas de Suances.

2 **Major lights:**

Cabo Mayor Light—as above.

Punta del Torco de Fuera Light (tower and dwelling, 9 m in height) (43°26′N, 4°02′W), which is obscured close inshore between 091° and 113° by higher ground W of the light.

Directions

(continued from 10.17)

10.67

1 **Initial position** N of Cabo Mayor (43°30′N, 3°47′W) (10.16).

The coastal route leads about 13 miles W, passing:

2 N of Cabo de Lata (43°30′N, 3°49′W), low and rugged, and Punta Vergajo (7 cables WSW) which is rather higher: the coast between these points is fronted by above-water and drying rocks. A rocky underwater ridge on which the sea breaks in bad weather extends 3¼ miles NW from Cabo de Lata and includes (positions given from the cape): Cabezos de la Vaca (7½ cables NW); Cabezo de Tierra (2 miles NW); Bajo La Lengüeta (3 miles NW). Thence:

3 N of Punta de la Mesa (18 m high) (43°29′·0N, 3°50′·5W). Cabezo de la Virgen del Mar, an 18 m patch on which the sea breaks in bad weather, and Isla Virgen del Mar, a low rugged island connected to the mainland by a bridge, lie 1½ miles NNW and W respectively of the point. Thence:

4 N of Isla del Castro (43°28′·5N, 3°54′·4W) whitish and connected to the mainland at LW by a beach. Cabezo de los Urros (depth 19 m) and Bajo del Castro lie 7 cables and 2¾ miles N of the island respectively: in bad weather a heavy sea that does not break forms over the latter rocky bank. Thence:

5 N of Punta de Somocueva (43°28′N, 3°57′W) that terminates in a small peninsula. In bad weather heavy seas that do not break form over Bajo Juan de Ambojo (3 miles N). Bajo Cadramón, a 50 m patch, lies 3 miles NW of the point. Thence:

N of Islas de Suances (43°27′N, 4°01′W); a 10·8 m patch lies 1 mile NNE, thence:

6 N of Punta del Dichoso (43°26′N, 4°03′W), a whitish bare rocky peninsula with Punta del Torco de Fuera Lighthouse (10.66) and Alto del Dichoso (knoll 41 m high) standing near its E and W extremities respectively. From a distance W the peninsula looks like an island as its isthmus is low. Bajo Canto (2 miles NNW) a steep-to rocky patch on which heavy breaking seas occur in bad weather should be given a wide berth in these conditions. Thence:

7 N of Punta Ballota (43°26′N, 4°05′W), prominent, black and sheer, and of La Percebera a drying rock lying close off its extremity.

10.68

1 **Clearing bearing.** The line of bearing 135° of Isla de Mouro (43°28′·4N, 3°45′·3W) (10.15) open NE of Cabo Mayor (1¾ miles NW) (10.16) clears NE of Cabezos de la Vaca, Cabezo de Tierra and Bajo La Lengüeta.

Useful mark:

Liencres church (tall tower) (43°28′N, 3°55′W).

(Directions continue at 10.89)

Small craft anchorages

Chart 1105 (see 1.18)

10.69

1 **Ría de San Pedro del Mar** is entered between Los Cañones (43°29′N, 3°50′W), a flat-topped steep-sided promontory surmounted by a battery, and Punta de la Mesa (2 cables WNW) (10.67). The entrance is foul and exposed to N and NW, but with local knowledge the estuary is accessible to small craft at HW during fine weather and provides complete shelter. The river is navigable as far as a mill situated about 4 cables upstream.

10.70

1 **Ensenada de Somocueva** (43°28′·2N, 3°56′·8W), a cove with a clean beach at its head, on the W side of the isthmus of Punta de Somocueva (10.67), provides shelter for fishing vessels from winds between N and E.

10.71

1 **Río de Mogro** is accessible, with local knowledge, only at HW in good conditions due to the drying bar at its entrance between Punta del Aguila (43°27′N, 3°59′W), a low rocky point with an islet close N and five rocks (four above water, the NE-most awash) off its NE side, and the W extremity of Playa de Valdearenas (3 cables SE) (10.62).

Ría de Suances and La Requejada

Chart 1150 plan of Ría de Suances

General information

10.72

1 **Description.** Ría de Suances, also called Ría de San Martín de la Arena, is approached between Isla de los Conejos (43°27′·2N, 4°01′·5W) (10.66) and Punta del Dichoso (1 mile WSW) (10.67), and entered W of Punta de Afuera (8 cables SSW of the island).

10.73

1 **Topography.** The land on both sides of the estuary consists of undulating woodland and scattered villages and farms. Villa de Suances (43°26′N, 4°02′W), the largest of the villages, stands on rising ground on the W bank near the entrance of the estuary. The village of San Martín de Hinojedo (43°24′N, 4°03′W; uncharted) lies about 1 km WSW of Hinojedo berths (10.82) and the village of La Requejada (43°23′N, 4°02′W) (chart 1105) stands on the E bank 1 km S of La Requejada berths (10.81).

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2 **Traffic.** In 2003 the commercial berths at La Requejada handled 28 vessels totalling 60 252 dwt.

Limiting conditions

10.74

1 **Controlling depth** in the channel: 1·0 m.

Deepest berth: at Hinojedo (10.82).

Tidal levels. See information in *Admiralty Tide Tables.* Meam spring range about 3·5 m; mean neap range about 1·4 m.

Abnormal water levels: fresh winds from SW to NW increase the level of HW by 0·3 to 0·5 m and fresh winds from NE to SE decrease the level of HW by the same amount.

2 **State of the bar.** Breakers form on the bar in the slightest sea. Entry should not be attempted if there is any swell in the approaches, or if the river is in spate which is indicated by discoloured water for some distance from the entrance. Pilots state that vessels drawing 3 or 4 m can cross the bar 3 or 5 hours after LW, respectively. Larger vessels should not attempt entry if the flow (10.78) is out-going.

Arrival information

10.75

1 **Outer anchorages** (positions given from Punta del Torco de Fuera Light (10.66)). In fair weather vessels awaiting the pilot anchor approximately in the position (3½ cables NE) shown on the chart, bottom sand good holding. Vessels awaiting suitable conditions to cross the bar anchor in Punta Ballota anchorage (1½ miles W) (10.85).

10.76

1 **Pilotage** is compulsory for vessels of more than 50 tonnes.

Boarding place: in fair weather, off the entrance; with heavy seas the pilot boat remains inside the breakers. Alternatively the pilot may be embarked at Santander (10.31).

Local knowledge is necessary if the vessel's draught is more than about 2 m.

Harbour

10.77

1 **General layout.** The channel leads 3½ miles generally S to La Requejada berths (10.81) and Hinojedo berths (10.82) which are situated on the E and W banks of the river respectively where it divides at the N end of Isla de San Martín de Hinojedo (43°24′N, 4°02′W). Suances small craft facilities (10.84) are located on the W bank of the river about 3 cables within its entrance.

10.78

1 **Flow.** The tidal stream attains a rate of about 3 kn at springs in the entrance. Freshets considerably increase the rate of the out-going flow and may overcome the incoming tidal stream.

Directions

10.79

1 **Initial position** 43°27′·0N, 4°02′·7W.

Leading lights:

Front (white truncated conical masonry tower 6 m in height) (46°26′·3N, 4°02′·0W) situated on E training wall.

Rear (white masonry tower, 10 m in height) (210 m SE of front light) at the foot of Punta Marzán, a steep-sided hill.

2 The alignment (149½°) of these lights leads SE to a position 1 cable NW of front light, in the entrance to the fairway, passing (positions given from front light):

NE of Punta del Torco de Fuera (4½ cables NW), close within which stands Punta del Torco de Fuera Light (10.66), thence:

Close SW of the 125 m long outermost section of the E training wall that covers at HW and is marked by a beacon (red sphere on tall red iron column) (1¾ cables NNW), and:

3 Close NE of the drying sandbank that fills most of the bay W of the training wall.

Thence the channel follows the E training wall at a distance of 15 to 20 m as far as Punta Marzán, whence it leads S towards the entrance of the basin at Suances (W bank, 3 cables S of Punta Marzán).

Useful mark:

Suances church, prominent tower, elevation 117 m (43°25′·7N, 4°02′·6W).

10.80

1 The chart is the best guide for the channel, 50 to 100 m in width, bottom sand or sandy mud, that leads to the berths at La Requejada and Hinojedo (3½ miles upstream).

The training walls, which cover at HW springs, are marked by beacons (metal posts); those on the E bank are red and white, those on the W bank black and white.

2 From the vicinity of the gap in the E training wall at El Abrigo (43°25′·3N, 4°01′·4W) the channel is marked in places by pairs of leading beacons, the first pair (painted black and white) standing close to Casa del Buzo (3½ cables SW). Thereafter the alignments are shown on the chart.

Vessels normally proceed to La Requejada on a rising tide. They can anchor in the channel or secure head and stern alongside the banks if the tidal stream is unfavourable.

Berths

10.81

1 **La Requejada.** Muelle de Solvay (43°23′·8N, 4°01′·8W), 60 m in length, is normally used by the Solvay Company to handle its own goods.

A wooden wharf, 37 m in length, is disused.

10.82

1 **Hinojedo.** Two berths (43°23′·8N, 4°02′·1W), depth alongside 5 m, are equipped to load hornblende and calamine in bulk.

Supplies

10.83

1 Fresh water and provisions are available at La Requejada and Hinojedo.

Small craft

10.84

1 **Berths** for fishing vessels and yachts are available in the basin at Suances (43°25′·8N, 4°02′·0W), reported (1983) to have a depth of 1·0 m.

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Port services:

Repairs: slip for vessels up to 100 tonnes in basin (43°25′N, 4°02′W) opposite Punta de Cudón.

Supplies: marine diesel fuel and provisions available at Suances.

Punta Ballota anchorage

Chart 1105 (see 1.18)

10.85

1 Anchorage may be obtained in Ensenada de Cabrera (43°26′N, 4°04′W), sheltered from SW to NW gales under the lee of Punta Ballota, in depths of 10 m sand. It is used by vessels awaiting suitable weather conditions to cross the bar of Ría de Suances (10.74).

PUNTA BALLOTA TO CABO ORIAMBRE

General information

Chart 1105

Route

10.86

1 The coastal route from the vicinity of Punta Ballota (43°26′N, 4°05′W) to that of Cabo Oriambre (43°24′N, 4°20′W) leads about 12 miles W.

Topography

10.87

1 Between Punta Ballota and Cabo Oriambre the coastline is indented and the points are generally inconspicuous. From Punta Ballota (10.67) WSW the coast is moderately high and generally bare showing light coloured rock between patches of vegetation Between Punta Calderón (43°24′·5N, 4°09′·5W) (10.89) and the entrance to Ría de la Rabia (7½ miles W) the coastline is mostly cliffy.

2 Ensenada de Luaña (43°24′N, 4°13′W) is distinctive as it is filled with sandbanks forming the only beach of any size between Punta Ballota (6½ miles ENE) and Puerto de Comillas (3 miles W) and is backed by a ravine. Both features are clearly visible from seaward as are two large caves in the cliffs about 1 mile farther W.

Playa de la Rabia, a white sandy beach strewn with rocks, extends 1¼ miles SSE from Cabo Oriambre to the entrance of Ría de la Rabia.

Major lights

10.88

1 Punta del Torco de Fuera Light (43°26′N, 4°02′W) (10.66).

Punta San Emeterio Light (43°24′N, 4°32′W) (10.104).

Directions

(continued from 10.68)

10.89

1 **Initial position** N of Punta Ballota (43°26′N, 4°05′W) (10.67), noting the extensive marine farm centred on 43°27′N, 4°08′W (3 miles WNW of Punta Ballota).

2 The coastal route leads about 12 miles W, passing:

N of Punta Calderón (43°24′·5N, 4°09′·5W) a high craggy promontory fronted by three small islets (uncharted). Cabezo Coraje (6 miles N), an extensive rocky bank, is not a hazard as it is too deep for breakers to form over it in heavy weather. Thence:

3 N of Punta de La Rebollera (43°24′N, 4°13′W), 75 m high and cliffy, and Punta Ruiloba (1 mile W) low and fronted by El Rastrillal a reef extending 1½ cables N; between these two points lies the distinctive Ensenada de Luaña (10.87). Bajo Torriente (3¾ miles N) and Bajo Luaña (3¼ miles NNW), two rocky banks over which there are heavy breaking seas in a NW gale, should be given a wide berth in rough weather. Thence:

4 N of Punta de la Gerra (43°23′·5N, 3°17′·3W) and Punta de la Moria (2 cables W), and of El Moro a drying reef extending nearly 3 cables N of these two low rocky points. Thence:

5 N of Cabo Oriambre (43°24′N, 4°20′W) whose N face, consisting of whitish cliffs backed by flat-topped hillocks, stands out clearly against the sandy beaches on both sides of the headland. The sea often breaks on Bajo La Molar (5 cables NE) a rocky patch. Bajas del Cabo, a 1·3 m patch, lies 3 cables W of Punta Peñaentera, the NW point of the cape. Neither Bajo San Francisco (1½ miles NE) nor Bajo San Juan de Cara (depth 48 m) (2½ miles N) are dangerous, but vessels should pass N of them when a heavy sea is running.

10.90

1 **Useful marks:**

Oreña church (prominent square tower) (43°24′N, 4°09′W).

Cóbreces church (two conical towers) (43°23′·1N, 4°12′·7W; uncharted); a convent with a conical tower stands 1 cable NW.

Nuestra Señora de los Remedios Church (spire) (43°23′N, 4°16′W) standing alone.

Seminary (prominent large red brick building with two towers) (43°23′·2N, 4°18′·0W; uncharted) on a height close W of Villa de Comillas (10.93).

(Directions continue at 10.105)

Small craft harbour and anchorages

Chart 1105 (see 1.18)

Ensenada de Calderón

10.91

1 **Anchorage** may be obtained in Ensenada de Calderón (43°24′·7N, 4°08′·2W), a small horseshoe-shaped bay, in depths from 5 to 16 m sand and rock, sheltered except from NW to NE.

Ensenada de Luaña

10.92

1 **Anchorage.** Fishing vessels take shelter from winds between SW and NW in Ensenada de Luaña (10.87) under the lee of Punta Ruiloba (43°24′N, 4°14′W) and El Rastrillal (10.89).

Puerto de Comillas

10.93

1 **General information.** Puerto de Comillas (43°23′·5N, 4°17′·3W), a small drying artificial fishing port and yacht harbour, is situated on the E side of Punta de la Gerra (10.89), the W entrance point of a wide bay encumbered with rocks and reefs.

2 Entry is possible only in good weather and requires local knowledge as the approach channel is narrow and tortuous with a rocky bar with depths from 2 to 3·3 m over it. If there are breakers over Bajo La Molar (2¼ miles WNW) (10.89) it indicates that similar conditions exist on the bar and that it would be unsafe to attempt entry.

Villa de Comillas lies 1 km S of the harbour.

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10.94

1 **Directions.** The alignment (194°) of the following leading lights (uncharted) situated on the slope of a hill on the SW side of the bay lead through the outer part of the approach channel to a position 1½ cables E of the harbour:

Front light (white conical tower, black stripe, 4 m in height) (2½ cables SSE of harbour).

Rear light (similar structure) (30 m SSW of front light).

2 A second alignment (245°) of leading lights (white towers black stripe, 4 m in height) (uncharted, standing 30 m apart 1 cable SSW of the harbour), which are obscured when bearing less than 231°, then leads through the inner part of the approach channel to a position close S of the harbour entrance.

10.95

1 **Basin** is formed between two moles and dries at LW springs, bottom muddy sand. The entrance faces SSW, is 10 m wide, and is marked by lights. It can be closed by a gate of wooden beams to reduce surging in rough weather.

Mooring chains are laid NW–SE across the bed of the basin. There are berths for about 10 fishing boats and 40 small yachts.

Supplies: marine diesel (light); fresh water; provisions.

Ría de la Rabia

10.96

1 **Anchorage.** Ría de la Rabia is accessible only to shallow draught craft at HW in good weather. Local knowledge is necessary as the entrance W of Peña de la Barra (43°23′·4N, 4°19′·3W), the NW-most of a group of four rocks, is obstructed by a sand-bar that shifts and dries at LW and the channel is narrow.

Inside the bar small craft can lie afloat. A road bridge 5 cables S of the entrance forms the limit of navigation for small craft.

CABO ORIAMBRE TO CABO LASTRES

GENERAL INFORMATION

Chart 1104

Topography

10.97

1 Between Cabo Oriambre (43°24′N, 4°20′W) and Cabo Lastres (43°32′N, 5°18′W) the coast is dominated by Picos de Europa, a group of the highest summits of Cordillera Cantábrica range that are snow covered all the year. The principal peaks (uncharted) are:

2 Naranjo de Bulnes (elevation 2514 m) (43°12′N, 4°49′W), the closest to the coast and most distinctive due to its barren isolation and the reddish coloured rock of its pyramid shaped summit.

Torre de Cerredo (elevation 2640 m) (43°12′N, 4°52′W), the highest peak.

Peña Santa (elevation 2584 m) (43°12′N, 4°58′W).

3 Picos de Europa are fronted by a parallel range of lower mountains. The coastline is mainly cliffy with numerous small breaks. There are no known outlying dangers and the 20 m depth contour seldom passes more than 1 mile offshore.

10.98

1 There are few harbours on this stretch of coast and none are accessible to vessels of more than 4·5 m draught. The coast is generally exposed to the predominant NW gales of winter when the fishing port and anchorage at Lastres (43°31′N, 5°16′W) (10.141) probably provides the only accessible shelter.

CABO ORIAMBRE TO CABO DE MAR

General information

Chart 1105

Route

10.99

1 The coastal route from the vicinity of Cabo Oriambre (43°24′N, 4°20′W) to that of Cabo de Mar (43°28′N, 4°55′W) leads about 25 miles W.

Topography

10.100

1 Between Punta Peñaentera, the NW point of Cabo Oriambre, and the entrance to San Vicente de la Barquera (1½ miles SW) (10.107), the coast is bordered by Arenal de Merón, an extensive beach of white sand.

10.101

1 Farther W between San Vicente de la Barquera and Cabo de Mar the coastline consists mainly of nearly vertical cliffs interspersed with many small gaps that have sandy beaches at their head. Numerous islets lie close to the shore.

2 Behind the cliffs the land rises steeply to a long narrow plateau which in the E stretch has an altitude of nearly 200 m and is intersected by Las Tinas, three ravines containing Ría de Tina Menor (10.111), Ría de Tina Mayor (10.114) and Ría de Santiuste (10.117) that lie respectively 3½, 5½ and 8½ miles W of the entrance to San Vicente de la Barquera. Ría de Tina Mayor has the most prominent of the three entrances, distinguished by the white sandy beach 1 cable E.

3 Westward of Puerto de Llanes (43°25′N, 4°45′W) (10.118) a similar stretch of coastline is intersected by Las Falsas Tinas, four more ravines which terminate in Ensenada de Póo, Ensenada de Celorio, Ría de Niembro, and Ensenada de San Antolín at the mouth of Río Bedón, which lie respectively 1¾, 2¾, 4 and 5½ miles WNW of Punta de San Antón Light (10.104). The ravine of Río Bedón and Playa de San Antolín, a white sandy beach extending 6 cables E from the river mouth, are both visible for a considerable distance seaward.

10.102

1 Inland, Sierra de Cuera, a mountain range, extends E and W from Monte Turbina (4 miles S of Llanes) its highest point and fronts the Picos de Europa (10.97).

Obstructions

10.103

1 Extensive marine farms (artificial reefs), approximately 2·5 m high, lie on the seabed between Punta San Emeterio and Llanes.

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Principal marks

10.104

1 **Landmarks:**

Punta San Emeterio Lighthouse (white round tower on dwelling , 10 m in height) (43°24′N, 4°32′W) on Punta San Emeterio (10.105).



Punta de San Emeterio Lighthouse from N (10.104)

(Original dated prior to 1997)

(Photograph – Autoridad Portuaria de Gijón)

Monte Turbina (43°21′N, 4°46′W) (10.102).

Naranjo de Bulnes (43°12′·1N, 4°49′·1W) (10.97).

2 **Major lights:**

Punta San Emeterio Light—as above.

Punta de San Antón Light (white 8-sided tower grey cupola and dwelling, 8 m in height) (43°25′N, 4°45′W) at Llanes (10.118).

Directions

(continued from 10.90)

10.105

1 **Initial position** N of Cabo Oriambre (43°24′N, 4°20′W) (10.89).

The coastal route leads about 25 miles W, passing:

2 N of Punta de la Silla Lighthouse (masonry tower, 9 m in height) .at the entrance to Puerto de San Vicente de Barquera. Bajo Pedro Gil (6 cables NW), a rocky patch, lies nearly 3 cables offshore. Thence:

3 N of Punta de Pechón (43°24′N, 4°29′W) a steep point midway between the entrances to Ría de Tina Menor (10.111) and Ría de Tina Mayor (10.114). A prominent television tower (red and white bands, metal framework structure about 60 m in height) (7 cables SSW) and Pechón village (5 cables SSE) stand on the slope of a hill S of the point. A rocky patch with a depth of 8 m over it lies 5 cables NNW of the point. Thence:

4 N of Punta San Emeterio (43°24′N, 4°32′W), a steep-to point. Ermita de San Emeterio stands close to the shore 1 cable S and Punta San Emeterio Lighthouse (10.104) on the top of the cliff 1½ cables W of the point. Thence:

5 N of Islote Peña Quinera (43°24′N, 4°37′W), a low flat elongated islet that is covered in spray when the sea is rough, and of a group of rocks awash (9 cables W) lying 2 cables offshore. Underwater reefs with depths of less than 10 m over them extend 5 cables offshore on both sides of the rocks awash and also from the shore 1¼ miles farther W. In rough weather this stretch of coastline should be given a wide berth. Thence:

6 N of Islote Palo de Póo (43°26′N, 4°46′W), the N-most of two islets, which is pyramidal in form and from E and W resembles a vessel under sail. Numerous other less remarkable islets lie close to the shore farther W. Thence:

7 N of Cabo Prieto (43°27′N, 4°50′W) which slopes gradually to the sea, terminates in low vertical cliffs and is dominated by Monte Castillo (4 cables SW) a saddle-shaped hill 104 m high. Bajo La Vaca, a small drying reef, lies 2½ cables ENE of the cape. Thence:

8 N of Cabo de Mar (43°28′N, 4°55′W) a low level headland terminating abruptly in vertical cliffs: from offshore the cape is not easily recognisable as it blends with the nearby cliffs, but it may be identified by Ermita de San Antonio del Mar, a chapel standing 1 cable WSW of its NE point at an elevation of 35 m. The cape is bold and may be approached to a moderate distance but there is a heavy sea off it in bad weather.

10.106

1 **Useful marks:**

Monte Jurgón (43°20′N, 4°24′W), a conical peak.

Monte Jana (43°20′N, 4°34′W), a conical peak at the E end of Sierra de Cuera (10.102), is prominent from N.

(Directions continue at 10.131)

Small craft harbours and anchorages

Chart 1105 (see 1.18)

San Vicente de la Barquera

10.107

1 **General information.** Puerto de San Vicente de la Barquera (43°23′N, 4°23′W) is a busy fishing port at the mouth of an estuary that consists mainly of tidal flats intersected by several narrow channels.

Villa de San Vicente de la Barquera stands at the SW end of the harbour on the rocky summit and E slope of the peninsula that separates the two arms of the estuary. Bridges connect the town with the NW and E shores of the estuary.

2 Breakers form on the bar at the entrance in any sea or swell from N or NE, especially between LW and half tide and during the out-going tidal stream. If the sea is breaking on Bajo Pedro Gil (1 mile WNW) (10.105) it is usually also breaking on the bar.

Local knowledge is necessary.

10.108

1 **Tidal streams.** The out-going tidal stream attains a rate of 3 kn at springs, 2 kn at neaps, and sets directly seawards.

10.109

1 **Directions.** From a position about 2 cables N of the head of Malecón del Oeste, the W breakwater marked by a light-beacon (green truncated conical masonry tower 3 m in height), vessels should approach Escollera del Este Light (red truncated conical tower 3 m in height) (1 cable S of Malecón del Oeste Light) on the head of the training wall on the SE side of the entrance from N, passing (positions given from Malecón del Oeste Light):

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2 Close E of Bajo La Plancha (½ cable NNW), a rocky shoal, and:
Close W of Bajo de Andresín (uncharted, about 40 m NE), a small rocky patch (depth about 6 m) sometimes covered by sand, that is a danger to deeper draught vessels pitching heavily in a head sea, thence:
Close E of the head of Malecón del Oeste.

3 Entering the channel the deepest water lies alongside Escollera del Este whose outermost 150 m consists of concrete blocks and covers at HW.

The fairway leads in mid-channel towards Punta de la Espina, marked by a light (green truncated conical masonry tower 5 m in height) (4 cables SW of Malecón del Oeste light) and thence to the berths.

10.110

1 **Berths** A quay (43°23′·3N, 4°23′·7W), 150 m in length, is equipped to handle fishing vessels. A smaller quay lies 1¼ cables SSW.

Moorings for small craft are laid ¾ cable S of Punta de la Espina and close SW of the fish quay, near the N bridge.

Supplies: fresh water; marine diesel; provisions.

Ría de Tina Menor

10.111

1 **General information.** Ría de Tina Menor (43°23′N, 4°28′W) is unfrequented as the estuary dries entirely at LW except for a narrow shallow tortuous channel and there are no facilities. The entrance between the steep slopes of the hills on both sides is visible from N only. Pesués, the only village on the shore of the estuary, lies on the W bank 1 mile S of the entrance.

Entry is possible only at HW in good conditions as the bar nearly dries and the slightest sea breaks over it. Local knowledge is essential as the channel frequently changes.

10.112

1 **Directions.** From the vicinity of Punta de la Vigía (43°23′·7N, 4°28′·2W), the steep-to W entrance point, the channel leads S, passing (positions given from Punta de la Vigía):
Close E of the W shore which is clean, and:
W of a group of rocks awash (1½ cables SSE) extending about 1 cable N of the E entrance point of the estuary, thence:
E of Punta de Pinto (2½ cables S), and:
W of Isla Cantón, a dark high flat-topped rocky islet.

10.113

1 **Anchorage:** in a pool, depth 2 m at MLWS, lying upstream from Punta de Pinto.

Ría de Tina Mayor

10.114

1 **General information.** Ría de Tina Mayor (43°23′N, 4°30′W) is frequented by a few local fishing vessels. The estuary is entered between steep hillsides and leads 1¼ miles S then SW to the villages of Bustio and Unquera on the NW and SE banks respectively of the Río Deva where it is spanned by three bridges that form the limit of navigation for small craft.

2 The entrance has on rare occasions been closed by a sand-bar after a NW gale, but normally there is a depth of 2 m over the bar and vessels with a draught of 1·5 to 2 m can reach Bustio at HW. Entry should not be attempted if the river is in spate, when the water has a reddish colour. Local knowledge is necessary: experienced local fishermen can advise.

3 Tidal levels See information in *Admiralty Tide Tables.* Meam spring range about 3·6 m; mean neap range about 1·4 m.

In normal conditions the out-going flow attains a rate of 2 to 4 kn: when the river is in spate it attains a rate of 7 or 8 kn and there is no incoming stream at the entrance to the estuary.

10.115

1 **Directions.** From a position about 6 cables E of Punta San Emeterio Light (43°24′N, 4°32′W) (10.104), the approach leads SE, passing:

2 SW of Bajos de San Mateo, the reef extending 2 cables NNW from Punta de la Barra, the E entrance point of the estuary. The inner part of the reef dries but the outer part shows at LW only when there is a swell. And:
NE of Punta de la Tina, the W entrance point of the estuary, from which rocks extend 35 m.

3 Thence the entrance leads S and the deepest water crossing the bar lies on the E side.

About 2 cables S of Punta de la Tina the estuary widens and the channel follows the W bank passing W of Banco Cascajal, a gravel bank extending from the E bank. Thence to Bustio the best guide to the channel is the Spanish chart.

10.116

1 **Anchorage.** Local fishing vessels awaiting the tide to proceed to Bustio anchor off the W bank about 4 cables S of Punta de la Tina.

Berths: quay at Bustio, NE of the NW-most bridge; small quay at Unquera, accessible at HW to craft maximum draught 1·4 to 1·6 m.

Ría de Santiuste

10.117

1 Ría de Santiuste (43°24′N, 4°34′W), also called Ría de Tina del Oeste, is entered over a bar, and is encumbered with banks of sand and gravel. It is only accessible to shallow draft craft at HW. The estuary extends SW and its entrance is identified by Islote de Castrón de Santiuste, a high steep-sided rocky island on the NW side, and a white sandy beach on the SE side that is visible when the island bears more than 200°.

Puerto de Llanes

10.118

1 **General information.** Puerto de Llanes (43°25′N, 4°45′W), a small drying artificial harbour at the mouth of the small Río Carrocedo, is accessible only in calm weather to vessels with a draught of 2 m or less. Local knowledge is essential. The flow in the harbour and its entrance does not exceed 1 kn.

Villa de Llanes stands around and extends S of the harbour.

10.119

1 **Directions.** From a position about 1 cable ENE of Punta de San Antón Light (43°25′N, 4°45′W) (10.104) the entrance channel, which has depths of 4 m at its outer end and dries at its inner end, leads 2 cables W, passing:
N of Punta de San Antón, the low rocky point on which the lighthouse stands, and:
S of Bajo La Osa, a drying rocky patch with two heads that do not break at HW in calm conditions, lying 80 m N of Punta de San Antón, thence:

2 S of Dique de la Osa, the breakwater extending 160 m E from Punta del Caballo, another low rocky point. The breakwater head (1 cable NW of Punta de San Antón Light) lies about 1 cable W of the outer drying head of Bajo La Osa. A light

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(green round masonry tower, 4 m in height) is exhibited from the breakwater head. Thence:

Between the rocky shores on both sides of the harbour entrance.

10.120

1 **Anchorage** in fair weather for vessels awaiting HW to enter harbour: in the small bight with a rocky foreshore lying, N of the harbour entrance, between Punta del Caballo and Punta de San Pedro about 1½ cables farther NW; depth 4 m sand.

Basins and berths. Fishing vessels and small craft may berth in an artificial basin situated on Dique de la Osa, about 100 m from the head. Depths in the basin are about 2 m.

2 There are two other small basins on the N side of the harbour but the outer basin is disused as it has filled with sand. The entrance to the river, S of the outer basin, is 8 m wide where there is a lifting sill which maintains a depth of 1·2 m in the inner basin. Between the river entrance and a bridge 1½ cables upstream the banks are partly quayed and the width of the winding channel varies between 33 and 67 m.

3 Dársena del Cabo Noval, the sheltered inner basin, has a sandy bottom and provides the principal berths.

Supplies: diesel fuel; fresh water; provisions.

Ría de Niembro

10.121

1 **General information.** Ría de Niembro (43°26′N, 4°50′W), frequented by a few local fishing boats, lies between partly wooded slopes. The entrance 40 to 100 m wide and 600 m long leads S and then, after rounding a point on the W bank, SW. The estuary (uncharted) then widens and turns SE for a further 400 m.

2 Niembro village stands at the NW corner of the wider part of the estuary: only the bell-tower of the church (uncharted) standing nearly 2 cables farther SE on the SW shore is visible from the entrance and farther N.

3 The estuary dries for 3 hours at LW except for the narrow channel through which the little Río de Niembro flows. At HW it is accessible, in calm weather, to vessels of 2 m draught. The out-going tidal stream attains a rate of 1½ kn.

10.122

1 **Directions.** From a position 5 cables NE of the entrance, the approach leads SW, passing (positions given from the entrance):

SE of Bajo La Vaca (5 cables N) (10.105), thence:

SE of Islote Peyes (3 cables N), a low rugged islet with a drying reef close S, thence:

NW of Punta Ladrona, the E entrance point of the estuary.

2 Entering the estuary the fairway lies in mid-channel and has a light coloured bottom. Dark coloured rocks on both sides may be seen beneath the normally crystal clear water. Within the entrance the fairway lies close to the outer bank where the channel bends.

10.123

1 **Anchorage.** The best anchor berths are in the vicinity of the church (10.121); bottom, sand downstream muddy sand upstream, dries.

Berth: quay, near slip on NW side of the inner end of entrance channel, dries alongside.

Playa de San Antonio del Mar

10.124

1 **Anchorage.** Playa de San Antonio del Mar (43°27′·7N, 4°55′·5W), a little inlet with a sandy beach at its head lying on the E side of Cabo de Mar (10.105), provides refuge for fishing vessels in W and NW gales. Anchorage may be obtained off the beach in favourable weather conditions.

CABO DE MAR TO CABO LASTRES

General information

Chart 1105

Route

10.125

1 The coastal route from the vicinity of Cabo de Mar (43°28′N, 4°55′W) to that of Cabo Lastres (43°32′N, 5°18′W) leads about 17 miles WNW.

Topography

10.126

1 Between Cabo de Mar and Punta Borines (5½ miles W) the coast consists of low broken cliffs: the principal features are the ravines of two rivers (positions given from Cabo de Mar):

2 Río de Nueva which flows into the sea (5 cables WSW) through the only sandy beach on this stretch of coast. Islote Orcado de Cuevas, a large steep flat-topped islet, lies 5 cables farther W.

Río Aguamía whose E entrance point is Punta Aguamía (2 miles W), a high bold cliff. Islote de Palo Verde, pyramid-shaped and of moderate height, lies 1½ miles farther W.

10.127

1 Ría de Ribadesella entrance (chart 1150, plan of Puerto de Ribadesella) is distinctive and identified by:

Monte Corbero (43°28′·1N, 5°03′·5W), the 99 m high summit of the peninsula on the E side, whose N slopes are dark, steep, smooth and slaty. A distinctive small white television relay station (uncharted) stands on the summit. Ermita de la Guía, a prominent white chapel, stands at an elevation of 52 m on Punta del Caballo, the W point of the peninsula.

2 Monte Somos on the W side (8 cables WNW of Monte Corbero and about the same height) which has similar but less pronounced slopes topped with cultivated ground, both reddish in colour.

Playa de Santa Marina, a white sandy beach backed by several small hotels, that extends 6 cables E from the foot of Monte Somos.

10.128

1 In the bight between Punta de la Sierra (43°29′N, 5°07′W) (10.131) and Cabo Lastres (8 miles WNW) (10.131) the coastal cliffs are broken and uneven: there are numerous sandy beaches between the various points that are mostly inconspicuous. Puerto Lastres (43°31′N, 5°16′W) (10.141) together with Punta Misiera (10.131) are the principal features.

10.129

1 The hinterland consists of barren rugged mountains, the most distinctive being:

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Monte Mofrecho (elevation 897 m) (43°24′N, 5°02′W), a good mark from NE.

2 Pico Pienzo (43°26′N, 5°14′W) whose dark summit consists of a series of conical peaks, the highest surmounted by a cross. A spur extends to Monte Gobia (3½ miles ENE), a prominent conical peak, and terminates at Punta de la Sierra (6 miles ENE) (10.131).

Picos de Europa (15 miles S of Cabo de Mar) (10.97), and other lofty peaks of Cordillera Cantábrica, may be seen farther inland.

Principal marks

10.130

1 **Landmark:**

Somos Lighthouse (10-sided tower on dwelling, 8 m in height) (43°28′N, 5°05′W) on the cliff top 4 cables NW of Punta de Somos.

Major lights:

Somos Light—as above.

Cabo Lastres Light (white round tower, 18 m in height) (43°32′·1N, 5°18′·0W).

Directions

(continued from 10.106)

10.131

1 **Initial position** N of Cabo de Mar (43°28′N, 4°55′W) (10.105).

The coastal route leads about 17 miles WNW, passing:

2 NNE of Punta Borines (43°28′N, 5°03′W) the termination of the NE slope of Monte Corbero (10.127). An extensive area of breakers forms over Bajo Serropio, a rocky patch, (6 cables N) in any swell: in these conditions vessels should pass N of the shoal even if there are no breakers farther inshore. A wreck with a least depth by sounding of 13 m over it lies about 1½ miles NE of Punta Borines. Thence:

3 NNE of Punta de la Sierra (43°29′N, 5°07′W), bordered by steep cliffs on its N face. Los Carreros, a reef with drying rocks on its inner part, extends 5 cables N from the point. In bad weather from NW breakers occur over the rocky bottom farther offshore; the point should be given a berth of 1½ to 2 miles in these conditions. Thence:

4 NNE of Punta del Penote (43°30′N, 5°15′W) the termination of the N slope of Monte Villera (chart 1150, plan of Puerto de Lastres). El Marraxin, a rock awash, lies on the coastal reef 1 cable NNE of the point. Thence:

5 NNE of Punta Misiera (43°31′N, 5°16′W), identified by Ermita de San Roque standing on its summit (elevation 118 m) and a prominent television tower (dish aerials on metal framework structure, painted red and white in bands, 60 m in height; fixed red aircraft obstruction lights vertically disposed) standing ¾ cable farther W. A rock pinnacle (depth 0·3 m) and Bajo de La Plancha, a rocky patch, lie 1 cable and 2½ cables NE of the point respectively; the sea breaks on the shoal in bad weather when it should be given a wide berth. Thence:

6 NNE of Cabo Lastres (43°32′N, 5°18′W), identified by its flat top (elevation 110 m) and reddish cliffs with steps in them on its N face. Bajo El Vaquín, rocks awash, lie up to 1 cable N of the point and a below-water reef extends farther N with depths of less than 20 m lying 8 cables offshore. During NW gales the sea breaks more than 1 mile offshore and the point should be given a wide berth.

7 **Useful mark:**

Tazones Light (43°33′N, 5°24′W) (10.150).

(Directions continue at 10.151)

Ribadesella

Chart 1150 plan of Puerto de Ribadesella

General information

10.132

1 **Description.** Puerto de Ribadesella (43°28′N, 5°04′W) is used by coasters, fishing vessels and yachts. The port no longer handles minerals, formerly its principal trade.

Limiting conditions

10.133

1 **Controlling depth:** about 2 m over the bar. This depth is reduced after NW gales which cause a temporary accumulation of sand, and increased when Río Sella is in spate but does not alter very greatly.

Caution. Depths in the approaches to Ribadesella and Río Sella are less than charted. Mariners are advised to proceed with caution.

2 **Tidal levels.** See information in *Admiralty Tide Tables.* Meam spring range about 3·4 m; mean neap range about 1·6 m.

Maximum size of vessel handled: 1000 grt.

Heavy seas and swell from NW cause breakers to form on the bar and prevent entry.

Arrival information

10.134

1 **Local knowledge** is necessary as the bar shifts position and the limits of the dredged area are uncharted.

There are no registered pilots.

The best time to enter is from 1 hour to 30 minutes before HW.

Harbour

10.135

1 **General layout.** The port occupies the entrance to Río Sella N of the low road bridge with numerous arches that connects the small town of Ribadesella on the E bank with the little holiday resort of La Playa that backs Playa de Santa Marina (10.127). The E bank of the river has quays between the entrance and the bridge. There are quays on the W bank near the bridge. Farther N a wall 4 m in height borders the W bank and the rear of Playa de Santa Marina.

10.136

1 **Flow.** The out-going tidal stream attains a rate of 2 kn at springs and 1½ kn at neaps. When Río Sella is in spate the out-going flow increases to 5 or 6 kn and the sea is discoloured.

Directions

10.137

1 **Initial position** 43°29′N, 5°04′W, about 1 mile N of the harbour entrance.

The approach leads S, passing (positions given from Somos Light (10.130)):

W of Bajo Serropio (1 mile ESE) (10.131), thence:

2 E of Punta de Somos (4 cables ESE) (10.130). Bajo El Simpatías, a drying reef, extends ¾ cable NE from the point. Thence:

W of Punta del Caballo (8 cables ESE) (10.127). The W edge of the point is marked by a light (round masonry tower 8 m in height) at the NW extremity

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of the quay that lines the river bank on the N and E side of the harbour. A 0·1 m patch lies nearly ¾ cable WNW of the light.

3 The fairway, width 50 to 80 m, crosses the bar in the vicinity of the NW extremity of the quay, where rocks extend about 8 m from its base, and then leads E turning S alongside the quay.

10.138

1 **Clearing marks:**

The line of bearing 190° of Monte Pico (43°27′·7N, 5°04′·0W), open W of Punta del Caballo (5 cables N), passes W of Bajo Serropio.

The NNE edge of the seawall at the E end of Playa de Santa Marina (43°28′·1N, 5°03′·7W) bearing about 115°, just open SSW of the quay on the N side of the entrance (1¼ cables WNW), has been reported (1981) to pass SSW of the charted 0·1 m patch (2¼ cables WNW).

Berths

10.139

1 Vessels with a draught of 3 to 3·5 m berth alongside the quay about 20 m upstream from the first buildings on it, where it is dredged to a depth of 4·5 m. Small vessels berth farther upstream where they can take the ground safely at LW as the bottom is soft. Vessels berth bows upstream in winter, when freshets may be expected, and bows downstream in summer.

2 A warping buoy is moored off the quay. Vessels alongside the quay may secure a line to it for extra security during freshets.

Small craft also berth at the quay on the W bank N of the bridge.

Port services

10.140

1 **Repairs** of a minor nature carried out; slip for fishing vessels on W bank N of bridge.

Supplies: marine diesel fuel; fresh water; provisions.

Lastres

Chart 1150 plan of Puerto de Lastres

10.141

1 **General information.** Puerto de Lastres (43°31′N, 5°16′W), is an artificial fishing port formed by two breakwaters, the heads of which are marked by lights. The larger, L-shaped breakwater, lies at the foot of Punta Misiera (10.131), and the smaller extends E from the shore towards the head of the L enclosing a small basin, dredged to 2 m. Lastres village stands on the steep hillside close SW of the harbour.

There are no registered pilots; local fishermen can provide pilotage.

2 **Directions.** Approaching the breakwater, marked by a light (round concrete tower, 5 m in height) on its head, a wide berth should be given to Bajo de La Plancha (3 cables NNE) (10.131) and the area of shoal depths close SE.

3 **Anchorage:** in the position (5 cables SE of breakwater head) shown on the chart, on the alignment (308°) of Punta Misiera and Punta de las Llastras de Cotariella (7 cables NW), depth 11 to 13 m muddy sand good holding. Used by vessels sheltering from NW gales or awaiting suitable conditions to enter Puerto de Ribadesella. Between this anchorage and the vicinity of the harbour entrance there are patches of rocky bottom.

4 **Berths.** It has been reported (1983) that there are trots for local fishing vessels and berths alongside the breakwater on the E side of the basin with depths of 4 to 7 m. Vessels of more than 50 tonnes are required to secure alongside the quay on the rare occasions when another vessel is entering.

Supplies: marine diesel fuel; fresh water and provisions in limited quantities.

CABO LASTRES TO CABO PEÑAS

GENERAL INFORMATION

Chart 1153

Topography

10.142

1 Between Cabo Lastres (43°32′N, 5°18′W) and Cabo Peñas (43°39′N, 5°51′W) the coastline mostly varies in elevation from 30 to 80 m. The capes and points are in general inconspicuous and present a similar aspect of vertical rock cliffs with broken rocks at their bases. The coastland is mainly flat; the hinterland is hilly and backed by Cordillera Cantábrica that extends E–W some distance inland. Puerto de Gijón (43°34′N, 5°41′W) (10.160) is the only harbour of any importance on this stretch of coastline; in bad weather it is also the only port of refuge for small craft.

Heavy seas

10.143

1 In bad weather, or when there is much swell, heavy seas occur up to 3 miles offshore along much of the coast and even farther offshore N of Cabo Peñas (10.188).

Local weather

10.144

1 In summer NE winds predominate and bring good weather.

In winter the predominant winds are SW to NW. Wet windy periods with poor visibility, locally named Vendavales, usually set in from S in clear weather and on the second or third day bring clouds and the wind starts to veer. Stormy weather, which may last 8 or 9 days, begins when the wind has veered to the SW and the wind continues to veer slowly to NW. Sometimes the wind continues veering to the N or even NNE causing devastation, but normally it remains in the NW until the sky clears. If the wind then backs SW a further period of bad weather ensues.

CABO LASTRES TO CABO SAN LORENZO

General information

Chart 1153

Route

10.145

1 The coastal route from the vicinity of Cabo Lastres (43°32′N, 5°18′W) to that of Cabo San Lorenzo (Cabo de San Lorenzo) (43°33′N, 5°37′W) leads about 14 miles W.

Topography

10.146

1 The coastline generally slopes steeply to the sea from elevations of more than 100 m and is partly covered in

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vegetation. There are few distinctive features except for the entrance to Ría de Villaviciosa which is identified by:

2 Monte Rodiles , an isolated hill with a flat top 124 m high, standing 2 cables S of Punta Rodiles (43°32′N, 5°22′W).

Punta de la Mesnada (6 cables W of Punta Rodiles) whose 120 m high cliff has a large yellowish scar.

Arenal de Rodiles, the white sandy beach extending 5 cables W from the foot of Monte Rodiles to the entrance to the estuary.

Farther inland Monte Curiella (43°29′N, 5°30′W) is prominent from N.

Prohibited anchorages

10.147

1 Anchoring and trawling are prohibited, due to submarine cables, within the area shown on the chart that extends N from the shore between Punta Rodiles (43°32′N, 5°22′W) and Punta Tazones (1¼ miles WNW) to the 50 m depth contour.

Measured distance

10.148

1 San Lorenzo-Quintes (Gijón) Measured Distance is established between Cabo de San Lorenzo (43°33′N, 5°37′W) and a position 2½ miles farther E:

West limit: the alignment (180°) of two beacons (metal towers covered with white reflective material with a red stripe) standing 260 m apart at elevations of 36 and 50 m on Cabo de San Lorenzo. Ermita de la Providencia (white chapel 6 m in height) stands 2 cables S of the rear mark at an elevation of 86 m.

2 East limit: the alignment (180°) of two similar beacons standing 340 m apart at elevations of 121 and 134 m on a wooded part of the coast.

Distance: 5056·1 m.

Running track: 090° and 270°, along parallel 43°35′N, in a least depth of 31 m.

Rescue

10.149

1 **Lifeboat** (1.78): based at Gijón (43°34′N, 5°41′W) (10.160).

Principal marks

10.150

1 **Landmark:**

Tazones Lighthouse (8-sided masonry tower on white dwelling, 11 m in height) (43°33′N, 5°24′W).

Major lights:

Tazones Light—as above.

Cabo de Torres Light (43°34′N, 5°42′W) (10.169).

Directions

(Continued from 10.131)

10.151

1 **Initial position** N of Cabo Lastres (43°32′N, 5°18′W) (10.131) at least 1 mile offshore.

The coastal route leads about 14 miles W, passing:

N of Punta del Olivo (43°33′N, 5°25′W) which slopes gradually to the sea from the high land within and is difficult to identify from offshore. Escaños de la Sierra, an underwater reef extends about 2½ cables N from the point. In NW gales the sea breaks up to 1 mile off the point. Thence:

2 N of Punta Peña Rubia (43°33′N, 5°31′W) that terminates in cliffs and has a rounded summit 140 m high on which there are a number of villas and groves. El Corbero (8 cables E), a large rock that does not cover, extends 2 cables offshore. Thence:

3 N of Cabo San Lorenzo (Cabo de San Lorenzo) (43°33′N, 5°37′W), which rises inland, and Islote de San Lorenzo, a black low flat-topped islet connected to the NE point of the cape at LW. Piedras de Estaño, a group of three black above-water rocks, lie 4 cables ESE of the islet. Restinga de San Lorenzo, a rocky patch (depth 5·1 m), lies 6 cables W of the islet. In rough weather breakers extend more than 5 cables NW from the cape and form over Restinga de San Lorenzo. See 10.148 for details of marks standing on the cape.

10.152

1 **Caution.** In bad weather vessels are advised to pass at least 3 miles offshore between Punta del Olivo and Punta Peña Rubia, also more than 1 mile off Cabo de San Lorenzo, to avoid the heavy ground swell that occurs farther inshore.

(Directions continue for Gijón at 10.170, and for the coastal route farther NW at 10.188)

Ría de Villaviciosa

Chart 1153 (see 1.18)

General information

10.153

1 **Description.** Ría de Villaviciosa is entered about 1 cables SSE of Punta de la Mesnada (43°32′N, 5°23′W) (10.146) through a channel, 100 m wide between training walls, leading 1 mile S. A shallow artificial basin lies at the S end of the W training wall at El Puntal (10.157). A tortuous channel then leads 3 miles SW through the estuary, which mostly consists of sand flats and reed beds, to the town of Villaviciosa (10.158).

2 **Topography.** At HW Ría de Villaviciosa forms a large lake; it is surrounded by hills covered with wooded farmlands. The entrance is sheltered by high ground W and NW.

Limiting conditions

10.154

1 **Controlling depths** over the bar normally vary between: 4·4 to 5·0 m at HW springs; 1·6 to 2·0 m at LW neaps; 1·0 to 1·5 m at LW springs. North and NW gales cause a temporary shoaling of the bar which is soon scoured to its usual depth.

Abnormal water levels. Strong winds from SW to NW raise the water level by 0·5 to 0·8 m and delay the time of HW by 30 minutes; strong winds from NE to SE have the opposite effect.

2 **Breakers** form on the bar if there is a heavy sea; they occur when breakers form on Bajas de la Mesnada (3 cables NNW) (10.156).

Tidal streams are much influenced by the wind and are irregular due to the extensive tidal flats. At springs the in-going tidal stream attains a rate of 3 kn, the out-going tidal stream a somewhat greater rate.

The best time to cross the bar is from 1 to 2 hours before HW when entering and at HW when leaving.

Arrival information

10.155

1 **Pilotage.** There are no registered pilots but local fishermen may be embarked off Tazones (10.159) to perform pilotage service.

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Local knowledge is necessary as the fairway is liable to change and is unmarked.

Directions

10.156

1 **Initial position** 43°33′N, 5°23′W, about 7 cables E of Tazones Light (10.150).

Approaching the entrance the route leads SSW, passing (positions given from Tazones Light):

ESE of Bajas de la Mesnada (5 cables SE) the reef, awash in places, that extends 2 cables N from Punta de la Mesnada (10.146), and:

WNW of Baxa Las Redes (1¼ miles ESE) the reef with a rock awash that extends 1½ cables N from Punta Rodiles (10.146).

2 **Entering** the estuary between the heads of the training walls (the head of the E training wall covers at HW) the fairway leads S:

Alongside the W training wall from the entrance, where it crosses the bar and has been reported to be only 25 m wide, to a position level with the N end of a plantation of eucalyptus trees on the W bank, thence:

3 Alongside the E training wall for 350 m, thence:

In mid-channel as far as the entrance to the basin at El Puntal.

The fairway thence to Villaviciosa is very tortuous. Although the principal bends are marked by perches, local knowledge is essential.

El Puntal

10.157

1 **Berths** at El Puntal (1½ miles S of Tazones Light): the rectangular basin 400 m long, 150 m wide, dries; bottom mud and sand

Villaviciosa

10.158

1 **Description.** Villaviciosa (43°29′N, 5°26′W) lies at the head of the estuary on the E bank. Cider is exported, very little is imported.

Berth: quay, attached to cider factory, on E bank at La Espuncia (1 mile NE of town centre); 125 m long; accessible at HW to vessels drawing up to 3 m.

Small craft

Tazones

10.159

1 **General information.** Tazones (43°33′N, 5°24′W), a little fishing village, stands on the sides of a steep valley at the head of Ensenada de Tazones. The small bay is entered between Punta de la Mesnada (10.146) and Punta de Tazones (3 cables NNE of the village), a point that rises steeply to an elevation of 130 m and from which a reef extends 1 cable NE.

2 **Anchorage,** with some shelter from NW, may be obtained in Ensenada de Tazones in a depth of about 10 m, clear of the prohibited area (10.147).

3 **Berths.** The head of the bay is sheltered by a mole extending 113 m SE from the shore 1¼ cables SSE of Tazones Light (10.150) and marked by a light (masonry tower 3 m in height) at its head. The SW side of the mole is quayed, depth 3 m alongside its head, but the berths are tenable only in fair weather.

Repairs: slip and ramp used for repair of fishing boats.

GIJÓN AND APPROACHES

General information

Chart 1154

10.160

1 **Position.** Puerto de Gijón occupies the whole of Concha de Gijón, the bay lying between Peninsula de Santa Catalina (43°33′N, 5°40′W), and Cabo de Torres (2 miles NW).

Function. Villa de Gijón, population 270 900 (1995), is a growing industrial and commercial centre. The port mainly handles bulk cargoes. Principal imports: iron ore, coal, petroleum products and LNG. Principal exports: cement, metal products. Gijón is also the only port of refuge between Santander (10.20) and San Ciprían (11.142).

2 **Topography.** Peninsula de Santa Catalina, whose flat grass-covered summit is 44 m high, is steep on its N and E sides: S it slopes gently to Villa de Gijón which extends E behind Playa de San Lorenzo, a sandy beach, to the mouth of Río Piles and W along the S shore of Concha de Gijón. The numerous tall buildings in Gijón can be seen from a considerable distance offshore.

3 Cabo de Torres, reddish coloured and steep with rugged pinnacles at its extremity, is distinctive. The breakwaters of Puerto del Musel extending E and NE from Cabo de Torres are prominent from N and E.

10.161

1 **Port limits:** a line drawn from Punta Peña del Cuervo (43°33′·0N, 5°39′·6W) to the head of Dique Principe de Asturias (1½ miles NNW).

Approach and entry. The port is approached through two recommended routes, one from the N and the other from the E, as shown on the chart.

In heavy weather vessels should approach the port by the N recommended route, even if coming from E.

2 **Traffic.** In 2003 the port was used by 835 vessels toalling 22 491 320 dwt.

Port Authority: Autoridad Portuaria de Gijón, Claudio Alvargonzález 32, 33201 Gijón.

Website: www.puertogijon.es

Limiting conditions

10.162

1 **Controlling depths:** 18·5 m in the entrance to the commercial port, decreasing as shown on the chart in the approach to the various berths.

Deepest and longest berths handling the type of cargo indicated (see 10.174 for further details):

Dry bulk: Muelle de Minerales.

General cargo: Muelle Moliner.

LNG: Muelle de los Pórticos.

Petroleum products: Espigón de Liquidos.

2 **Tidal levels.** See information in *Admiralty Tide Tables.* Meam spring range about 4.1 m; mean neap range about 1.3 m.

Abnormal water levels. Strong winds from SW to NW raise the water level by 0·5 m, strong winds from NE to SE lower it by 0·5 m.

Density of water: reported to be 1·025 g/cm^3.

Maximum size of vessel handled: length 333 m; draught 20·5 m; 227 412 dwt.

Arrival information

Port radio

10.163

1 The pilot office (43°33′·6N, 5°41′·9W) situated near the root of Espigon II provides a port operations and

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information service, see *Admiralty List of Radio Signals Volume 6(2)* for further details. Messages may also be passed on VHF radio through Cabo Peñas Coast Radio Station, see *Admiralty List of Radio Signals Volume 1(1)* for further details.

Outer anchorages
10.164

1 There are anchorage areas to the N and NE of the port, as shown on the chart. Vessels with dangerous cargoes use the N half of the NE anchorage. In adverse weather vessels of less than 1000 grt may anchor in Anchorage A (43°33′·7N, 5°41′·0W) close NE of Contradique de Levante; those less than 500 grt may use Anchorage B (43°33′·5N, 5°41′·5W) in Darsena de El Musel.

1 Anchor berths are allocated by the pilot's office. Pilotage is compulsory for vessels anchoring within the port limits (10.161). All vessels intending to anchor should establish direct radio contact with the pilot's office at a distance of not less than 3 miles from Dique Principe de Asturias.

Pilotage and tugs
10.165

1 **Compulsory pilotage:** within the port limits (10.161).

Boarding place: 1½ miles N and ¾ mile E of Dique Principe de Asturias or in bad weather within its shelter.

Tugs are available. The use of a tug is mandatory for vessels more than 80 m in length. Regulations are laid down for the number and hp of tugs required by vessels of 215 m in length or more; additional tugs are obtained from Avilés (11.23) when necessary for very large vessels.

Traffic regulations
10.166

1 **Prohibited anchorage.** Anchoring and fishing are prohibited within 500 m of an outfall extending 1½ miles N from position 43°33′·1N, 5°37′·8W.

2 **Areas to be avoided** are centered on Punta de la Forcada (43°34′·6N, 5°41′·8W) the N extremity of Cabo de Torres; Banco Las Amosucas (43°34′·8N, 5°39′·7W) (10.170); and position 43°33′·6N, 5°39′·4W. All vessels carrying dangerous or toxic cargoes and all vessels over 500 grt should avoid these areas, the limits of which are shown on the chart.

3 **Prohibited area.** Entry is prohibited into Ensenada de San Lorenzo (43°32′·8N, 5°39′·0W), a bay between Peninsula de Santa Catalina (10.160) and Punta del Cervigón 1 mile E.

Underwater activities are prohibited within an area, radius 100 m, centered on the wreck charted in position 43°33′·3N, 5°39′·3W.

Puerto de Gijón

General layout
10.167

1 Puerto de Gijón (10.160) consists of three areas:

Puerto del Musel (10.173), the commercial port in the NW corner of Concha de Gijón, formed by Dique Principe de Asturias and Dique de la Osa. It includes the fishing port.

Muelles Locales (Local Harbour) (10.179), the original port situated in the SE corner of Concha de Gijón, which is now a marina.

The SW part of Concha de Gijón, occupied by several shipyards.

Natural conditions
10.168

1 **Wind.** The prevailing winds are NE in summer and SW in winter: the strongest winds are those from NW.

Tidal streams in the entrances to Puerto del Musel and Muelles Locales are negligible.

Climatic table. See 1.156 and 1.169.

Principal marks
10.169

1 **Landmarks:**

Cabo de Torres Lighthouse (white 8-sided tower on dwelling, 12 m in height) (43°34′·4N, 5°41′·9W).

Conspicuous tanks (white spherical gasholders) (5 cables SSW of lighthouse) on the crest of Cabo de Torres.

Major light:

Cabo de Torres Light—as above.

Directions
(continued from 10.152)

North approach
10.170

1 **Initial position** 43°37′N, 5°41′W.

Approaching Puerto de Gijón, the recommended route leads S then SSE to the vicinity of the head of Dique Principe de Asturias, passing (positions given from the breakwater head):

2 Between the two outer anchorage areas (10.164), thence:

ENE of Piedra de La Concha (4 cables NNW), a rocky patch on which heavy seas break, and:

WSW of Banco Las Amosucas (6 cables NE), a rocky bank on which less heavy seas break. The bank is marked on four sides by light-buoys (cardinal).

East approach
10.171

1 **Caution.** The E approach should not be attempted with heavy seas from N or NW.

Initial position 43°35′N, 5°38′W.

Approaching the entrance to Puerto del Musel, the line of bearing 244° of Muelle de los Pórticos Head Light (green tower, 5 m in height) (43°33′·7N, 5°41′·4W), just open SSE of the head of Contradique Exterior (5 cables ENE), leads WSW to the vicinity of the latter, passing (positions given from head of Contradique Exterior):

2 NNE of a light-buoy (special) (1½ miles ENE), thence:

SSE of Banco Las Amosucas (1 mile NE) (10.170), thence:

3 NNW of Roca Martin (1 mile E), Roca La Moral (8½ cables ESE) and Roca Punta de Amandi (6 cables ESE) that lie in an area to be avoided (10.166), close within the 20 m depth contour and on the edge of an area of rocky bottom where breakers form in heavy seas, thence:

SSE of the head of Dique Principe de Asturias (4 cables NE), from where a light (round grey tower) is exhibited.

10.172

1 **Useful marks:**

Contradique de Levante Head Light (red tower, 5 m in height) (43°33′·6N, 5°41′·2W).

Piedra Sacramento Light-beacon (green 8-sided masonry tower, 6 m in height) (43°32′·8N, 5°40′·3W).

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Puerto del Musel

General layout

10.173

1 Puerto del Musel, consisting of Dársena de El Musel and Dársena Exterior, is formed by:

Dique Principe de Asturias, extending 11 cables E from Cabo de Torres and consisting of three sections named from W to E: Muelle Norte; Muelle de los Porticos; and Muelle Minerales.

Dique de la Osa extending 8 cables NE from the SW corner of Concha de Gijón: Contradique de Levante extends 2 cables NW from its extremity.

Berths

10.174

1 There are 5·5 km of cargo handling quay with depths alongside of between 6 and 21 m, and 789 m of quay in the fishing port with depths alongside of 5 to 7 m. Many of the berths handle specific categories of cargo only. Details of the deepest and longest berths in each category are:

Berth	*Length (m)*	*Depth (m)*	*Cargo handled, remarks*
Muelle de Minerales 1st (W) section	247	19	Dry bulk
2nd (E) section	405	21	Dry bulk
Muelle de los Pórticos 1st (NW) section	554	14	Various
Espigón I S side 2nd (E) section	190	11·5	Steel products
Espigón II N side	300	7 to 9·5	Cement; general
Espigón de Liquidos (not named on chart; 1 cable S of Espigón II)	180	8·5	Petroleum products
Muelle de Rendiello SW side	443	5 to 7	Fish quay in 3 sections
Muelle Moliner	313	14	Bulk; general.

Development

10.175

1 Reclamation work and new berth construction is in progress between Contradique Exterior and Principe de Asturias (2004). The works are marked by light buoys as shown on the chart.

Port services

Repairs

10.176

1 **Repairs** of all kinds can be carried out.

Dry docks: four, the largest of them can accept vessels up to 26 798 dwt and has the following dimensions: extreme length 170 m; breadth at entrance 25 m; limiting draught 3·6 m at MHWN.

Other facilities

10.177

1 **Deratting:** deratting and exemption certificates issued.

Hospital: Hospital de Jove stands on Cerro del Otero (43°33′N, 5°42′W).

Salvage: ocean-going tug; some other tugs are equipped with salvage pumps and for fire-fighting.

Supplies

10.178

1 **Fuel:** fuel oil and marine diesel supplied by barge or to small vessels at quay on SW side of fishing port.

Fresh water: available from supply points at most berths, otherwise supplied by barge.

Provisions: available.

Small craft

Muelles Locales

10.179

1 **General information.** Muelles Locales (Local Harbour) (43°33′N, 5°40′W), the original port of Gijón, is now a marina. This artificial port is formed by Dique Santa Catalina on the N side and Malecón de Fomento on the W side and consists of four basins: Antepuerto, in the N part, and three further basins in the S part.



Muelles Locales from NW (10.179)
(Original dated prior to 1997)

(Photograph – Autoridad Portuaria de Gijón)

Two breakwaters partially enclose the bay immediately W of Malecón de Fomento: Playa de Poniente Breakwater extending ¾ cable W from near the head of Malecón de Formento; and another extending 1¼ cables ENE from the entrance to Canal de Sahones.

10.180

1 **Directions.** From a position about 7 cables ENE of Contradique de Levante Head Light (43°33′·7N, 5°41′·0W) (10.172), the line of bearing 180° of Playa de Poniente Breakwater Light (green column) (43°32′·8N, 5°40′·2W) leads 1 mile S along the recommended track to the harbour entrance, passing (positions given from Dique Santa Catalina Head):

2 Across Roca Punta de Amandi which breaks in heavy seas, thence:

W of Bajo Serrapio del Mar (5 cables N), stony patch with a depth of 3·3 m over it, thence:

Close E of Piedra de San Justo (3½ cables NNW), a rocky patch on which heavy seas break, thence:

3 Over the rocky bar in a least charted depth of 2·2 m (2 cables NW), thence:

E of Bajo Serrapio de Tierra, a reef that dries about 2 m at its NW corner (2 cables WNW) and is marked on its E side by Piedra Sacramento Light-beacon (1 cable WNW) (10.172).

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4 **Caution.** When heavy seas are breaking on Roca Punta de Amandi and Bajo Serrapio del Mar they will also be breaking on the bar and entry should not be attempted. Heavy seas also produce a backwash in the channel.

10.181

1 **Entrance channel** between Piedra Sacramento Light-beacon and the breakwater heads is dredged to 3 m.

Berths. The marina contains 657 small craft berths, 100 reserved for visitors alongside pontoons in depths of 1 to 3 m.

Supplies: marine diesel fuel; fresh water; provisions.

CABO DE TORRES TO CABO PEÑAS

General information

Chart 1153

Route

10.182

1 The coastal route from the vicinity of Cabo de Torres (43°34′N, 5°42′W) to that of Cabo Peñas (43°39′N, 5°51′W) leads about 10 miles NW.

Topography

10.183

1 Between Cabo de Torres (10.160) and Cabo Peñas the coast is cliffy and very broken, especially NW of Punta de la Vaca (43°38′N, 5°47′W) where the several headlands are very similar. The town of Candás (43°35′·5N, 5°45′·7W), whose red-roofed houses built in the form of an amphitheatre lie between high reddish cliffs on both sides, is easily recognised, as are the twin towers of its church (43°35′·6N, 5°45′·6W) which show above the skyline. The town of Luanco (2 miles farther NW) is distinguished by its church (10.190) of a different style.

2 Cabo Peñas, being one of the most salient promontories on the N coast, is easily identified either by its aspect by day or its light (10.187) at night. Its N face consists of three rugged precipitous projections and its cliffs partly of whitish coloured quartz; its flat top has an elevation of about 100 m and there are a few houses and groves of trees on it.

Hazards

10.184

1 **Heavy seas.** In bad weather heavy seas are encountered off Cabo Peñas which should be given a wide berth in these conditions, see 10.188 for further details.

Marine farm. A fish haven exists 5½ miles NE of Cabo Peñas.

Rescue

10.185

1 **Lifeboat** (1.78): based at Gijón (43°34′N, 5°41′W) (10.160).

Natural conditions

10.186

1 **Tidal streams** off Cabo Peñas set SE when the tide is rising and SW when it is falling.

Current off Cabo Peñas usually sets E, especially in winter. In summer the current sometimes sets W especially after several days of NE winds.

2 **Local weather.** Opposing winds often occur in the vicinity of Cabo Peñas, with strong NE or E winds to the E and SW or W winds to the W of the cape.

Principal marks

10.187

1 **Landmarks:**

Cabo de Torres Lighthouse (43°34′N, 5°42′W) (10.169).

Candás Lighthouse (reddish tower, white dwelling; 12 m in height) (43°35′·7N, 5°45′·5W) standing on masonry terrace built on slope of Punta del Cuerno (10.188).

Cabo Peñas Lighthouse (pale grey 8-sided tower with dwelling, 18 m in height) (43°39′N, 5°51′W).

2 **Major lights:**

Cabo de Torres Light – as above.

Candás Light – as above.

Cabo Peñas Light – as above.

Directions

(continued from 10.152)

10.188

1 **Initial position** NE of Cabo de Torres (43°34′N, 5°42′W) (10.160), in the N approach to Puerto de Gijón (10.170).

The coastal route leads about 10 miles NW then W, passing:

NE of Restinga de Cabo de Torres or de Riastaches, the underwater reef on which heavy seas break that extends nearly 5 cables NNE of Cabo de Torres, thence:

2 NE of the dangerous reefs that encumber the approaches to Puerto de Candás (10.191) and on which heavy seas break. Piedra Perico (43°36′N, 5°45′W) (uncharted), the outermost reef, extends 8 cables NE of Punta del Cuerno (elevation 56 m) on whose steep NE slope stands Candás Lighthouse (10.187), from which a fog signal is sounded. Thence:

3 NE of Islote La Isla (43°36′·5N, 5°45′·9W) a flat rugged islet lying off Punta Sombrado (1 cable SE) and Punta del Cabrito (2 cables NW), two low rocky points. Ermita de San Pedro Antromero (4 cables SW of Islote La Isla) a white chapel standing at an elevation of 39 m is prominent. Thence:

4 NE of Punta de la Vaca (43°38′N, 5°47′W) a point with a flat top 44 m high and vertical cliffs of black rock. Bajo El Xato, a pinnacle rock awash, lies ¾ cable NNE of the point. Thence:

NE of Islote Corbiro (43°38′·7N, 5°48′·5W) a flat-topped above-water rock lying 1 cable NE of the low rugged Punta Sabugo, thence:

5 Clear of Somos Llungo (43°41′N, 5°47′W) a steep-to rocky bank on which there is always a swell and the sea breaks heavily in rough weather. La Espadaña, a similar bank, lies 6 cables SW. Thence:

6 NE of Cabezo La Romanella (43°40′·1N, 5°50′·2W) a rock awash. Cabezo La Romanella lies at the extremity of Arrecife Los Merendálvarez (43°39′·5N 5°50′·3W), a chain of low above-water rocks and rocks awash extending about 5 cables NNE from Isla de La Gaviera, a steep high flat-topped islet separated from the NE tip of Cabo Peñas by a very narrow passage barely practicable for boats. Thence:

7 N of a group of below-water rock pinnacles lying from 3 to 6 cables N of Isla Erbosa (43°39′·8N, 5°51′·8W), a rocky island of medium elevation.

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Piedra Cono del Noroeste (NW), the shallowest pinnacle, is marked by ripples when the sea is calm otherwise by breakers. Islote El Bravo, Islotes Las Monistas and Piedras Las Corberas, rocky islets and above-water rocks lie close NE, NW and W respectively of Isla Erbosa. Isla Erbosa lies 4 cables NW of Islote Agudo del Sabín, a large pillar of rock. The passage between them is encumbered by Piedra Ballerín and Piedra Ballena, two drying rocks. Islote Agudo del Sabin is joined to Cabo Peñas at LW.

8 **Caution.** In bad weather Cabo Peñas (43°39′N, 5°51′W) should be given a berth of 5 or 6 miles to avoid the breakers on Somos Llungo and also the heavy seas caused by the uneven bottom that extends a considerable distance offshore.

10.189

1 **Clearing marks:** the alignment (138°) of the extremity of Punta de la Vaca (43°38′N, 5°47′W) (10.188) and the summit of Cabo de Torres (elevation 118 m) (43°34′N, 5°42′W), marked by a pillar standing about 1 cable NNE of the conspicuous storage tanks (10.169), passes more than 2 cables NE of Cabezo La Romanella.

10.190

1 **Useful marks:**

Prominent church (pointed dome on square tower) (43°37′N, 5°47′W) at E end of Luanco town on 35 m high promontory.

Muelle del Callo Light (round masonry tower 4 m in height) (3 cables NE of church) on the head of the breakwater at Punta del Gallo.

(Directions continue at 11.13)

Anchorages and harbours

Chart 1153 (see 1.18)

Ensenada de Candás

10.191

1 **General information.** Ensenada de Candás, the bay entered between Punta Socampo (43°35′·2N, 5°44′·9W), a low rugged point, and Punta del Cuerno (8 cables NW) (10.188) has a sandy bottom but is encircled with dangerous rocky shoals.

Puerto de Candás, a fishing port at the head of the bay fronting the town (10.183) consists of a small drying boat harbour and an outer harbour that partly dries formed by two moles.

10.192

1 **Directions.** In calm weather it is possible to enter the bay between the various shoals shown on the chart but local knowledge is essential except for Canal El Carrero, the only channel that is passable in heavy seas from N or NW.

Initial position 43°35′·3N, 5°44′·0W, 5 cables NNE of Punta Aviao which rises steeply to a distinctive truncated conical knoll 49 m high.

2 **Leading lights** for Canal El Carrero:

Front (white concrete column 4 m in height) (43°35′·8N, 5°45′·5W) situated ½ cable NE of Candás Lighthouse (10.187) lower down the slope of Punta del Cuerno.

Rear (exhibited from upper window in gable of whitewashed masonry house, 4 m in height, with two windows on ground floor and white fence extending S) (5 cables WNW of front light).

3 The alignment (290°) of these lights leads about 8 cables WNW into Ensenada de Candás in depths of 10 to 12 m, passing the following rocky shoals (positions given from front light):

Close NNE of Bajo El Petón de Entrellusa (8½ cables ESE), thence:

4 SSW of Bajo El Castañar (7½ cables E), a 4·1 m patch over which the most dangerous breakers occur, thence:

NNE of Bajo La Sierra (7 cables ESE), with a depth of 2·1 m over it the shallowest of the shoals bordering the channel.

5 The harbour entrance which faces SE may then be approached from NE, passing SW of the head of the E mole marked by a light-beacon (grey truncated conical tower 4 m in height) (4 cables S of front leading light).

10.193

1 **Berths:** Along the inner side of the E mole is a quay. It has been reported (2000) that there is a depth of 2 m alongside the S-most 45 m of the quay. There are drying berths for fishing boats in the inner harbour, also within the entrance to Río Perán (5 cables SSE).

Repairs: slip.

Supplies: marine diesel fuel; fresh water; provisions.

Chart 1150 plan of Puerto de Luanco

Ensenada de Luanco

10.194

1 **General information.** Ensenada de Luanco (43°37′N, 5°47′W) is entered between Punta del Carmen, also called Punta de Luanco, a low rugged point fronted by Peña Cercada, an islet surmounted by the prominent chapel Ermita del Carmen, and the breakwater extending E from Punta del Gallo (10.190) lying 5 cables NNW of the islet. The bay is exposed to bad weather from NE; breakers also form across the whole entrance when there is a heavy swell from N or NW.

2 Villa de Luanco lies at the head of the bay which is given the name of Puerto de Luanco and frequented by fishing vessels. Small coasters occasionally call to load barytes in the shelter of the breakwater.

There are no licensed pilots but local seamen will provide a pilotage service.

10.195

1 **Directions.** Initial position 43°37′·2N, 5°46′·2W, about 5 cables E of Muelle del Gallo Light (10.190).

Leading lights:

Front (board 2 m in height attached to wall) (43°37′·0N, 5°47′·3W) at the SW extremity of the harbour wall.

Rear (white concrete tower, 7 m in height) (240 m WSW of front light) located in the street N of large building with 6 arches on seafront.

2 In fair weather the alignment (255°) of these lights leads 7 cables WSW through Canal del NE to La Poza de Arriba, the pool lying ¾ cable SSE of the prominent church (10.190), passing (positions given from front light):

3 SSE of Bajo Sierra del Peón, the underwater reef extending 2 cables E from Punta del Castillo (5½ cables NNE), thence:

SSE of Bajo Juan de Melao also named El Petón (4 cables NE), the rocky patch (depth 3 m) extending from ½ to 1 cable ESE of the breakwater head, and:

4 NNW of Bajo Pegollo de Fuera and Bajo La Espiga, the E and NW extremities respectively of the reef,

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awash in places, which extends 2 cables NNE from Peña Cercada (4 cables ESE), thence:

SSE of Peña de Arriba (1½ cables NE), a rock that almost covers at HW, standing 40 m within the SE corner of the coastal reef.

5 In heavy seas when Canal del NE is impassable local fishing vessels use Canal del Vendaval, the channel between the breakwater head and Bajo Juan de Melao, but local knowledge is essential as there are no leading marks.

10.196

1 **Anchorages** are available;

In La Espera anchorage (43°37′·3N, 5°46′·8W) in depths of 5 to 8 m clean sandy bottom; sheltered in bad weather from NW by Punta del Castillo and Bajo Sierra del Peón (10.195); used by fishing vessels awaiting better sea conditions for entering harbour.

2 In fair weather, in the shelter of the breakwater extending E then SE from Punta del Gallo which has a depth of 4 m at its head. This anchorage is shallow and poorly sheltered from N and NW and has patches of rocky bottom.

10.197

1 **Berths.** Puerto de Luanco is formed by Muelle Interior which extends 100 m SSE then SW from the shore 150 m SW of the prominent church. The basin on the W side dries at LW, bottom muddy sand; up to 15 fishing vessels of 50 tonnes berth alongside in pairs but they have to take precautions against surging at HW if there is any swell in the bay. An arm extends ENE from the elbow of Muelle Interior; it has a berth 45 m long on its NNW side.

10.198

1 **Repairs:** shipyard situated in Ensenada del Dique (43°36′·7N, 5°47′·0W) builds small craft.

Supplies: marine diesel fuel available at Muelle Interior, fresh water at Punta del Gallo and Muelle Interior; provisions.

Chart 1153

Ensenada de Llumeres

10.199

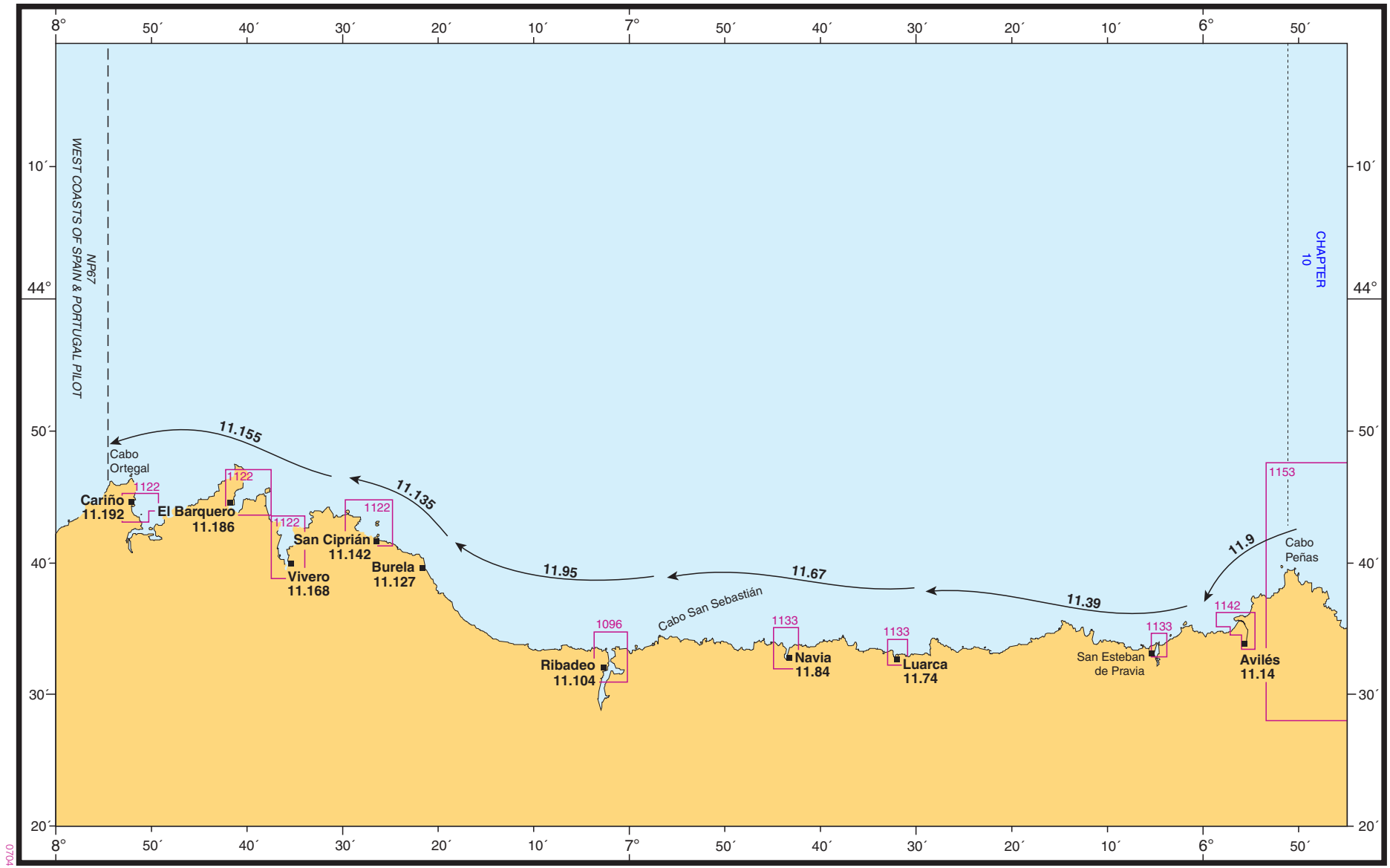
1 **Anchorage.** Ensenada de Llumeres, entered between Punta del Castro (43°39′N, 5°50′W) and Punta de la Narvata (7 cables SE), provides sheltered anchorage in winds from SW to NW in depths from 8 to 9 m clean sandy bottom. The SE shore of the bay and Islote del Castro off the NW point are both high. A masonry pier (6 cables SSE of Punta del Castro), formerly used by coasters loading iron ore, provides shelter from N and NW winds.

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Chapter 11 - Cabo Peñas to Cabo Ortegal



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CHAPTER 11

CABO PEÑAS TO CABO ORTEGAL

GENERAL INFORMATION

Chart 1108

Topography

11.1

1 Westward of Cabo Peñas (43°39′N, 5°51′W) as far as Cabo San Sebastián (43°34′N, 6°56′W) the coast is generally steep-to with rocky cliffs. It is only slightly indented, with ports usually at river mouths. High mountains mostly lie some distance inland often in the rear of a strip of level ground.

2 Farther W the coast becomes more and more indented with steep-sided estuaries, the E-most of the so called Rías Altas, and the mountains approach close to the coast.

There are no known dangers with depths of less than 20 m over them lying more than 1½ miles offshore. In bad weather breakers or heavy seas may occur farther offshore over banks and in areas of shelving rocky bottom.

Ports and shelter

11.2

1 Avilés (43°34′N, 5°55′W) (11.15) and San Ciprián Puerto de Alumina Española (43°43′N, 7°28′W) (11.142) are the only two important commercial ports on this stretch of coastline. There are several important fishing ports most of which are also used by small merchant vessels.

2 Between Avilés and Ribadeo (43°32′N, 7°02′W) (11.104), nearly 50 miles W, there are no ports of refuge for small vessels that are accessible in heavy weather from the N quarter. The latter port is difficult of access in these conditions. See 11.134 for details of shelter to be found farther W.

Obstructions

11.3

1 Obstructions, approximately 2·5 m high, which form artificial reefs, exist in several areas between Cabo Vidrias (43°35′N, 6°01′W) and Ría de Ribadeo, 45 miles W. The limits of the areas, which can extend up to 4 miles offshore, are shown on the chart.

ODAS buoys

11.4

1 ODAS buoys are moored in positions 43°44′·1N, 6°10′·2W and 44°03′·9N, 7°37′·1W.

11.5

Natural conditions

1 **Swell.** A heavy NW swell is an especial hazard, see 10.4 for further details.

2 **Weather.** The local weather patterns in the area between Cabo Peñas and Cabo Ortegal (43°46′N, 7°53′W) are similar to those described at 10.144 for the area between Cabo Lastres (43°32′N, 5°18′W) and Cabo Peñas. Further information on the weather in the vicinity of Cabo Peñas is given at 10.186, and for the area W from Punta de la Estaca de Bares (43°47′N, 7°41′W) at 11.157.

Fog occurs fairly frequently in summer especially in late June and early July.

3 **Currents** off Cabo Peñas and in the approaches to Avilés are described at 10.186 and 11.8, respectively: elsewhere they are generally similar to, but weaker than, those E of Cabo Peñas described at 10.6.

Tidal streams. It has been reported that close inshore between Cabo Peñas and Punta de la Estaca de Bares the tidal stream sets generally E when the tide is rising and generally W when it is falling. The direction is modified by the coastline.

4 **Abnormal water levels** caused by the wind occur along the whole N coast of Spain, see 1.107 for further details.

Caution

11.6

1 **Major lights** along this stretch of coastline are, in general, placed so high as frequently to be obscured by low cloud.

CABO PEÑAS TO CABO BUSTO

GENERAL INFORMATION

Chart 1108

Topography

11.7

1 Between Cabo Peñas (43°39′N, 5°51′W) and Cabo Vidrias (9 miles WSW) the coast is indented by Ensenada de Avilés. Ría de Avilés (11.14) is entered about halfway between these two capes.

Thence from Cabo Vidrias to Cabo Busto (43°34′N, 6°28′W) the coastline continues generally W for 20 miles with slight indentations each side of Cabo Vidio the mid-point. Westward of the valley through which Ría de Pravia enters the sea (3 miles WSW of Cabo Vidrias) the hinterland becomes more mountainous.

Current

11.8

1 In Ensenada de Avilés there is a constant NE-going current. In the vicinity of Cabo Peñas it is augmented in summer by an eddy produced by the W-going current passing N of the cape. It has been reported that off Punta del Castillo (43°36′N, 5°57′W) the NE current may attain a rate of 3 kn.

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CABO PEÑAS TO RÍA DE AVILÉS

General information

Chart 1108

Route

11.9

1 The coastal route from Cabo Peñas (43°39′N, 5°51′W) to the entrance of Ría de Avilés (11.14) leads about 5 miles SW.

Topography

11.10

1 Between Cabo Peñas (10.183) and Cabo Negro (43°37′N, 5°55′W) (11.13), 3 miles SW, the steep and rugged coastline is indented by several small bays with shingle beaches at their heads. It is fronted by a number of islets and flat rocks; Islote Bermeo (43°38′N, 5°53′W) of medium elevation and reddish is one of a group of three islets.

2 Between Cabo Negro and Punta de la Forcada (2 miles SW) (11.13) the coast is steep and craggy for about 8 cables S from the cape and 8 cables E from the point. In the middle Ensenada de Xagó or Chagó is bordered by a broad beach backed by the village of Llodero standing on a hillock and visible from seaward.

Current

11.11

1 The current is described at 11.5.

Principal marks

11.12

1 **Landmarks:**

Isla Erbosa (43°40′N, 5°52′W) (10.188).

Cabo Peñas Lighthouse (43°39′N, 5°51′W) (10.187).

Avilés Lighthouse (white square tower, 14 m in height) (43°35′·8N, 5°56′·6W) standing on the top of Punta del Castillo. A disused pilot look-out (square building, mast) stands 60 m N.

2 **Major lights:**

Cabo Peñas Light—as above.

Avilés Light—as above.

Directions

(continued from 10.190)

11.13

1 **Initial position** NW of Isla Erbosa (43°40′N, 5°52′W) (10.188) and its off-lying dangers, see caution at 10.188.

Approaching Ría de Avilés the coastal route leads about 5 miles SW, passing:

2 NW of Cabo Negro (43°37′N 5°55′W), an abrupt headland similar in aspect to Cabo Peñas (10.183) with a funicular on its 60 m high summit. The cape is fringed by an underwater ledge but may be passed at a distance of 5 cables. Thence:

NW of Punta de la Forcada (chart 1133), the bold rocky W extremity of Península de San Juan (43°36′N, 5°56′W) (11.16).

(Directions continue, for Ría de Avilés at 11.28, and for the coastal route at 11.47)

RÍA DE AVILÉS

General information

Chart 1142 plan of Ría de Avilés

11.14

1 **Position.** Villa de Avilés (43°33′·5N, 5°55′·5W), population 88 400 (1995), stands on the W bank of Río Tamón where it flows into the head of Ría de Avilés.

11.15

1 **Function.** Puerto de Avilés trades mainly in the raw materials for and products of the steel, iron, aluminium and glass works situated around the port.

11.16

1 **Topography** Ría de Avilés entrance is sheltered N by Península de San Juan (43°36′N, 5°56′W) whose S coast is steep and rises to an elevation of 72 m at the summit of Monte Bocon. Playa del Espartal, an outstanding beach of fine white sand backed by pinewoods, extends from the entrance 1½ miles SW to Salinas whose tall buildings are prominent. The NE end of the beach is retained by a rubble groyne to prevent silting in the channel.

2 Seven cables E of the entrance the estuary turns through Curva de Pachico and continues S for nearly 2 miles to Dársena de San Agustín, the basin at its head. It passes through Canal de Pedro Menéndez where the channel has been dredged through the flats that once formed the E bank.

11.17

1 **Approach and entry.** Ría de Avilés is approached from NW and entered through the channel dredged S of Punta del Castillo (43°35′·8N, 5°56′·7W) (11.28).

11.18

1 **Traffic.** In 2003 the port was used by 953 vessels totalling 7 689 433 dwt.

11.19

1 **Port Authority.** Autoridad Portuaria de Gijón-Avilés, El Muelle 8, E–33405, Avilés.

Limiting conditions

11.20

1 **Controlling depths:**

Entrance channel: dredged to 9.6 m (2000).

Fondeadero del Monumento (11.25): dredged to 9·0 m (2000).

Canal de Pedro Menéndez: dredged to 6·5 m (2000).

Darsena de San Augustin (11.25): dredged to 5·0 m (2000).

Deepest and longest berth: Muelle de Raices (11.33).

Vertical clearance: A power cable with a safe overhead clearance of 48 m crosses Canal de Pedro Menéndez.

2 **Tidal levels.** See information in *Admiralty Tide Tables.* Meam spring range about 3.2 m; mean neap range about 1.2 m.

Abnormal water levels of 0·3 m more or less than those predicted are reported to occur due to atmospheric conditions. Winds from S through W to N raise the water level and advance the time of HW: winds between N and E have the opposite effect.

Density of water: reported to vary from 1·016 to 1·019 g/cm^3.

3 **Maximum size of vessel handled:** longest 220 m; see 11.24 for regulations regarding under-keel clearance.

Local weather. The mouth of Ría de Avilés is exposed to NW storms. They rarely close the port as, due to dredging, there is no longer a bar.

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Curva de Pachico *Canal de Pedro Menéndez*



Punta de la Forcada

Entrance to Avilés from NW (11.14)
(Original dated 1997)

Arrival information

Notice of ETA
11.21

1 Mariners should send ETA 2 hours before arrival and confirm when approximately 10 miles from the port when instructions will be given.: See *Admiralty List of Radio Signals Volume 6(2)* for further details.

Waiting anchorage
11.22

1 Vessels awaiting the tide to enter Ría de Avilés may anchor in the area known as La Bogariza. The anchorage is situated between 5 cables and 1 mile W and NW of Avilés Light (43°35′·8N, 5°56′·6W) (11.12) and has depths of 15 to 20 m, sand. Bajo El Aguin (9 cables W of Avilés Light) (11.28) should be avoided. It has been reported that vessels lie beam-on to the swell due to the current (11.8).

Pilots and tugs
11.23

1 **Compulsory pilotage:** vessels more than 50 grt.

Pilot boats have orange topsides, black hull with white letter 'P' on both sides.

Boarding place: 1½ miles NW of harbour entrance.
Tugs: several available.

Regulations concerning entry
11.24

1 On entry and departure a vessel's under-keel allowance at the shallowest point en route to her berth, and the number and type of tugs employed shall be as follows:

Length (m)	*Allowance (m)*	*Tugs: number & minimum hp*
Under 100	0·61	
100–130	0·61	One 500 hp
130–150	0·91	Two, one of them 1000 hp
150–180	1·22	Two, combined hp 2000
180–220	1·22	Two or more, combined hp 3000

2 Length is measured over all in the case of vessels with bulbous bows, between perpendiculars for others.

Entry of vessels more than 220 m in length is authorised only in exceptional circumstances.

Vessels more than 130 m in length shall employ two pilots.

These rules can be modified by the Port Authority in the event of *force majeure*.

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Harbour

General layout

11.25

1 Puerto de Avilés contains four berthing areas (listed in sequence from the entrance):

Dársena de San Juan de Nieva, the basin on the S side of the inner end of the entrance channel.

Fondeadero del Monumento, a waiting anchorage about 3 cables S of Curva de Pachico. It lies between Muelle de Raices on the W bank, the principal public berth, and Muelle Inespal (Endasa) on the E bank.

2 Muelle Pesquero, the fish quay on the E side of Canal de Pedro Menéndez.

Dársena de San Agustín; quays on the E and S side are operated by Ensidesa, the national steel corporation.

Traffic signals

11.26

1 Traffic signals (Diagram 11.26) are exhibited from a metal mast on the pilot's office (43° 35′·6N, 5° 55′·8W), a two storey building standing at the E end of the S bank of the entrance channel.

Signal	*Meaning*
● ● ●	Port closed.
●	Caution, bad weather.

Traffic signals (11.26)

Natural conditions

11.27

1 **Winds.** The prevailing wind is NW.

Flow in the entrance channel attains a maximum rate of 2¼ kn.

Current off the harbour entrance is described at 11.8.

Directions for entering harbour

(continued from 11.13)

11.28

1 **Initial position** NW of Punta de la Forcada (43°35′·9N, 5°56′·8W) (11.13).

Approaching Ría de Avilés entrance the route leads SE, passing:

NE of the light-buoy (starboard hand) marking Bajo El Aguin (43°35′·9N, 5°57′·7W) an extensive rocky patch. Thence:

2 SW of Punta de la Forcada; a light-beacon (red mast on white truncated conical tower, 4 m in height) stands on the point. Thence:

Close SW of Punta del Castillo (1½ cables SE of Punta de la Forcada). A light-beacon (red truncated conical tower 3 m in height) stands at the foot of the point 37 m SW of Avilés Lighthouse (11.12).

11.29

1 **Entering Puerto de Avilés** the channel, leads 7 cables E to the entrance of Dársena de San Juan de Nieva. It is 153 m wide between rubble embankments and is marked by:

2 Six light-beacons (red masts on white truncated conical towers, 4 m in height) on the N side, the two W-most at the foot of the cliff, the remainder on Escollera Norte, the embankment which has two openings giving access to small shallow bays, and:

3 A light-beacon (green round tower, truncated conical base and top, 7 m in height) at the W end of Escollera Sur, the embankment on the S side, and eight light-beacons (green masts on white truncated conical towers, 4 m in height) situated at 110 m intervals along the top of the embankment.

11.30

1 **Passing Dársena de San Juan de Nieva entrance,** the fairway turns S through Curva de Pachico where it is marked by light-buoys (lateral). Thence it continues S for about 5 cables through Fondeadero del Monumento, parallel to Muelle de Raices on the W bank.

2 **Useful marks:**

Light-beacon (green mast with red band on white truncated conical tower, 4 m in height) (43°35′·5N, 5°55′·5W) on the SE entrance point of Dársena de San Juan de Nieva.

Light-beacon (green mast on white truncated conical tower 4 m in height) (1 cable SE) at NE end of Muelle de Raices.

11.31

1 **Entering Canal de Pedro Menéndez** (43°34′·8N, 5°55′·2W), the channel marked by light-buoys (lateral) and a light-beacon (white round tower, red lantern; 3 m in height) leads S passing:

E of a training wall, thence:

Beneath an overhead power cable (11.20), thence:

To Darsena de San Augustin.

Basins and berths

Dársena de San Juan de Nieva

11.32

1 The basin (43°35′·4N, 5°55′·6W) lined with 817 m of quay and dredged to 5·2 m in 2000, handles general and bulk cargoes. Muelle Sur on the S side has a length of 300 m.

Fondeadero del Monumento

11.33

1 **Waiting berth** (43°35′N, 5°55′W). It has been reported (1983) that vessels up to 220 m in length and 9 m draught awaiting an alongside berth can moor bows W to two anchors with their stern secured to Muelle Inespal.

Muelle de Raices (W bank) has two parts. The main quay, length 823 m, depth alongside 7·0 to 8·2 m, handles general and bulk cargoes. An extension to the S is about 400 m in length, and with alongside depths of 12 m it is the deepest berth.

Muelle Inespal (Endasa) (E bank), a private berth length 133 m, dredged to 5·2 m (2000), handles alumina and aluminium products.

Canal de Pedro Menéndez

11.34

1 **Muelle Pesquero**, the fish quay length 505 m, dredged to 4·5 m (2000), lies on the W side of the channel.

Dársena de San Agustín

11.35

1 The basin at the head of the estuary has 1 km of private quays on its E and S sides. The N section of Muelle de Levante on the E bank is 300 m long and handles general and dry bulk cargoes, petroleum products and ammonia. The other berths handle general cargo and heavy loads.

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Muelle de Raíces

Fondeadero del Monumento from NE (11.33)
(Original dated 1997)

Port services

Repairs

11.36

1 **Shipyard** carries out repairs afloat.
Divers are available.

Other facilities

11.37

1 Deratting and deratting exemption certificates issued. Hospital.

Supplies

11.38

1 **Fuel:** fuel oil and marine diesel available by barge; marine diesel also supplied by pipeline at Dársena de San Juan de Nieva and fishing vessel berths at Avilés.
Fresh water: available at quays.
Provisions: plentiful.

RÍA DE AVILÉS TO CABO BUSTO

General information

Chart 1108

Route

11.39

1 The coastal route from the approach (43°38′N, 5°59′W) to Ría de Avilés to the vicinity of Cabo Busto (43°34′N, 6°28′W) leads about 22 miles W.

Topography

11.40

1 From the SW end of Playa del Espartal (11.16), to Cabo Vidrias (2 miles W) the coast is high and steep with several indentations and ravines. The factory buildings and chimneys at Arnao (2½ miles NW of Avilés) are prominent.

2 From Cabo Vidrias (43°35′N, 6°01′W) to Punta del Cogollo (1 mile WSW) the uniform steep cliff-face is about 120 m high. The conspicuous Isla Deva (11.46) lies close offshore. Thence to Punta del Pozaco, 1½ miles farther SW the coast descends steeply to a narrow beach. Between Punta del Pozaco and the entrance to Ría de Pravia, 5 cables SW, the coast becomes lower. Playa de los Quebrantos, the beach, and the village of San Juan de la Arena at its SW end are distinct.

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Muelle de Levante



M u e l l e S u r

Dársena de San Agustín from S (11.35)
(Original dated 1993)

11.41

1 From Punta del Espíritu Santo (43°34′N, 6°05′W) (11.50), the W entrance point of Ría de Pravia, to Cabo Vidio (7½ miles WNW) (11.47), the coastline rises steeply to elevations of more than 100 m. There are numerous small bays with a rocky foreshore and a beach at their heads; they are separated by more or less prominent points mostly fringed with reefs that extend 3 cables offshore.

Monte Montarés (43°33′N, 6°11′W), 405 m high, and Islote Rabión de Artedo (2 miles NNW) are both distinctive conical features of this stretch of coastline.

11.42

1 Between Cabo Vidio (43°36′N, 6°15′W) (11.47) and Cabo Busto (10 miles W) (11.47) the coastline presents a uniform aspect of 80 m high cliffs interspersed with numerous points and beaches. It is fringed by ledges and detached rocks: some of the latter are above-water or drying and lie up to 5 cables offshore.

2 The cliffs are backed by a narrow plateau which is interrupted by many deep ravines formed by the torrents that descend the slopes of a mountain ridge. Monte Palancas, the summit, lies less than 2 miles inland midway between the two capes.

Breakers

11.43

1 In heavy weather breakers occur over El Serrón (43°38′N, 6°24′W) (11.47). Elsewhere between Cabo Vidrias and Cabo Busto the 50 m depth contour lies between 1 and 2 miles offshore. There are no areas where breakers are reported to occur lying farther offshore.

Rescue

11.44

1 **Rescue station:** at San Juan de la Arena (43°33′·5N, 6°04′·5W) (11.40).

Currents

11.45

1 The current in Ensenada de Avilés is described at 11.8. Between the mouth of Ría de Pravia (43°34′N, 6°05′W) and Isla Deva (2½ miles ENE) the current sets ENE.

Principal marks

11.46

1 **Landmarks:**

Isla Deva (43°35′·5N, 6°02′·0W), 81 m high and sheer on its E and S side, is conspicuous.

Ermita de Santa Ana de Montarés (43°33′N, 6°11′W), a chapel, is clearly visible except in the vicinity of Cabo Vidio (4 miles NW) where it is obscured by the summit of Monte Montarés (11.41).

2 Cabo Vidio Lighthouse (round masonry tower and dwelling; 9 m in height) (43°36′N, 6°15′W) standing on the NW point of the table and forming the cape (11.47).

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Cabo Busto Lighthouse (white square tower; 9 m in height) (43°34′N, 6°28′W) attached to the seaward facade of a white house standing close to the cliff top.

3 **Major lights:**

San Esteban de Pravia Light (white round tower, 10 m in height).

Punta Rebollera Light (43°34′N, 6°08′W) (11.48).

Cabo Vidio Light—as above.

Cabo Busto Light—as above.

Directions

(continued from 11.13)

11.47

1 **Initial position** NW of Punta de la Forcada (43°35′·9N, 5°56′·8W) (11.13) at least 2 miles offshore.

The coastal route leads about 22 miles W, passing:

2 N of El Petón (43°36′N, 6°00′W), an underwater pinnacle that breaks in heavy seas, covered by the red sector (091°–113°) of Avilés Light (11.12). The rock lies 1 mile NNE of Cabo Vidrias at the extremity of a below-water reef that contains Los Anuales, steep-to shallow rocks, and Moro de la Vidria, a rock that covers at HW, lying 4 and 1½ cables NNE of the cape respectively. Thence:

N of Isla Deva (1½ miles SW of El Petón) (11.46) whose N point is steep-to, thence:

3 N of the entrance to Ría de Pravia (43°34′N, 6°04′W) (11.50), thence:

N of Punta Rebollera (43°34′N, 6°08′W) whose lighthouse (11.48) indicates the entrance to Puerto de Cudillero (11.61). An obstruction (artificial reef) is centred about 2½ miles NW of the lighthouse. Thence:

4 N of Cabo Vidio (43°36′N, 6°15′W), the 89 m high extremity of a cultivated tableland, surmounted by Cabo Vidio Lighthouse (11.46). Islote Chouzano, a conical islet lower than the cape, lies close N and is linked to it by a drying reef. A reef extending 1½ cables N from the islet terminates at Lozanín, a drying rock. Thence:

5 N of Las Chugaronas (43°34′N, 6°24′W) a group of above-water and drying rocks lying up to 5 cables offshore. El Serrón, a rocky bank, lies 4 miles farther N; in heavy weather dangerous steep seas and in very heavy weather breakers form over it. Thence:

6 N of Cabo Busto (43°34′N, 6°28′W), the 65 m high and 800 m wide N face of a tableland surmounted by Cabo Busto Lighthouse (11.46). Sierra del Cabo, a reef with depths of 12 m or less over it, extends 4 cables N from the cape. A ledge that dries extends nearly 4 cables WNW from the NW point of cape. Petón del Busto, a rocky patch lying 2 miles NNW of the cape, causes a moderate ground swell.

11.48

1 **Clearing marks.** The line of bearing 114° of Islote Rabión de Artedo (43°35′·0N, 6°11′·5W) (11.41), open NNE of Cabo Vidio (2½ miles WNW), clears NNE of El Serrón (43°38′N, 6°24′W).

2 **Useful marks:**

Cabo Peñas Light (43°39′N, 5°51′W) (10.187).

Avilés Light (43°35′·8N, 5°56′·6W) (11.12).

Punta Rebollera Lighthouse (white 8-sided tower and dwelling; 10 m in height) (43°34′N, 6°08′W) standing on the point which rises to an elevation of 107 m close SE of the light.

(Directions continue at 11.71)

Ría de Pravia

Chart 1133 plan of San Esteban de Pravia

General information

11.49

1 San Esteban de Pravia (43°33′N, 6°05′W) is situated on the W bank of Ría de Pravia, the estuary of Río Nalón. San Juan de la Arena village (11.40) lies on the E bank of the entrance to the estuary.

Function. Puerto de San Esteban was dedicated to the export of coal but it is no longer regularly used by commercial shipping; only the repair and shipbreaking yards are active. San Juan de la Arena is concerned solely with fishing.

11.50

1 **Topography.** Ría de Pravia is entered W of Playa de los Quebrantos (11.40) and E of Punta del Espíritu Santo. The point, surmounted by a prominent hermitage (43°33′·8N, 6°04′·8W) standing at an elevation of 109 m, is wooded on its steep E slopes. The entrance is sheltered from W by Dique del Oeste, a breakwater extending N from the point, and from NE by Contradique del Este, a detached breakwater.

2 The entrance channel, about 150 m wide between training walls, leads about 7 cables S to a position where the estuary widens and Dársena de San Esteban, the basin on the W bank, is entered.

About 1 mile S of the entrance to the basin the estuary narrows and is spanned by a road-bridge (uncharted) which has a vertical clearance of 2·5 m and forms the limit of navigation except for small craft.

11.51

1 **Port Authorities:**

Comisión de Puertos del Principado de Asturias, Oviedo.

Limiting conditions

11.52

1 **Controlling depths.** Depths in the approaches and basin are subject to siltation and may be significantly less than charted, especially after freshets in winter.

Tidal levels. See information in *Admiralty Tide Tables.* Mean spring range about 3·4 m; mean neap range about 1·6 m.

2 **Abnormal water levels.** Winds between SW and NW raise the water level by about 0·9 m, winds between NE and SE lower the water level possibly by a greater amount. In winter the level changes when Río Nalón is in spate.

Local weather. Small craft should not attempt entry in heavy seas or during the out-going tidal stream if there is a fresh NE wind or a swell from the same direction.

Arrival information

11.53

1 **Pilotage** is compulsory. A qualified pilot is available.

Entry: the best time is 2 hours before HW.

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Harbour

11.54

1 **Layout.** The principal berths are situated on the W side of Dársena de San Esteban. There are a number of berths for small craft on both sides of the S end of the entrance channel.

Tidal streams at the entrance to the estuary attain a rate of 4 or 5 kn at springs.

Directions

11.55

1 **Initial position** N of the head of Dique del Oeste (43°34′·3N, 6°04′·5W).

Leading lights:

Front (white post, 4 m in height) (43°33′·5N, 6°04′·6W) on the training wall adjacent to the wharves at San Juan de la Arena.

Rear (red and white chequered square pillar, 8 m in height) (160 m S of front light).

2 The alignment (182¼°) of these lights clears very close E of the head of Dique del Oeste marked by San Esteban de Pravia Light (11.46). Thence it leads into and through the entrance channel, passing (positions given from front light):

3 W of the WNW end of Contradique del Este (7 cables N), thence:

E of Dique del Oeste, marked approximately half way along its length by a light (truncated pyramidal tower, 4 m in height), and:

W of the training wall whose outer end (5 cables N) is marked by a light (truncated pyramidal tower, 6 m in height).

11.56

1 **Lights in line.** The alignment (202½°) of the following lights clears close WNW of the WNW end of Contradique del Este:

Front (grey metal post, 7 m in height) (43°33′·9N, 6°04′·6W) on the W training wall.

Rear (grey metal post, 9 m in height) (200 m SSW of front light).

These lights are obscured W of the head of Dique del Oeste.

11.57

1 From a position 2½ cables N of the rear leading light (11.55), the channel leads 4 cables SSW to the entrance to Dársena de San Esteban, marked on each side by a light (truncated pyramidal towers, 3 m in height).

Basin and berths

11.58

1 **Dársena de San Esteban** contains 930 m of quay in three sections along the S part of its W side and two coal loading terminals along the N part of the same side. The S-most section is used as a shipbreaking berth. Depths alongside are less than 2 m.

11.59

1 **Small craft.** At San Juan de la Arena there is 92 m of wharf, used by fishing vessels, alongside the reclaimed land at the S end of the E training wall. On the opposite side of the channel there are two small concrete wharves projecting from the W training wall.

Port services

11.60

1 **Repairs** can be carried out. There are three patent slips and the largest has a capacity of 700 dwt and can accept vessels up to 45 m in length, beam 12 m.

Supplies: marine diesel fuel; fresh water; provisions.

Cudillero

Chart 1108 (see 1.18)

11.61

1 **General information.** Puerto de Cudillero (43°34′N, 6°09′W; not shown on chart 1108), an important fishing port, is approached from NNE and entered close W of Punta Rebollera surmounted by its lighthouse (11.48); local knowledge is required. The port consists of the old harbour, a small shallow basin at the head of the inlet protected by a breakwater known as Dique del Este, and the large new harbour lying close NW. The latter is formed by Dique del Oeste, a substantial prominent breakwater enclosing an artificial basin. Las Colinas, a chain of tall black rocks, extend almost 3 cables N of the N extremity of the new harbour.

2 The town of Cudillero lies in a deep narrow gorge extending S from the old harbour and is not visible from seaward.

11.62

1 **Useful marks** (positions given from Punta Rebollera Light):

Light (masonry pyramid) (1¼ cables NW) on head of Dique del Oeste.

Light (metal column 3 m in height) (1 cable SW) on head of Dique del Este on E side of entrance to old harbour.

2 **Berths:**

Numerous moorings and pontoon berths in new harbour; used by small craft and fishing vessels. The old harbour is little used.

Repairs: slip for small craft up to 12 tonnes.

Supplies: marine diesel fuel; fresh water; provisions.

Anchorages

Concha de Artedo

11.63

1 Concha de Artedo is entered between Punta Austera (43°35′N, 6°11′W) and La Ostrera (1 mile SE), a ridge with three drying heads extending nearly 4 cables NNE from Punta Castañal. The bay has a clean sandy bottom that shoals gradually to 5 m close off the beach at its head.

In summer anchorage may be obtained 1½ cables off the centre of the 100 m high steep W shore, depth 14 m sand, sheltered from SW to NW. In winter the NW swell enters the bay and causes heavy seas in the vicinity of Punta Austera.

Small craft

11.64

1 Ensenada de Oleiros, entered between Islote Rabión de Artedo (43°35′·0N, 6°11′·5W) (11.41) and Punta Malperro (7 cables WNW), and Ensenada de San Pedro entered between the latter point and Punta Gavilán (88 m high)

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(8 cables farther WNW), each provide fair weather anchorage close to the shore in a depth of 6 m sand.

11.65

1 Fondeadero de Cadavedo (43°33′·3N, 6°22′·0W) is a fair weather summer anchorage depth 5 m sand in a bight facing NE.

Local knowledge is necessary to enter the anchorage between two drying rocks lying 3¼ cables NE and 5 cables E of the NW entrance point of the inlet; La Moura, the former rock, is uncharted and lies 3¾ cables NW of the latter rock.

2 A chain of above-water and drying rocks extends 2¼ cables N from the NW entrance point; La Furada a large above-water rock lies 4½ cables WNW of the same point.

A spur from the coast road runs down to Playa de Cadavedo, the beach at the head of the bight.

CABO BUSTO TO CABO BURELA

GENERAL INFORMATION

Chart 1108

Topography

11.66

1 Between Cabo Busto (43°34′N, 6°28′W) and Cabo Burela (43°40′·5N, 7°21′·5W), nearly 40 miles W, the coast consists of rocky cliffs whose height decreases towards the W end. It is backed by a narrow plain intersected at intervals by the rivers descending from the mountainous hinterland.

Ribadeo (43°32′N, 7°02′W) (11.104) and Burela (43°4′N, 7°21′W) (11.127) are the only harbours of any commercial importance. There are several small fishing ports of which Luarca (43°33′N, 6°32′W) (11.74) is the most important and least difficult of access in bad weather.

CABO BUSTO TO CABO SAN SEBASTIÁN

General information

Chart 1108

Route

11.67

1 The coastal route from the vicinity of Cabo Busto (43°34′N, 6°28′W) to that of Cabo San Sebastián (43°34′·5N, 6°56′·5W) leads about 20 miles W.

Topography

11.68

1 From Cabo Busto to Cabo San Sebastián the coastline presents a uniform aspect of steep rocky slopes or cliffs 20 to 60 m high broken only by the mouths of rivers and ravines. It is fringed in places with islets and with numerous rocks and reefs that extend up to 5 cables offshore. The few beaches are only accessible in fair weather.

2 A 3 km wide strip of relatively flat land backs the coastline: farther inland hills and mountain ranges rise steeply to elevations exceeding 600 m 8 km from the coast.

There are several little fishing ports but no harbours of any commercial importance.

Breakers

11.69

1 In heavy weather breakers occur over Cabezo de Viavélez (43°36′N, 6°49′W) (11.71) and other rocky patches closer inshore within the 50 m depth contour.

Principal marks

11.70

1 **Landmarks:**

Cabo Busto Lighthouse (43°34′N, 6°28′W) (11.46).

Punta Blanca Lighthouse (white square tower and dwelling; 9 m in height) (43°33′N, 6°32′W). La Blanca chapel (tall belfry and building, both whitewashed) (30 m SE) is more prominent.

2 Cabo de San Agustín Lighthouse (white round tower black bands, 10 m in height) (43°34′N, 6°44′W) standing on the extremity of the tableland of the cape (elevation 60 m) N of several large white buildings.

Isla de Tapia Lighthouse (white square tower and dwelling; 10 m in height) (43°34′·5N, 6°56′·5W). Tapia church (statue on tall tower) (3 cables SE, uncharted) is generally more prominent.

3 **Major lights:**

Cabo Busto Light—as above.

Cabo de San Agustín Light—as above.

Isla de Tapia Light—as above.

Directions

(continued from 11.48)

11.71

1 **Initial position:** N of Cabo Busto (43°34′N 6°28′W) (11.47).

The coastal route leads about 20 miles W, passing:

N of Punta del Cuerno (43°34′N, 6°36′W) which has a distinctive reddish horn-shaped crag on its head (elevation 40 m). Bajo La Vaquiña, a below-water pinnacle that uncovers in rough seas, lies 2 cables NE of the point. Thence:

2 N of Islotes Romanellas, a chain of three steep high islets prominent from E and W that lie up to 2 cables N of Punta Romanellas (58 m high) (1 mile WNW of Punta del Cuerno). Bajo Castiel (43°35′N, 6°39′W), a rocky patch, lies 1¼ miles WNW of the islets. Thence:

3 N of Punta Engaramada (65 m high) (43°34′N, 6°46′W). Islotes Los Gavieros, a chain of two rocky islets and smaller rocks all lower than the point but prominent from E and W, extend 2 cables NNE from the point. Las Llamosas, a detached reef awash at half tide, extends 3 cables NW of the N-most islet. Heavy seas may break over Petón de Valladón (36 m patch) lying 1 mile N of the point. Thence:

4 N of Cabo Blanco (21 m high) (43°34′N, 6°51′W), a prominent cliffy point with distinctive white patches on its W side, fringed with rocks. Heavy seas break over Restinga de Cabo Blanco, a slight rise in the bottom that extends 4 cables N from the point, and also over Cabezo de Viavélez (2½ miles NNE of Cabo Blanco). Thence:

5 N of Cabo San Sebastián (43°34′·5N, 6°56′·5W) on which the town of Tapia (11.92) stands. Isla de Tapia, 18 m high surmounted by its lighthouse (11.70), is connected to the NW corner of the cape by a mole. Islote Orrio de Tapia lies 1 cable NW

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of Isla de Tapia. A drying reef, whose extremity lies 3 cables N of the light, extends 2 cables NNE from the islet. Las Percebosas, two rocks resembling boats, lie on the reef. El Coitelo and Mar Bella, two rocky patches, lie 1¼ miles NNE and NNW, respectively, from the light. Breakers occur over El Coitelo in a slight sea, over both patches in heavy seas.

11.72

1 **Useful marks:**

Vega church (white twin towers at W end of large masonry building) (43°34′N, 6°38′W).

Punta Lama Light (3 cables NW of Vega church) (11.83).

Caridad church (43°33′N, 6°50′W).

Viavélez N Breakwater head Light (truncated conical masonry tower 5 m in height) (43°34′·0N, 6°50′·4W; uncharted).

(Directions continue at 11.102)

Ensenada de Canero

Chart 1108 (see 1.18)

11.73

1 **Anchorage.** Ensenada de Canero (43°33′·5N, 6°29′·0W), the bight formed by the angle in the coastline at the mouth of Río de Canero, affords anchorage in depths of 5 to 10 m sand sheltered from the fresh NE winds prevalent in summer. Local knowledge is required. The river entrance is obstructed by a sand spit terminating in a bar that dries.

Luarca

Chart 1133 plan of Luarca

General information

11.74

1 **Concha de Luarca,** the bay entered between Punta Inguilo (65 m high) (43°33′N, 6°31′W) and Punta Mujeres (37 m high) (8 cables WNW), and its approaches are encumbered by numerous rocky patches. The shores of the bay are high and steep; the bay is identified by La Blanca chapel and Punta Blanca Lighthouse (11.70) standing on Punta Focicón (4 cables W of Punta Inguilo), the N point of La Blanca peninsula.

11.75

1 **Puerto de Luarca** lies at the head of the bay, E of the mouth of Río Negro and S of La Blanca peninsula. The port is frequented by fishing vessels and yachts; it is approached through a passage on the W side of the bay and entered between breakwaters that give some shelter to the outer harbour.

The town stands mainly on the slopes around the harbour and the valley of the Río Negro.

Limiting conditions

11.76

1 **Controlling depths.** In 1998 there was a depth of about 1 m in the channel and the basin.

Tidal levels. See information in *Admiralty Tide Tables.* Meam spring range about 3·5 m; mean neap range about 1·7 m.

2 **Abnormal water levels:** see 1.107 for general effect of winds.

Local weather. In winter the sea breaks over the whole bay in heavy weather. The outer harbour is somewhat exposed to N and NW: in winter the effect of heavy seas may be felt in the inner harbour.

Arrival information

11.77

1 **Pilotage:** not compulsory; pilots available.

Local knowledge is required for entering harbour.

Directions

11.78

1 **Initial position** N of Punta Mujeres (43°33′·3N, 6°32′·4W) (11.74), at least 5 cables offshore.

Leading lights:

Front (white masonry column, red bands, 15 m in height) (43°32′·8N, 6°32′·0W) on the root of Muelle del Paso.

Rear similar structure, 7 m in height) (45 m S of front mark) on slope on S side of Río Negro entrance close to white five-storey house.

2 The alignment (170°) of these lights, reported (1983) to be difficult to see by day (especially the rear light) and possibly confused with the television tower (2 cables ESE), leads S to a position about 150 m NNW of the head of Dique del Canouco, passing (positions given from front light):

3 W of Bajo Petón del Oleo (6 cables N). Breakers occur in the passage between this bank and Punta Mujeres in moderately heavy seas. Thence:

E of the reef that extends 1 cable NE of Punta Mujeres on which lies Piedra Castiel (underwater rock) (5 cables NNW), thence:

W of Bajo Bolerno (3½ cables N), thence:

E of Encoronada (3 cables NNW) a group of drying rocks.

11.79

1 The channel then leads S then SE, passing (positions given from Dique del Oeste Light (43°33′·0N, 6°32′·2W)):

E of the head of Dique del Oeste, the W Breakwater, surmounted by a light-beacon (metal mast 4 m in height), thence:

E of the NE end of Cepeda (½ cable SSE), a group of rocks awash, and:

2 W and SW of the head of Dique del Canouco surmounted by a light (round concrete tower, 13 m in height) (1 cable ESE). Thence:

NE of the head of Muelle del Paso (1¾ cables SE), the inner harbour breakwater, surmounted by a light-beacon (green metal mast 3 m in height).

Basins and berths

11.80

1 **Outer harbour.** Visitors moorings are laid parallel to the inner side of Dique del Canouco.

Inner harbour. There are alongside berths and moorings for small craft; a berthing pontoon lies in the SE corner of the basin.

Río Negro: the first 300 m is accessible only to boats at HW in calm conditions.

Port services

11.81

1 **Repairs** of a minor nature to hulls and machinery are carried out. Replacement of the slipway by a patent slip is planned.

Other facilities: yacht club.

Supplies: fuel; fresh water; provisions.

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Roadstead

Chart 1108 (see 1.18)

11.82

1 Anchorage off Playa de Sabugo and Playa de Arnela, in the bay (43°34′·5N, 6°36′·0W) SE of Punta del Cuerno (11.71), sandy bottom, is sheltered from winds between S and W. Local knowledge is required.

Small craft

Vega

11.83

1 **General information.** Puerto de Vega (43°34′N, 6°38′W), a very small artificial fishing port, lies at the head of a creek with rocky shores. It is entered SW of Punta Lama marked by a light (metal mast, concrete base; 5 m in height).

The inlet is identified by the white houses of Vega village and church (11.72) on its E side; by a chapel (uncharted; elevation 36 m) on Punta del Barroco and by Isla de Vega, a rocky islet, situated 2 and 6 cables W of the entrance respectively.

2 **Directions:** The harbour is accessible in fair weather to vessels of 2 to 2·7 m draught. The alignment (about 150°) of leading lights:

Front light (concrete column, 6 m in height) (½ cable SSE of Punta Lama Light)

Rear light (wooden mast, 7 m in height) (129 m SE of front light)

leads to the outer harbour entrance. The entrance channel is 13 m wide and very tortuous especially entering the inner basin; local knowledge is essential.

3 **Berths:**

Outer harbour: E side of mole extending N to the entrance; outer end, surmounted by a light-beacon (metal mast 5 m in height), has a depth alongside of 1 m (reported 2000). Quay on S side dries alongside. Both berths subject to surging in heavy weather.

Inner harbour: small quayed basin that dries.

Supplies: fuel; fresh water; some provisions.

Ría de Navia

Chart 1133 plan of Ría de Navia

General information

11.84

1 **Ría de Navia,** the estuary of Río Navia, is entered between Cabo de San Agustín (43°34′N, 6°44′W) (11.70) and Punta de la Sierra (1 mile E) a low wooded point. The estuary leads 1¼ miles S to the mouth of the river where it is spanned by a cantilever road bridge. The channel is contained between training walls extending nearly 1 mile N from the bridge and has a bar about ½ cable off its entrance. Monte Jarrio (2¼ miles SSW of Cabo de San Agustín) (chart 1108) helps to identify the entrance. N and NE from the mouth of Ría de Navia a large offshore area has been allocated to the construction of artificial reefs which lie 2·5 m above the seabed.

2 **Villa de Navia** lies on the E bank of the river S of the bridge. A basin on the same bank, entered 1 cable N of the bridge, is frequented mainly by fishing vessels.

Río Navia is navigable by boats for several miles.

Limiting conditions

11.85

1 **Controlling depth:** bar dries at MLWS; its position varies due to gales and freshets.

Deepest berths: NE and SE side of basin (11.88).

Tidal levels: similar to Luarca (8 miles E) (11.76).

Breakers form on the bar if there is any swell.

11.86

1 **Pilotage.** A pilot can be obtained at Cala de Ortiguera. The pilot boat will come out as soon as the request signal is displayed.

Towage. Depending on the weather and state of the bar, one or more launches will be sent out to provide assistance.

Local knowledge is required to navigate in the deepest water over the bar and within the canalised section of the channel.

Directions

11.87

1 **Initial position** NNE of the light-buoy (special) (43°34′·2N, 6°43′·5W) marking the outfalls of a submarine pipeline.

It has been reported (1983) that:

2 In the approach, the channel leads S parallel with and between the alignments (186°) of the outer section of the two training walls, thence:

At the entrance between the heads of the training walls, the fairway depth 2 m lies closer to the W wall, thence:

3 From a position ½ cable within the entrance to a position about 2 cables farther S, abreast the number 32 painted on the E training wall, the fairway lies closer to the E training wall, thence:

The fairway lies in mid-channel and decreases in depth to 1·6 m at its inner end abreast the basin.

Basin

11.88

1 The basin, dredged in 1982, was then reported to have depths of 2·4 m alongside its N and E walls and 1·8 m alongside its S wall. It is reported (2000) that a pontoon on the W side of the W wall has a depth of 2 m alongside and provides the best berth.

Port services

11.89

1 **Repairs** by shipyard situated ½ cable N of basin. Three slipways, the largest lifting capacity 500 tonnes.

Supplies: marine diesel fuel; fresh water; provisions.

Small craft

Chart 1108 (see 1.18)

Puerto de Viavélez

11.90

1 **General information.** Puerto de Viavélez (43°34′N, 6°50′W) is a very small natural harbour; it occupies an S-bend at the head of a narrow creek with steep rocky shores extending 1 cable SE from Punta Atalaya de Viavélez, its NE entrance point. A breakwater extends about 50 m WNW from the NE entrance point. The inner half of the creek is sheltered by two similar breakwaters, one extending NNE from the SW shore and the other WSW from the NE shore towards the root of the former. The entrance between the two inner breakwaters is about 40 m wide and faces N. A light-beacon (truncated conical masonry tower 5 m in height) stands on the head of each of the two outermost breakwaters. Depths decrease

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gradually from 5 m at the entrance to the creek to drying 0 m in the harbour entrance at the head of the creek.

2 Entry should only be attempted at HW in settled conditions with no swell. Local knowledge is necessary.

Berth: Muelle de Gudin, a quay about 40 m in length on the S side of the W entrance point of the harbour, dries alongside at LW.

Repairs: slipway at head of harbour.

Supplies: fresh water.

Ensenada de Figueras

11.91

1 **Anchorage.** Ensenada de Figueras, the open bay entered between Punta Campo Longo (43°34′N, 6°55′W) and Punta Castellón de Torba (7 cables ESE), is clean and affords anchorage in strong S winds in depths of 5 m close to the shore. Local knowledge is required. Bajo Virado, a drying rock, lies 1½ cables NNE of Punta Campo Longo.

Tapia

11.92

1 **General information.** Puerto de Tapia (43°34′·3N, 6°56′·7W), a small artificial fishing port, lies on the W side of Cabo San Sebastián (11.71). It is formed by Malecón del Norte, the breakwater extending ½ cable SW from the SW corner of Isla de Tapia, and Malecón del Sur, the mole extending 1 cable N towards the root of Malecón del Norte from the S side of the inlet forming the harbour. It extends about 1½ cables E from Malecón del Sur.

2 The port is considered safe in summer but not so secure in winter due to the undertow caused by NW swells.

The entrance between the heads of Malecón del Norte and Malecón del Sur is 65 m wide and faces S.

Villa de Tapia lies E and S of the harbour.

Pilotage is provided by local fishermen.

Local knowledge is necessary to enter harbour.

11.93

1 **Directions.** Initial position W of Isla de Tapia Light (43°34′·5N, 6°56′·5W) (11.70), at least 5 cables offshore.

The following alignment has been reported (1983) to lead E to the harbour entrance:

Front: Head of Malecón del Norte, surmounted by a light-beacon (truncated conical masonry tower 5 m in height; uncharted).

Rear: Head of Malecón del Sur, surmounted by a similar light-beacon (6 m in height) (65 m E; uncharted).

2 Thence the fairway leads in an S-bend into harbour, passing:

Close S and SE of the head of Malecón del Norte, thence:

Close N and NE of the head of Malecón del Sur.

11.94

1 **Berths:**

Moorings for local fishing vessels.

Malecón del Sur: outer part of E side can accommodate 2 or 3 small coasters; bottom alongside inner part is foul. Fish market quay, length 164 m, situated on N side of basin; fuelling berth at W end, depth alongside 2 m, is rather exposed to any swell.

Supplies: marine diesel fuel; fresh water; provisions.

CABO SAN SEBASTIÁN TO CABO BURELA

General information

Chart 1108

Route

11.95

1 The coastal route from the vicinity of Cabo San Sebastián (43°34′·5N, 6°56′·5W) to that of Cabo Burela (43°40′·5N, 7°21′·5W) leads about 12 miles W to the vicinity of Ría de Foz entrance (43°34′·5N, 7°14′·5W) then about 6 miles NW.

Topography

11.96

1 Between Cabo San Sebastián and Cabo Burela the coast is indented up to 4 miles by Golfo de Foz, also called Golfo de la Masma. Ría de Ribadeo (11.104), the estuary of Río Eo, is entered 4 miles W of Cabo San Sebastián. The entrances to Ría de Foz, the estuary of Río de la Masma, and to Río de Oro lie 8 and 5 miles SE of Cabo Burela respectively.

The points between the two capes are generally inconspicuous.

2 The coastline consists of cliffs that are 15 to 20 m high and steep at each end, E of Ría de Ribadeo and NW of Ría de Foz; they are lower and less steep between these two estuaries.

The hinterland consists of mountain ranges running generally E and W. East of Ría de Foz they descend steeply to a coastal plain about 3 km wide: between Ría de Foz and Río de Oro the plain is only 1 km wide. North-west of Río de Oro the mountain slopes extend to the coastline.

11.97

1 Between Ría de Ribadeo and Cabo Burela the most visible marks are the conical summits of the mountains. Monte Mondigo (43°31′N, 7°08′W), the principal mark, is visible from the offing and throughout Golfo de Foz. With NE winds it is usually hidden by cloud; then Monte Penabor (4 miles WNW), which slopes steeply W to Ría de Foz, is a useful mark.

North-west of Ría de Foz and about 1 mile inland the following summits are prominent:

2 Monte Vidueiras (43°34′·5N, 7°18′·2W).

Monte Faro de Cangas (2 miles farther NNW).

Monte Rañadoira (43°38′·8N, 7°22′·4W; uncharted) 413 m high.

Farther inland distinctive peaks are:

Monte Cornería (43°31′N, 7°18′W) with a television mast (red and white bands) on its summit.

Monte Frouseira (3 miles farther WNW) identified by its isolated serrated rocky crown that is visible from E of the meridian of Foz.

Hazards

11.98

1 **Squalls** descending from the mountains and funnelled by the valleys are experienced in Golfo de Foz and up to about 12 miles offshore when the wind farther offshore is from E to WSW. They are especially violent off Ría de Foz and the coast NW to Burela where they blow from SW and W.

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11.99

1 **Sea and swell.** Due to the shelving rocky nature of the bottom in Golfo de Foz, heavy seas and ground swell are experienced up to 3 or 4 miles offshore in bad weather. NE winds raise a steep sea near the shore.

Natural conditions

11.100

1 **Currents.** In summer the current sets W then NW along the coast and is strongest between June and September when a rate of 2 kn may be attained off Cabo San Sebastián and off Cabo Burela with persistent NE winds. In winter the current sets SE then E along the coast and attains a rate of 2 kn during strong NW winds.

2 **Tidal streams** are felt inshore: they set E when the tide is rising, W when it is falling.

Fog frequently occurs in June and July when there is a light NE wind: it may last 3 or 4 days and is almost always followed by fresh NE winds.

Principal marks

11.101

1 **Landmarks:**

Isla de Tapia Lighthouse (43°34′N, 6°57′W) (11.70).

Isla Pancha Lighthouse (white round tower black bands, 13 m in height) (43°35′·5N, 7°02′·4W). The old lighthouse (white square tower on house, 9 m in height) (70 m SSW, uncharted) and a factory (large white building, orange floodlights) (¾ cable S) are also visible from afar.

Monte Mondigo (43°31′N, 7°08′W) (11.97).

2 **Major lights:**

Isla de Tapia Light—as above

Isla Pancha Light—as above.

Directions

(continued from 11.72)

11.102

1 **Initial position** N of Cabo San Sebastián (43°34′·5N, 6°56′·5W) (11.71), at least 2 miles offshore.

The coastal route leads about 12 miles W to the vicinity of Ría de Foz entrance (11.119), thence about 6 miles NW, passing:

2 N of Las Muelas (43°34′N, 6°59′W), pinnacle rocks the N-most lying 3 cables NNW of Las Pantorgas, a group of three islets the same height (23 m) as the adjacent coastline, thence:

N of Punta de la Cruz (43°33′·5N, 7°01′·5W) (11.112), the E entrance point of Ría de Ribadeo (11.104). Piedra del Molino, a steep-to rocky patch on which heavy seas break, lies 1 mile NNE of the point. Thence:

3 N of Punta Corbeira (9 m high) (43°34′N, 7°07′W) fronted by Las Corbeiras, detached below-water rocks lying ¾ cable NW, thence:

N of Punta Promontoiro (12 m high) (43°34′N, 7°11′W), a distinctive grass covered cliffy point. A reef with a rock awash close within its extremity extends 3 cables NE from the point. Thence:

4 N of Có de la Cana (depth 22 m) (43°35′N, 7°12′W), the outermost head of Restinga Remior an underwater reef extending 2 miles ENE from Punta Prados (11.119). Có de la Cana lies 1¼ miles offshore where breakers begin to form in rough weather. Thence:

NE of lslotes del Orjal (43°38′N, 7°19′W), a chain of three tall rocks extending 2 cables NE from the shore 2 cables SE of Punta Gralleira (10 m high), thence:

5 NE of Cabo Burela (31 m high) (43°40′·5N, 7°20′·5W) a green headland with rocky cliffs surmounted by several large white buildings. The cape is surrounded by a reef that extends 3 cables from its NE side and 6 cables SE to Piedra Burela, a rock that at HW looks like a boat, marked by a light-beacon (E cardinal). Bajo Petañó (depth 10 m) and Bajo Arnelas, two rocky patches, lie 3 cables NE and 7 cables E of Piedra Burela respectively; heavy seas break over both.

11.103

1 **Useful marks:**

Punta de la Cruz Light (43°33′·5N, 7°01′·7W) (11.112).

Nois church (43°37′N, 7°19′W).

Factory chimney at Burela (43°40′N, 7°21′W) (11.127).

(Directions continue at 11.140)

Ría de Ribadeo

Chart 1096 plan of Ribadeo

General information

11.104

1 **Description.** Ría de Ribadeo, entered between Punta de la Cruz (43°33′·5N, 7°01′·5W) (11.112) and Isla Pancha (5 cables W) (11.111), extends 5½ miles S to the town of Vegadeo (chart 1108) situated at the mouth of Río Eo. Puente de Los Santos, a cantilever road bridge spans the estuary 8 cables S of the entrance. The harbour, used mainly by small merchant ships and fishing vessels, extends 1 mile S from the bridge and is encumbered with sandbanks. Farther S the estuary dries at LW except for the shallow channel through which Río Eo empties.

11.105

1 **Topography.** Both banks of the estuary are craggy and more than 20 m high, the E side generally having the steeper slopes.

Ribadeo stands on the W bank S of the bridge. The towns of Figueras, on which the fishing fleet is based, and Castropol lie opposite, N and S respectively of Ensenada de la Linera a bay filled with tidal flats.

Approaching Ría de Ribadeo from the offing, the entrance may be identified by the following objects which appear in the sequence listed:

2 Masonry cross (more than 8 m in height), illuminated at night, standing on the S side of Ermita de Santa Cruz (43°31′·8N, 7°03′·2W). a white water tower (uncharted) stands close N.

Instituto Laboral (large white college building) (43°32′·3N, 7°03′·0W) (uncharted).

3 Capilla de San Román (square tower 12 m in height) (43°32′·6N, 7°01′·6W).

Torres Moreno (43°32′·3N, 7°02′·3W), the tallest building in Ribadeo, whose domes are covered in red glazed tiles that reflect the sun (uncharted).

Isla Pancha Lighthouse (43°33′·4N, 7°02′·5W) (11.101).

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11.106

1 **Traffic.** In 2003 the port was used by 122 vessels totalling 383 586 dwt.

Limiting conditions

11.107

1 **Controlling depths** in the channels leading to the berths listed:

Muelle de Mirasol: 4 m
Figueras: dries.
Castropol: dries.

Vertical clearance beneath Puente de los Santos: 30 m.

Deepest berth: Muelle de Mirasol (11.116).

Tidal levels. See information in *Admiralty Tide Tables.* Mean spring range about 3.9 m; mean neap range about 1.5 m.

2 **Abnormal water levels.** Strong winds from SW to NW raise the level by 0·5 to 0·8 m, strong winds from NE to SE lower it by the same amount.

Density of water: reported to be 1·020 g/cm^3.

Maximum draught permitted: 4·57 m.

Local weather. Strong onshore winds or a heavy swell make entry difficult and cause breaking seas across the whole entrance in the vicinity of the bridge.

Arrival information

11.108

1 **Waiting anchorage.** In fair weather vessels awaiting the tide to enter harbour anchor in Ensenada de Arnao, 3 cables NNW of the front light of Punta Aerojo Leading Lights (11.112), depth 10 m sand.

11.109

1 **Pilotage:** compulsory for vessels of more than 50 tonnes; see *Admiralty List of Radio Signals Volume 6(2)* for further details.

Boarding place: 3 cables NE of Isla Pancha Light, in the position shown on the chart; in bad weather the pilot boat waits in the channel and communicates by VHF radio or visual signals.

Pilot boat: painted white; displays pilot flag.

Tugs: none.

Harbour

11.110

1 **General layout.** The main channel follows the W shore of the estuary to Muelle de Mirasol (43°32′·0N, 7°02′·3W) the cargo handling quay. A side channel follows the E shore S of the bridge to the shipyards at Figueras (43°32′·4N, 7°01′·4W), whence it leads 7 cables SSW to the berths at Castropol: there may be less water than charted in the entrance to this channel due to silting.

Tidal streams in the main channel attain a rate of 3 kn at springs.

Directions

11.111

1 **Initial position** N of Isla Pancha Light (43°35′·5N, 7°02′·4W) (11.101), at least 1 mile offshore.

Leading marks:

2 Front: Punta Castrelius (43°33′·1N, 7°02′·0W); terminating in a point consisting of several high rocks; identified by the isolated hut of the life-saving station on it.

Rear: Punta Castropol (1¼ miles S), identified by a prominent church (spire on dome on tall square tower) situated about 1 cable S of the point and 1 cable N of the charted church.

3 The alignment (170½°) of these marks, as shown on the chart, leads S to a position 4 cables N of front mark, in the entrance to the estuary, passing (positions given from front mark):

W of the underwater reef that extends about 5 cables NW from Punta de la Romela (7 cables NE) and on which heavy seas break, thence:

4 W of Bajo Arredo (5 cables N) a rocky patch on which rough seas break, and:

E of Bajo Panchorro (5 cables NNW) a rocky shoal which breaks in any sea, thence:

E of Isla Pancha (5 cables NW) a flat-topped islet 13 m high.

11.112

1 **Outer leading lights:**

Front (red diamond on white tower 6 m in height) (43°32′·9N, 7°01′·4W) on cliff top at Punta Arroxo, backed by a low battlemented wall.

Rear (similar structure) (228 m SE of front light).

The alignment (140°) of these lights then leads 4 cables SE, passing (positions given from front light):

2 SW of Punta de la Cruz (6 cables N), which slopes down from its 11 m high N scarp to its low W point marked by a light (red round tower) and is fringed by a reef extending about ¾ cable, thence:

NE of Piedras Las Carraias (4 cables NW), two drying rocks at the extremity of the reef extending 1 cable NE from Punta Castrelius.

11.113

1 **Inner leading lights:**

Front (red diamond on white concrete tower 7 m in height) (43°32′·5N, 7°02′·2W).

Rear (white rectangle on structure, 2 m in height) (178 m SSW of front mark).

The alignment (205°) of these lights leads SSW to a position about 2¼ cables NNE of the front light, passing (positions given from front light):

2 ESE of Restinga de la Viga (4½ cables NNE) the reef extending ¾ cable E from the shore about 1 cable S of Punta Castrelius, thence:

WNW of Banco de la Carabela, a sandbank that occupies the whole of the estuary, from abreast Punta Arroxo (6 cables NE) S to abreast the entrance to Dársena de Porcillan (1 cable SSE), except for the narrow channel off the W bank N of the bridge. And:

ESE of Bajo Carballo (2½ cables NNE) the rocky ledge extending E from the shore to the edge of the channel.

11.114

1 From a position SE of Bajo Carballo the track turns gradually S, passing:

Beneath the E half of the W-most span of Puente de los Santos, a cantilever road bridge supported by four pairs of piers numbered from 1 to 4 from E to W. The piers on either side of the channel are fitted with lights and lateral topmarks.

2 **Caution.** Vessels more than 100 m long have difficulty negotiating the turn to port beneath the bridge owing to the proximity of the W bank and must pass close W of Pier 3. The tidal stream beneath the bridge is quite strong, see 11.110 for rate. The out-going stream changes direction near the shore.

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11.115

1 The channel then leads 4½ cables S as shown on the chart, passing:

E of the entrance to Dársena de Porcillan (43°32′·5N, 7°02′·1W).

Thence the channel leads SSW passing:

NW of Banco Berlinga, the extensive sandbank that dries more than 1·5 m and occupies the middle of the estuary off the entrance to Ensenada de la Linera, and:

2 SE of a breakwater (43°32′·3N, 7°02′·0W), 3 cables long, with lights at each end, thence:

SE of the jetty extending NE from Muelle de Mirasol. A light (red timber on red and white round tower, 5 m in height) is exhibited from the jetty head.

Berths

11.116

1 **Muelle de Mirasol** (43°32′·0N, 7°02′·2W), at Figueirua S of Ribadeo, is 340 m in length and is extended 150 m NE by a jetty. Cargo vessels berth alongside the SE face; fishing vessels and small craft also berth on the NW side of the jetty.

Port services

11.117

1 **Repairs.** Small shipyards at Figueras (11.105) with patent slips, the largest has a lifting capacity of 700 tonnes and can accept vessels up to 55 m in length, beam 12 m and draught 4·5 m. Minor repairs by workshops at Muelle de Mirasol.

Supplies: Marine diesel fuel in limited quantities and fresh water available at Muelle de Mirasol; provisions.

Small craft

11.118

1 **Anchorage:** in the channel off Figueras and off Castropol (11.110) in depths of 3 to 4 m.

Berths:

There are pontoon berths in the N part of Dársena de Porcillan (11.115), althogh it is reported (2000) that these are usually occupied by local craft.

Muelle de Mirasol: see 11.116 for details.

Castropol: T-shaped pierhead (43°31′·7N, 7°01′·9W) and quay (¾ cable SSW).

Ría de Foz

Chart 1108 (see 1.18)

General information

11.119

1 **Description.** Ría de Foz is entered between Punta de los Cairos (43°34′·5N, 7°14′·7W), a point with 14 m high cliffs on its NE face fronted by five rocks of nearly the same height, and Punta Prados (6 cables SE) which is less prominent. The estuary, which extends 2¼ miles SSW to the mouth of Río de la Masma, is filled with sandbanks. Apart from the channels leading to Puerto de Foz, the river is too shallow even for small craft.

2 Foz, standing N of the harbour, is of little commercial importance. Puerto de Foz is used by fishing vessels, leisure craft and occasionally by coasters.

Castro de Foz, a hill 80 m high surmounted by scattered conifer trees, situated 8 cables WSW of Punta de los Cairos, is prominent from N and NE. The beach extending 2½ miles E from Punta Prados shows up well at LW.

Limiting conditions

11.120

1 **Maximum draught:** 3·5 m at springs, 2 m at neaps, limited by depth over the bar.

Tidal levels: similar to Ribadeo (11.107).

Abnormal water levels: see 1.107.

Sea state. Entry is possible only in the absence of a heavy swell on the bar; often it is impracticable in winter.

Arrival information

11.121

1 **Pilotage:** provided by Ribadeo Pilots (11.109); 3 or 4 hours notice is required.

Local knowledge is necessary. The entrance channel has been reported (2000) to be liable to change.

Tidal streams

11.122

1 It has been reported (2000) that the tidal stream attains a rate of 5 kn at springs in the entrance channel.

Directions

11.123

1 **Initial position** NE of Punta de los Cairos (43°34′·5N, 7°14′·7W) (11.119), at least 2 miles offshore.

The approach leads SW, passing:

NW of Có de la Cana (43°35′N, 7°12′W) the head of Restinga Remior (11.102).

2 The entrance channel follows the rubble training wall and leads 3 cables SW, passing (positions given from Punta de los Cairos):

SE of the light-beacon (post 2 m in height) (1½ cables SE) marking the head of the principal training wall, thence:

SE of the junction of the principal training wall with the former breakwater that extends ¾ cable SE from the shore, and thence into the new harbour.

Puerto de Foz

11.124

1 The new harbour (43°34′·2N, 7°15′·0W) consists of a rectangular basin: its SE side is formed by a mole about 250 m in length with depths alongside of about 4 m. The NW side of the basin is quayed. The inner part of the basin contains pontoon berths for small craft.

The old harbour (3 cables SW) dries and is mainly used by fishing vessels.

Port services

11.125

1 **Repairs** of a minor nature carried out.

Supplies: marine diesel fuel from filling station in the town; fresh water; provisions.

Río de Oro

11.126

1 **Small craft** can enter Río de Oro at HW, crossing the bar formed by Playa de Fazouro the beach extending 1 mile SE from Punta Fazouro (11 m high) (43°36′N, 7°18′W) to Punta Vilarmeá, and proceed about 5 cables upstream to the villages of Vilarmeá and Fazouro. This section of the river is spanned by a railway bridge and two road bridges which identify the entrance.

Burela

General information

11.127

1 **Description.** Puerto de Burela (43°40′N, 7°21′W) situated 1 mile S of Cabo Burela (11.102) is an important

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fishing port that also handles some cargo, mainly kaolin and timber. A china clay works with a prominent chimney that is floodlit at night stands on the N side of the harbour. Two large cement silos stand near the head of the breakwater which is prominent.

2 Burela, an expanding township, stands on the hillside W of the harbour.

Traffic. In 2003 the port was used by 22 vessels totalling 44 295 dwt.

Port authority. Burela Port Authority, Travesia del Puerto 15, E–27880 Burela, Lugo, Spain.

Limiting conditions

11.128

1 **Maximum size** of vessel handled: 2800 dwt, draught 6·1 m.

Arrival information

11.129

1 **ETA** should be reported to the Port Authority at least 36 hours in advance.

Outer anchorage: in fair weather, 2 cables SSW of Piedra Burela Light (11.102) in depths of 6 to 8 m.

Pilotage. A registered pilot is available.

Local knowledge is required.

Regulations. Entry at night is at the discretion of the pilot.

Harbour

11.130

1 **General layout.** The harbour consists of an artificial basin formed by:

A breakwater extending 1100 m SE from the shore in the vicinity of the prominent chimney. There is a 35 m wide spur on its SW side 560 m from its root, and a second spur, also on the SW side, near the head of the breakwater.

A mole extending NE from the shore towards the first spur on the breakwater, leaving an entrance 70 m wide.

The breakwater has a quay on its SW side.

Directions

11.131

1 **Approaching** the breakwater head from ENE the route passes (positions given from breakwater head):

SSE of Piedra Burela (5 cables N) (11.102), thence:

SSE of Bajo Laxela (1½ cables NE) a rocky 4 m patch.

Useful mark:

Breakwater head light-beacon (green column 2 m in height) (43°39′·3N, 7°20′·6W).

Port services

11.132

1 **Repairs** to engines and machinery.

Supplies: marine diesel fuel; fresh water; provisions.

CABO BURELA TO CABO ORTEGAL

GENERAL INFORMATION

Chart 1108

Topography

11.133

1 This N-most part of the Spanish coast between Cabo Burela (43°40′·5N, 7°21′·5W) and Cabo Ortegal (43°46′N, 7°53′W), about 23 miles WNW, is much indented in its W part by three of the Rías Altas. Westwards from Cabo Morás (6 miles WNW of Cabo Burela) the coastline becomes steeper as the mountains lie closer to and their spurs terminate at the coastline.

Local weather

11.134

1 North and NW gales are common in winter as are NE gales in summer. Small vessels may find refuge in the main harbour at San Ciprián (11.142) and also in Ría de Vivero (11.161) or in Ría del Barquero (11.175).

CABO BURELA TO PUNTA RONCADOIRA

General information

Charts 1108, 1122 plan of Ensenada de San Ciprián

Route

11.135

1 The coastal route from the vicinity of Cabo Burela (43°40′·5N, 7°21′·5W) to that of Punta Roncadoira (43°44′N, 7°31′W) leads about 9 miles WNW, passing NNE of Los Farallones (43°43′N, 7°26′W) the islets at the entrance to Ensenada de San Ciprián (11.142).

Topography

11.136

1 Los Farallones consist of three rocky islets:

La Sombriza, the largest.

El Pié de los Farallones, the highest, a conspicuous reddish rock lying 1 cable farther ENE.

La Baixa, low and flat, lying 1 cable S of La Sombriza which obscures it from N.

2 The coastline between Cabo Burela (11.102) and Cabo San Ciprián (43°42′N, 7°26′W) (11.150), 4 miles WNW, is low, rocky, fringed by reefs and backed by small hills without notable features. Farther inland Monte Cabeleiro (4 miles S of Cabo San Ciprián) (11.139) is the most prominent landmark.

11.137

1 Ensenada de San Ciprián lies between Cabo San Ciprián and Cabo Morás (2 miles NW) (11.140); it is distinguished by the massive breakwaters and the industrial complex of Puerto de Alúmina Española (11.142) in the SW corner. The low-lying S shore of the bay is backed by the steep wooded slopes of Sierra de Medela (43°40′N, 7°28′W) 342 m high and 2 miles inland.

From Cabo Morás (43°44′N, 7°28′W) to Punta Roncadoira (2½ miles WNW) (11.140) the coastline is high and steep.

Flow

11.138

1 Currents and tidal streams off Cabo Burela are described at 11.100.

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Principal marks

11.139

1 **Landmarks:**

Monte Cabeleiro (43°38′N, 7°26′W) whose conical summit is crowned with great rocks.

Punta Atalaya Lighthouse (white round tower, black band; 14 m in height) standing close E of the old lighthouse (grey granite tower 9 m in height, in centre of N face of house) on Cabo de San Ciprián (43°42′N, 7°26′W) (11.150).



Punta Atalaya Lighthouse (11.139)

(Original dated 2000)

(Photograph – Captain E Muller)

2 El Pié de los Farallones (43°42′·2N, 7°26′·1W) (11.136).

Punta Roncadoira Lighthouse (white round tower 14 m in height) standing on the head of Punta Roncadoira (43°44′N, 7°31′W) (11.140).

3 **Major lights:**

Punta Atalaya Light—as above.

Punta Roncadoira Light—as above.

Punta de la Estaca de Bares Light (43°47′N, 7°41′W) (11.158).

Directions

(continued from 11.103)

11.140

1 **Initial position** NE of Cabo Burela (43°40′·5N, 7°20′·5W) (11.102), at least 1 mile offshore.

The coastal route leads about 9 miles WNW, passing:

NNE of Cacheimo de Fuera (43°41′·5N, 7°21′·8W) and Bajo Juan Mariño (1½ miles WNW), two rocky shoals on which the sea breaks, thence:

2 NNE of El Pié de los Farallones (43°43′·2N, 7°26′·1W) (11.136). La Chifladoira, a rocky shoal on which the sea breaks, lies nearly 5 cables E of the islet. Thence:

NNE of Cabo Morás (30 m high) (43°43′·5N, 7°28′·0W). In heavy seas breakers cover the whole area extending 5 cables N from the cape to the rocky shoals forming Bajos Cangrejeiros. Thence:

3 NNE of Islote Ansarón (1 mile WNW of Cabo Morás). Breakers occur over Có del Ansarón a rocky patch 1 cable N of the islet. Thence:

NNE of Punta Roncadoira (83 m high) a bold rocky point surmounted by Punta Roncadoira Lighthouse (43°44′N, 7°31′W) (11.139). In rough weather breakers occur over Có de Porto Celo (6 cables ENE of the light).

11.141

1 **Useful marks:**

Piedra Burela Light (43°40′N, 7°21′W) (11.102).

Puerto de Alúmina Española Dique Norte Light (43°43′·0N, 7°27′·5W) (11.146).

Monte de la Vela (43°43′N, 7°30′W) a 154 m high conical peak on the coast, prominent from E and W.

(Directions continue at 11.159)

San Ciprián

Charts 1122 plan of Ensenada de San Ciprián, 1108

General information

11.142

1 **Ensenada de San Ciprián** (43°43′N, 7°27′W) (11.137) is entered either S or W of Los Farallones (1 mile N of Cabo de San Ciprián) (11.136).



Dique Sur *Dique Norte*

Puerto de Alúmina Española SA entrance from E (11.142)

(Original dated 2000)

(Photograph – Captain E Muller)

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Puerto de Alúmina Española SA, the private artificial port occupying the W part of the bay, serves the aluminium production plant standing on its S shore. Raw materials and fuel are imported, aluminium ingots and sheet are exported.

Puerto de San Ciprián, the small harbour situated in the SE corner of the bay, formerly used by small coasters, is now frequented by a few fishing vessels.

11.143

1 **Traffic.** In 2003 Puerto Alúmina was used by 250 vessels totalling 4 553 466 dwt.

Port Authority. Autoridad Portuaria de San Ciprián, Alúminio Española SA, E–27890 San Ciprián, Lugo.

Website: www.porto-ferrolsanciprian.com.

Limiting conditions

11.144

1 **Deepest berth:** Dique Sur, N berth (11.148).

Tidal levels: similar to Ría de Vivero (6 miles W) (11.170).

Abnormal water levels: see 1.107 for general information.

Maximum size of vessel handled: 62 000 dwt; maximum draught 12·5 m.

Swell from N enters Puerto Alúmina and can cause considerable surging at quays.

Arrival information

11.145

1 **Port radio** at Puerto Alúmina, see *Admiralty List of Radio Signals Volume 6(2)* for details.

Outer anchorage lies NE of Los Farallones (11.136) as shown on the charts.

2 **Pilotage** is compulsory for all vessels over 150 grt. Contact pilots 2 hours before arrival to confirm ETA and receive instructions. Depending on size of ship and cargo the pilot boards either 9 or 12 cables NNE of the entrance to Puerto de Alúmina Española SA. See *Admiralty List of Radio Signals Volume 6(2)* for details.

Tugs: available; vessels of more than 60 000 dwt require an additional tug from Avilés (11.23) for berthing.

Regulations. Entry and departure is permitted only in daylight.

Directions

11.146

1 **Canal Norte.** Initial position N of Los Farallones (43°43′N, 7°26′W) (11.136), at least 1 mile offshore.

Leading lights:

Front (white round tower red bands, 12 m in height) (43°42′·2N, 7°27′·7W) on root of Dique Sur.

Rear (similar structure 22 m in height) (475 m SSW of front light).

2 The alignment (204°) of these lights leads SSW to a position 2 cables E of the entrance to Puerto Alúmina, passing (positions given from front light):

ESE of Restinga de San Clemente (1¼ miles N), the rocky shoal extending nearly 5 cables E from Cabo Morás (11.140), and:

3 WNW of a rocky shoal, with a 9·1 m patch, marked by a buoy (W cardinal), at its NW corner (1¼ miles NNE). The shoal extends about 4 cables NW and W from the W end of La Sombriza (11.136). Thence:

ESE of Dique Norte breakwater head surmounted by a light (grey pyramid on 8-sided tower, 10 m in height).

4 A light-buoy (starboard hand) is moored close SE of Dique Norte breakwater head and another light-buoy (port hand) is moored close N of Dique Sud breakwater head.

11.147

1 **Canal Este and approach.** Initial position NE of Punta Atalaya Light (43°42′·1N, 7°26′·1W) (11.139), at least 1½ miles offshore.

The approach to Canal Este leads SW to a position about 9 cables NE of Punta Atalaya Light, passing (positions given from the light):

NW of Bajo Juan Mariño (1¾ miles E) (11.140), thence:

SE of La Chifladoira (1¼ miles NNE) (11.140).

2 **Leading lights:**

Front (white round tower red bands, 23 m in height) (43°42′·8N, 7°28′·7W) on the cliff top at the N end of Playa de Lago.

Rear (similar structure, 12 m in height) (275 m W of front light) on slope of hill.

3 The alignment (273¼°) of these lights, just open S of Dique Sur Head Light (grey metal column 6 m in height) (9 cables E of front light), then leads W through Canal Este towards the entrance of Puerto Alúmina, passing (positions given from front light).

4 N of Bajo Có Tras Atalaya (2 miles ESE) a shoal with rocky patches lying 3 to 4 cables N and NE of Cabo San Ciprián, and:

Close S of a Light-buoy (S cardinal) (1½ miles E) marking Bajo La Baixa, the SW extremity of shoals extending about 1 cable E, S and W from La Baixa (11.136); thence:

N of the light-buoy (special) (1 mile E) marking the extremity of an outfall pipeline.

Puerto Alúmina berths

11.148

1 **Anchorage** may be obtained W of Dique Sur as directed by the pilot.

Moorings: several as shown on the chart.

Quays on the W side of the inner part of Dique Sur:

N-most: length 280 m; depth alongside 14 m; equipped for unloading solid bulk cargo.

S-most: length 80 m; depth alongside 7·5 m; used to load aluminium and unload coke and fuel oil.

2 **Small craft:**

Basin at root of Dique Norte is used by port maintenance craft.

Yachts reported (1983) to obtain refuge in anchorages with sandy bottom in El Portiño (NW corner) and off Playa de Lago (11.147); latter sheltered from squalls that affect rest of Ensenada de San Ciprián.

Port services

11.149

1 **Repairs:** minor only.

Other facilities: first aid post; hospital at Vivero (10 km WSW) (11.173).

Supplies: fuel oil not available; fresh water at quays; provisions.

Puerto de San Ciprián

11.150

1 **General information.** Puerto de San Ciprián (43°42′·0N, 7°26′·3W) is protected:

E by Cabo de San Ciprián, a small peninsula consisting of a low sandy isthmus extending NE to

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a 27 m high granite hummock sparsely covered with grass.

N by a detached breakwater 7 m high standing on Anzuela, a drying reef which in places is not quite covered at HW.

2 San Ciprián village stands on the SW slope of the hummock which obscures it from seaward. Río Cobo flows into the S side of the harbour NW of Figueiras village. The river is accessible at HW only to craft with a draught of less than 2 m.

11.151

1 **Directions.** Initial position 43°42′·7N, 7°26′·0W, in Canal Este (11.147) 2 cables S of the E end of La Baixa (11.136).

The white sector (194°–198°) of San Ciprián Direction Light (red diamond on white masonry tower, 8 m in height) (43°41′·8N, 7°26′·4W) leads SSW into the harbour, passing (positions given from direction light):

2 WNW of the shoalest patches of Bajo Có Tras Atalaya (7 cables NNE) (11.147), thence:

ESE of Leixón del Vendaval (4 cables N) at the N extremity of Anzuela (11.150), thence:

ESE of the light-beacon (white masonry column, green band; 6 m in height) (3 cables N) on the E end of the detached breakwater, and:

WNW of the rocky foreshore of Cabo de San Ciprián.

3 The W entrance, although wider, is shallower and unmarked; the chart is the best guide.

11.152

1 **Anchorage** may be obtained S of the E part of the detached breakwater, depth 3·2 m sand and mud. There are numerous moorings for fishing vessels.

Quay at SW corner of Cabo de San Ciprián, marked by a light-beacon (white masonry column 3 m in height) (2 cables NNE of direction light) from which it extends 50 m N with depths of 1·4 to 2 m alongside and about 80 m ESE with depths alongside of 1·4 m to drying 0 m. There are two sets of landing steps.

Supplies: marine diesel fuel; fresh water; provisions.

Small craft anchorage

Chart 1108 (see 1.18)

Río Junco

11.153

1 The inlet at the mouth of Río Junco, entered between Punta Castro (27 m high) (43°41′N, 7°24′W) and Punta Rueta (1½ cables NNW), provides shelter for small craft. Piedras Caballo Fontan, a reef awash in places which extends 1½ cables N and NE from Punta Castro, affords protection from NE seas.

Local knowledge is necessary for entry. Landing can be effected if the sea is not very rough.

Portocelo

11.154

1 **General information.** Portocelo (43°43′·5N, 7°30′·8W) a creek at the mouth of Río de Portocelo, entered W of Punta Medixa, extends 4 cables S and is open N. A steep-to 0·6 m patch lies ¾ cable N of the point. Local knowledge is required for entry.

2 **Anchorage:** in the entrance in a depth of 4 m; closer to the W shore, which is clear, than to Punta Medixa from which Piedras Meas, drying rocks, extend ½ cable W.

Berths. A mole extends 40 m from the W shore of the harbour entrance. The inner half of the harbour dries. Small craft and boats lie aground on the sandy bottom at LW.

PUNTA RONCADOIRA TO CABO ORTEGAL

General information

Chart 1108

Route

11.155

1 The coastal route from the vicinity of Punta Roncadoira (43°44′N, 7°31′W) to that of Cabo Ortegal (43°46′N, 7°53′W) leads about 9 miles WNW to the vicinity of Punta de la Estaca de Bares (43°47′N, 7°41′W) passing the entrances to Ría de Vivero (11.161) and Ría del Barquero (11.175), then about 12 miles W past the entrance of Ensenada de Santa Marta (11.188).

Topography

11.156

1 The mountainous promontories of Cabo de la Estaca de Bares (11.176), on the W side of Ría del Barquero, and of Cabo Ortegal are the dominant features of this stretch of generally steep and rocky coastline whose deep indentations are described individually later on.

Natural conditions

11.157

1 **Tidal streams.** From Cabo de la Estaca de Bares to Cabo Ortegal the tidal streams set NE or E when the tide is rising, SW or W when it is falling. Both streams attain a rate of up to 2 kn inshore and are felt to a considerable distance offshore.

2 **Currents.** In the offing the current sets with the prevailing wind and is strong when the wind is fresh from E or W. Local fishermen state that the NE-going current is especially strong and with fresh winds may overcome the SW-going tidal stream even close to the shore. A constant W-going flow is rarely observed. It has also been observed that for a day or two before a gale the current sets towards the direction from which bad weather is approaching.

3 **Local weather.** Northerly winds raise heavy seas but do not last long: they are strongest from the end of December to the beginning of April and squally during this period. Warning signs are an abnormally high sea level and a swell from N when there is no wind. North-east winds bring foul weather in winter but are less common than in summer: abnormally low sea levels and a current setting NE against the wind are warning signs of strong winds from NE.

4 Fog is very common in summer and often gives warning of strong S to SW winds.

Principal marks

11.158

1 **Landmarks:**

Building (former signal station) on summit of Monte Bares (elevation 208 m) (43°46′·7N, 7°40′·0W) (chart 1122 plan of Ría del Barquero).

Punta de la Estaca de Bares Lighthouse (8-sided tower and dwelling, 10 m in height) (43°47′N, 7°41′W).

2 **Major lights:**

Punta Roncadoira Light (43°44′N, 7°31′W) (11.139).

Punta de la Estaca de Bares Light (as above); obscured when bearing more than 291°.

Cabo Ortegal Light (white round tower, red band, 10 m in height) (43°46′N, 7°52′W).

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Directions

(continued from 11.141)

Punta Roncadoira to Cabo de la Estaca de Bares

11.159

1 **Initial position** N of Punta Roncadoira (43°44′N, 7°31′W) (11.140).

The coastal route leads about 9 miles WNW, passing:

NNE of Isla Coelleira (43°46′N, 7°38′W) which is covered in vegetation. Isla Coelleira Light (grey round stone tower and dwelling, 7 m in height) is situated on its summit. In rough weather breakers form over a rocky rise extending NNE from the island when it should be given a wide berth. Thence:

2 NNE of Punta de la Estaca de Bares (43°47′N, 7°41′W) surmounted by a lighthouse (11.158). The point is the N extremity of Cabo de la Estaca de Bares (11.176). Los Sigüelos (4 cables NW of the light), two high pointed rocky islets, appear to form the NW tip of the point; a reef extends nearly 1 cable farther NW and terminates in El Estaquín, an above-water rock. Breakers form over a rocky rise, extending NW from Punta de la Estaca de Bares, in heavy seas when it is advisable to pass more than 3 miles off the point. In fair weather the point should be given a berth of 1 mile.

Cabo de la Estaca de Bares to Cabo Ortegal

11.160

1 The coastal route then leads W for about 12 miles, passing:

N of Punta de los Aguillones (43°46′N, 7°52′W), a steep spur extending 5½ cables N from Pico Gargacido, the 353 m high N-most peak on Cabo Ortegal. Cabo Ortegal Lighthouse (11.158) stands on the slope of the spur about 1 cable S of the extremity of the point. Los Aguillones, a chain of steep sharply-pointed bare rocky islets 39 to 66 m high, extend nearly 5 cables N from the point. Piedra Recimada, a below-water rock on which the sea always breaks, lies 1½ cables WNW of Caballo Juan the N-most islet. Thence:

2 N of Punta del Limo (1½ miles W of Punta de los Aguillones), high and precipitous with a stepped outline when seen from NE. Two pinnacle rocks, Bajo Lée (awash) and Bajo Lée de Tierra which dries, lie respectively 3½ and 1 cable N of the point.

(Directions continue in West Coasts of Spain and Portugal Pilot)

Ría de Vivero and approach

Charts 1108, 1122 plan of Ría de Vivero

General information

11.161

1 **Description.** Ría de Vivero, the E-most of the Rías Altas (11.1), is approached between Punta Saiñas (43°44′N, 7°33′W) and Punta Camero (3½ miles WNW). It is entered between Punta de Faro (43°43′N, 7°35′W) and Punta Socastro (1 mile WNW) whence it extends 2 miles S.

11.162

1 **Topography.** The shore on both sides of the estuary and its approach is generally high, steep and cliffy and provides shelter from E and W winds.

Monte Penedo do Galo (43°40′N, 7°34′W) with a white pillar on its summit or, should it be hidden by cloud, Ermita de San Roque a chapel standing halfway up its W slope, are useful marks that locate Vivero from the offing. On closer approach the entrance to Ría de Vivero is identified by Monte Faro Juances (43°42′·5N, 7°34′·7W), a distinctive conical peak, and Peña Grande (1¾ miles W) the summit backing the cliffs W of Punta Socastro.

2 Playa de Covas, the yellow sandy beach at the head of Ría de Vivero backed by the houses of Vivero, is clearly visible from a distance.

11.163

1 **Tidal streams** attain a rate of 1½ kn at springs in the middle of Ría de Vivero.

Heavy seas penetrate Ría de Vivero during N gales.

Directions

11.164

1 **Initial position** NW of Punta Roncadoira (43°44′N, 7°41′W) (11.140).

Ría de Vivero approach leads 3 miles SSW to the entrance of the estuary, passing:

2 ESE of Isla Coelleira (43°46′N, 7°38′W) (11.159), which is separated from Punta Camero (3 cables SSW) by Freu de Coelleira (11.181), thence:

WNW of Punta Saiñas (43°44′N, 7°33′W) a hump-backed point 28 m high. Neto Chico, a low flat islet, lies 5 cables NE of the point with Neto Grande, a tabular islet 22 m high, between it and the shore 2 cables SE.

11.165

1 Ría de Vivero is entered:

WNW of Punta de Faro (43°43′N, 7°35′W), a bold point marked by a light (white tower 6 m in height), at the foot of Monte Faro Juances (11.162). Cós de Esteiro, two submerged pinnacle rocks, lie 5 and 8 cables NE of Punta de Faro in the middle of Ensenada de Esteiro. And:

2 ESE of Punta Socastro (1 mile WNW of Punta de Faro) a steep point with a light (white tower 6 m in height) at its extremity. In rough weather the sea breaks over Bajo El Có, a rocky patch lying 3 cables E of the point, and in the passage between them.

11.166

1 The fairway of Ría de Vivero, which is steep-to on its E and W sides and whose predominantly fine sandy bottom shoals gradually towards its head, leads 2 miles S, passing:

E of Isla Gabeira (3 cables SSE of Punta Socastro), thence:

W of Isla Insua d'Area (43°42′N, 7°35′W), and:

2 E of Punta del Caballo (9 cables W of Insua d'Area), a steep point 47 m high, thence:

W of Cillero mole head (43°41′N, 7°36′W) surmounted by a light (red column 6 m in height).

Outer anchorage

11.167

1 An anchorage area with depths of 20 to 50 m lies 1 mile NE of Punta Socastro (43°43′N, 7°36′W) as shown on the chart.

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Anchorages in the bay N of Punta del Caballo (43°42′N, 7°36′W) (11.166), off either Playa de Abrela (W of point) or Playa Alegrín (3 cables WSW of Isla Gabeira) which is less exposed to NE, are used by coasters.

Vivero

Chart 1122 plan of Ría de Vivero

General information

11.168

1 **Villa de Vivero** (43°40′N, 7°35′W) stands on the E bank of Río Landrove at the foot of Monte de San Roque (338 m in height).

Puerto Cillero, an artificial port, lies 1 mile N of Vivero NE of the entrance to Río Landrove; it is used by numerous fishing vessels of 100 to 250 tonnes and small cargo vessels loading various products mainly quartz and timber.

2 The mouth of Río Landrove has been canalised in recent years and reclamation works have altered the depths in Puerto Cillero. Berths at Vivero are used by fishing vessels and small craft. The N-most bridge has little vertical clearance and forms the limit of navigation for masted craft.

11.169

1 **Traffic.** In 2003 the port was used by 5 vessels totalling 22 553 dwt.

Limiting conditions

11.170

1 **Deepest berth:** quay at Puerto Cillero (11.172).

Tidal levels in Ría de Vivero. See information in *Admiralty Tide Tables.* Meam spring range about 3·4 m; mean neap range about 1·6 m.

Abnormal water levels: strong winds between SW and NW raise the level by 1 to 1·5 m and strong S winds lower the level by 0·8 m.

Arrival information

11.171

1 **Outer anchorage.** In summer months anchorage may be obtained near the middle of the estuary in a depth of 9 m on the alignment (about 004°) of the E edges of Islote Queimada (43°42′N, 7°36′W) and Isla Gabeira (9 cables N). Plenty of cable should be veered due to the risk of heavy seas (11.163).

2 Small craft obtain better shelter from N winds by anchoring closer to the W shore but must avoid the shellfish beds shown on the chart.

Pilotage is not compulsory for any vessel entering or leaving Ría de Vivero but it is obligatory for vessels of more than 50 tonnes entering or leaving the port.

Tidal streams in the channel to Vivero attain a rate of 3 kn at springs.

Berths

11.172

1 **Puerto Cillero.** A quay 200 m long with depths alongside of 4 to 8 m lines the inner part of the S side of the mole; it is continued S then SE along the shore for 200 m, depths alongside decreasing from 4 m to 1 m.

A quay 150 m in length on the E side of the S breakwater has depths alongside of less than 5 m.

Small craft anchor in the S part of the basin W of the small warping buoys moored off the slips.

2 **Vivero.** Quay on E bank extends 150 m N from N-most bridge; vessels alongside take the ground at LW.

Port services

11.173

1 **Repairs:** shipyard at Cillero with three patent slips lifting capacity 500 tonnes.

Other facilities: hospital at Vivero.

Supplies: marine diesel fuel at Cillero; fresh water at quays at Cillero and Vivero; provisions.

Small craft

11.174

1 There are moorings and pontoon berths in a basin on the E side of Río Landrove, 4 cables above the N bridge.

Ría del Barquero

Chart 1122 plan of Ría del Barquero

General information

11.175

1 **Description.** Ría del Barquero, also called Ría de Bares, is entered between Cabo de Bares (43°47′N, 7°40′W) and Punta Camero 1¾ miles SE; it extends 3 miles SW to El Barquero, the village standing at the head of the estuary on the W bank of the mouth of Río Sor. The inlet is easy of access and clear of dangers with a sandy bottom, good holding, sheltered in heavy weather from all directions except NE.

11.176

1 **Topography.** Cabo de la Estaca de Bares, the promontory forming the NW shore, is dominated by Sierra Maeda a ridge that culminates in Monte Facho de Maeda (337 m high) (47°45′·5N, 7°42′·5W) (chart 1108). The SE shore is also steep in many places but not as high. Playa Longa, the beach at the head of the inlet, is clearly visible from the NW half of the entrance.

11.177

1 **Hazards.** Fishing vessels shoot their nets right across the entrance and well into the inlet.

Local intensification of winds between S and SW has been reported. In February 1966 HMS *Bossington* (425 tonnes) seeking shelter from a SW gale force 9 encountered winds of force 11 to 12 in Ría del Barquero. During SW and W gales squalls blow down from Piedras Cañoles (43°45′N, 7°42′W).

11.178

1 **Local weather.** North-east winds predominate; in summer they blow for prolonged periods and are sometimes very strong; in winter they are strong but of short duration. During fair periods in summer the land breeze lasts until 0800 or 0900, then a period of calm is followed by a sea breeze from NW.

Even when the NE wind blows directly into the inlet the sea is never very heavy.

Directions

11.179

1 **Initial position** N of Isla Coelleria (43°46′N, 7°38′W) (11.159).

The main entrance channel leads SW, passing:

SE of Cabo de Bares (43°47′N, 7°40′W), (11.175), and:

NW of Isla Coelleira. Percebellosa (small above-water rock) and a drying rock (1 cable ENE) lie about 2 cable off the NW side of the island.

2 Thence the channel leads 2 miles SW between high steep-to shores, passing:

NW of Punta Chileiteira (43°45′N, 7°39′W), dominated by Monte Ventoso (4 cables ESE) which has a lookout hut on its summit, thence:

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SE of Punta Almeiro (43°46′N, 7°40′W) a high bold point, thence:

NW of Punta Cueva Baja (43°45′N, 7°40′W) a high rocky point.

By night the white sector (213°–240°) of Punta de la Barra Light (11.180) defines the entrance route.

11.180

1 The head of the inlet, a shallow natural basin surrounded by sandy beaches and flats, is entered:

WNW of Punta del Castro (43°44′·5N, 7°40′·4W) marked by a light (white truncated conical tower 9 m in height), and:

ESE of Punta del Santo (5 cables WNW), a rugged point dominated by Piedras Cañoles (9 cables farther WNW) (11.177). Punta de la Barra (1½ cables SW of Punta del Santo) is marked by a light (white truncated conical tower 9 m in height).

Side channel

11.181

1 **Freu de Coelleira,** the channel between Isla Coelleira (43°46′N, 7°38′W) (11.159) and Punta Camero) (2½ cables SSW), a 46 m high bluff, is 18 m deep in the fairway. In fair weather the pass is used by most coasters entering Ría del Barquero from E, but with N and NW gales breakers extend right across it and squalls occur in it with S winds. A strong flow may be encountered in the pass.

Puerto de Bares

11.182

1 **General information.** Puerto de Bares, a small fishing village, stands at the E end of the clean sandy beach that lines the shores of Concha de Bares (43°46′N, 7°40′W). A rubble breakwater extends more than 200 m in a curve S then W from Punta Coido the NE entrance point of the little bay.

2 **Anchorages.** In summer coasters anchor in the middle of the bay, in a depth of 8 m sand, with Punta del Santo (43°44′·7N, 7°41′·0W) (11.180) bearing 204° just open ESE of Punta Almeiro (11.179) the SW entrance point. Larger vessels anchor farther offshore in depths of 16 to 20 m, clear of the shell-fish bed shown on the chart. These anchorages are sheltered in winds from SW to NW but are not used in winter when the wind is liable to veer NE suddenly.

11.183

1 **Small craft.** Moorings for local fishing vessels are laid at the head of the bay. It has been reported (1987) that the area between these moorings and the breakwater is a popular anchorage for yachts.

Supplies: fresh water is available from a spring; provisions obtainable during daily visits by a mobile shop.

Fondeadero de Campelo

11.184

1 **Anchorage** may be obtained (clear of charted shellfish beds) 2 cables E of Playa Vilela, depth 7 m, which is sheltered in winter from winds between SW and NW. Anchorage may also be obtained farther E in a depth of 11 m on the alignment (about 219°) of Punta del Santo (43°44′·7N, 7°41′·0W) (11.180) and Punta Pedra Furada (6 cables SW) a low sandy hummock. Small craft can obtain shelter from N winds close off Playa de Campelo and also anchor S of Islote Vilela, in both cases remaining well clear of the charted shellfish beds.

Puerto de Vicedo

11.185

1 **General information.** Puerto de Vicedo consists of an artificial basin enclosed by two moles extending W from Punta Videiros (43°44′·4N, 7°40′·4W).

2 **Anchorage** off Playa de Vicedo, the beach between Punta del Castro (43°44′·5N, 7°40′·4W) (11.180) and Punta Congreira (2 cables N), as close inshore as draught permits and clear of a submarine outfall as shown on the chart, bottom muddy sand, provides the best shelter in Ría del Barquero from NE winds.

3 **Berths.** Within the basin; depths alongside reported (2000) to be about 4 m.

Repairs: patent slip for vessels of 100 tonnes or less in small shipyard S of the port.

Supplies: fresh water and diesel on the quays; provisions from Vicedo village.

El Barquero

11.186

1 **General information.** El Barquero village (43°44′·5N, 7°42′·0W) is built in the shape of an amphitheatre on the slopes backing the little harbour on the W bank of Río Sor entrance. The entrance channel is shallow and almost dries out at LW. At HW springs the harbour is accessible to vessels with maximum draught of 2·7 to 3·3 m. Tidal levels are the same as those in Ría de Vivero (11.170). Entry is impracticable if there are breakers on the bar which occur if there is any swell at the head of Ría del Barquero.

2 **Directions.** Initial position about ¼ cable SE of Punta de la Barra (43°44′·6N, 7°41′·2W) (11.180). The narrow channel, for which the best guide is the chart, lies very close to the NW shore of the entrance.

11.187

1 **Anchorage:** E of Punta de la Barra, for vessels awaiting the tide to enter harbour. It has been reported (1987) that there is a quay at Punta de la Barra that has plenty of water alongside for small craft but is exposed to swell at HW.

2 **Puerto de El Barquero** consists of a basin formed by:

Rectangular quay with 160 m of berthing space, depth alongside 1 to 2·5 m.

L-shaped jetty extending 42 m SE from the shore, then 70 m NE towards the SW corner of the quay, leaving an entrance 40 m wide. The bottom alongside the inner arm and the SE side of the outer arm is rocky.

Supplies: marine diesel fuel; fresh water; provisions.

Ensenada de Santa Marta

Chart 1108

General information

11.188

1 **Description.** Ensenada de Santa Marta, the bay entered between Punta de la Estaca de Bares (43°47′N, 7°41′W) (11.159) and Punta de los Aguillones (8 miles W) (11.160), lies between Cabo de la Estaca de Bares on the E and Cabo Ortegal on the W. The entrance to Ría de Santa Marta de Ortigueira (11.196) is situated at its head.

Ensenada de Cariño, an alternative name for Ensenada de Santa Marta, is also the name given to the small bay on the E side of Cabo Ortegal in which Puerto de Cariño (43°44′N, 7°52′W) (11.192) is situated.

11.189

1 **Topography.** Both shores of Ensenada de Santa Marta are generally high and steep. Cabo de la Estaca de Bares is described at 11.176; its NW coast and the coastline SW to

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the head of the bay are mostly cliffy and fringed with islets and rocks.

2 From Punta de los Aguillones S, the E coast of Cabo Ortegal consists of cliffs with an average height of 40 m as far as Ensenada de Cariño which lies at the mouth of a wide valley. The summits of Pico Gargacido (11.160) and Monte Faroleiro (uncharted) elevation 353 m, standing 5½ and 9 cables S of Punta de los Aguillones respectively, are sharply defined from E.

3 The entrance to Ría de Santa Marta de Ortigueira is located between Monte Mazanteo (elevation 219 m) (43°43′N, 7°52′W) and Monte Castro de Ladrido (elevation 175 m) (2½ miles ESE), two conical hills. Isla de San Vicente (1½ miles ESE of Monte Mazanteo), 56 m high and covered in vegetation with a house at its centre, is clearly visible from N against the sandy beach of Playa de San Martín in the background.

Chart 1108 (see 1.18)

Directions

11.190

1 **Initial position** between Punta de la Estaca de Bares (43°47′N, 7°41′W) (11.159) and Punta de los Aguillones (8 miles W) (11.160).

Approaching Ría de Santa Marta de Ortigueria entrance (43°43′N, 7°50′W), the route leads SSW, passing:

ESE of Isla Malveira (43°46′N, 7°51′W), a 38 m high rock covered in vegetation lying 1 cable offshore and 2 cables NNE of Punta Ortabade, thence:

2 WNW of Piedras Meas (43°45′N, 7°48′W), two rocks about 0·5 m high lying close together at the extremity of an underwater reef extending 7 cables NNW from Punta Bandeja, which are the farthest offshore dangers between Punta de la Estaca de Bares (11.159) and Cabo Ortegal. Punta Bandeja is a spur extending 3 cables N from Monte Cova Guión identified by the white rocks on its 102 m high summit. Thence:

3 ESE of Isla La Gabeira (43°45′N, 7°52′W) attached to the shore forming a promontory, thence:

ESE of Monterón del Este (43°43′·6N, 7°51′·0W) a 1 m high pinnacle rock lying 2 cables E of Punta del Castro da Moura. Monterón del Oeste, a drying reef, extends 2 cables NE from the point. And:

4 WNW of a light-buoy (W cardinal) which marks Piedras Liseiras (43°43′·5N, 7°49′·0W), a detached reef awash in places, extending 1½ cables W from Corbeiro an above-water rock. It is reported (2000) that this light-buoy is not always on station. Corbeiro lies 1 cable W of the SW point of Punta de Espasante whose 66 m high summit is surmounted by an old watch house.

5 **Useful marks:**

Puerto de Cariño Breakwater head Light (green and white round tower 6 m in height) (43°44′N,7°52′W).

Cariño church (tall clock tower) (5 cables NNW of the light).

Anchorage

11.191

1 Anchorage can be obtained 1 miles NNE of Puerto de Cariño Breakwater Light (11.189) as shown on chart 1122.

Chart 1122 plan of Puerto de Cariño

Puerto de Cariño

11.192

1 **General information.** Puerto de Cariño lies at the N end of Ensenada de Cariño, the bay situated between Punta del Castro (43°44′·4N, 7°51′·7W) and Punta del Castro da Moura (9 cables SSE) (11.190). It is an important and expanding fishing port.

The tidal levels are practically the same as those in Ría de Vivero (11.170).

2 In summer E winds are common, but it is often calm in Ensenada de Cariño when there is a very fresh NE wind blowing off Cabo Ortegal and cloud covers the summits (chart 1108) of Monte Garita de Herbeira and Monte Vigía del Limo (elevation 558 m) lying respectively 3 miles WSW and 2 miles WNW of the harbour.

11.193

1 **Directions.** Initial position close S of Puerto de Cariño Breakwater head Light (43°44′N, 7°52′W) (11.190).

The fairway leads NW then N to the quay on the W side of the inner section of the breakwater. In 1983 it had a least depth of 6 m and passed E of a sandbank with a depth of 4 m over it (uncharted) that was advancing slowly towards the elbow of the breakwater.

11.194

1 **Anchorage** can be obtained 3 cables SSE of Puerto de Cariño Breakwater Light (11.189) as shown on the chart.

Berths:

Commercial Quay, on the W side of the breakwater, has a 210 m berth (9 m depth) extending SE from the breakwater elbow and a 180 m berth (depth 7 m) immediately N of the breakwater elbow.

2 Fish market quay: extends 200 m W from root of breakwater, then 27 m N.

Jetty: extends 200 m SSW from the shore 1 cable N of the SW corner of fish market quay.

Repairs: patent slip for fishing vessels.

Supplies: marine diesel fuel; fresh water; provisions.

Chart 1108 (see 1.18)

Ensenada de Espasante

11.195

1 **Anchorage.** Ensenada de Espasante (43°43′N, 7°49′W), the bay between Punta de Espasante (11.190) and Punta de Tallo (5 cables SW), provides anchorage in depths of 5 m or more about 1½ cables offshore. Towards the S end the bottom is sandy. The anchorage is approached from W passing S of Bajo Con, a detached rocky shoal extending 2 cables SW of Corbeiro (11.190): local knowledge is required.

2 **Harbour.** Espasante, a fishing village, backs the NE end of the beach at the head of the bay. A small harbour enclosed by two breakwaters has moorings for fishing vessels and small craft. There is a slipway in the N part of the harbour.

Supplies: provisions.

Santa Marta de Ortigueira

11.196

1 **General information.** Santa Marta de Ortigueira (43°41′N, 7°51′W) stands on the E shore of Ría de Santa Marta de Ortigueira, an extensive landlocked estuary. The harbour, accessible to coasters, is approached by a narrow tortuous channel between tidal flats. The entrance is obstructed by a bar.

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11.197

1 **Limiting conditions:**

Controlling depth over bar: 1·5 m.

Deepest berth: see 11.199.

Tidal levels. See information in *Admiralty Tide Tables.* Mean spring range about 3·5 m; mean neap range about 1·7 m.

Maximum draught of vessels crossing the bar: 3·5 m at springs; 3·0 m at neaps.

Breakers form on the bar in any swell from N and entry is seldom practicable in winter.

2 **Arrival information:**

Pilotage may be arranged through port officials at Puerto de Cariño (11.192). The pilot boards at Puerto de Cariño having travelled by road from Santa Marta de Ortigueira.

Local knowledge is essential as the bar is constantly changing and the channel to Santa Marta de Ortigueira is unmarked.

3 **Tidal streams** in Ría de Santa Marta de Ortigueira channel begin shortly after local HW and LW and attain a rate of 6 kn at half tide at springs.

11.198

1 **Directions.** Initial position N of Isla de San Vicente (43°42′·7N, 7°50′·2W) (11.189).

Crossing the bar, the entrance channel leads S passing close to the W shore of the island. A second channel over the bar that passed close E of Punta del Fraile (5 cables W of island) has silted up but may be reopened by the action of the sea.

Within the bar, the channel, average width 1 cable, leads W to the entrance of Ensenada de la Caleira (1¼ miles W of Isla de San Vicente), passing:

2 N of Playa de San Martín, an extensive beach, thence:

S of the shore W of Punta del Fraile.

Then the channel leads SW, passing:

Close SE of Punta Sismundi (43°42′·5N, 7°52′·2W), thence:

Close SE of Punta Redonda (4 cables farther SW).

3 The channel then leads S to the vicinity of Punta Fornelos (1½ miles S of Punta Sismundi) whence it leads 3 cables E to Pozo Cadelo, a hole, where it divides. The NE branch continues for a further 2 cables to the berths at Santa Marta de Ortigueira.

11.199

1 **Berths:**

Anchorages are available: in the hole off Punta Sismundi (11.198) depth 8 to 12 m; in Pozo Cadelo (11.198) depth 6 m.

Mole at Santa Marta de Ortigueira extends 105 m SSW from Punta Requeixo (43°41′·2N, 7°51′·6W); coasters berth alongside ESE side taking the ground on mud at LW springs.

Quay extends E from root of mole; used by small craft.

Supplies: fresh water at alongside berths; provisions.

Small craft

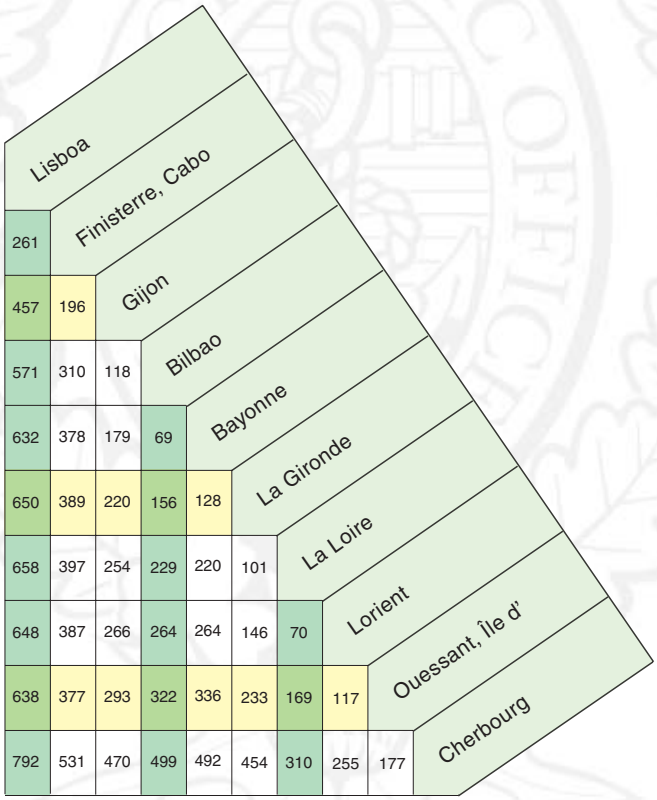
11.200

1 **Ensenada del Vado,** the landlocked bay entered between Isla de San Vicente (43°43′N, 7°50′W) (11.189) and Punta Carnero (1 cable E), dries except for a very narrow channel. It is navigable only at HW with local knowledge by small craft.

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Distance table - West Coast of France and North Coast of Spain

Note: For further information and notes on distances, see *Admiralty Distance Table Atlantic Ocean* Tables IIa.



	Finisterre, Cabo	Gijon	Bilbao	Bayonne	La Gironde	La Loire	Lorient	Ouessant, Île d'	Cherbourg
Lisboa	261	457	571	632	650	658	648	638	792
Finisterre, Cabo		196	310	378	389	397	387	377	531
Gijon			118	179	220	254	266	293	470
Bilbao				69	156	229	264	322	499
Bayonne					128	220	264	336	492
La Gironde						101	146	233	454
La Loire							70	169	310
Lorient								117	255
Ouessant, Île d'									177

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APPENDIX I

TEMPORARY HOLDING AREAS FOR DANGEROUS OR SUSPICIOUS OBJECTS

The following Temporary Holding Areas for Dangerous or Suspicious Objects, whose purpose is described at 1.61, have been established within the area covered by this volume:

No	*Place*	*Zone*
25	Le Guilvinec	Area 500 m radius from position 169° distant 3100 m from Lost Moan Light (47°47′N, 4°17′W) (3.41)
26	Concarneau	Area 400 m radius from position 258° distant 2400 m from Trévignon Light (47°47′·6N, 3°51′·2W) (3.193)
27	Lorient, Étel, Île de Groix	Area 400 m radius from position 090° distant 2400 m from Pointe de la Croix Light (47°38′N, 3°25′W) (4.88)
28	Quiberon, Auray, La Trinité-sur-Mer, Belle-Île	Area 200 m radius from position 200° distant 3320 m from Le Rouleau Beacon-tower (47°22′N, 3°01′W) (5.90)
29	Vannes, Penerf	Area 200 m radius from position 188° distant 6020 m from Château de Suscinio (47°28′N, 2°44′W) (5.315)
30	Piriac-sur-Mer, Le Croisic	Area 200 m radius from position 325° distant 2790 m from Jetée du Tréhic Light (47°20′·5N, 2°33′W) (5.395)
31	Saint-Nazaire, Port Giaurd	Area 200 m radius from position 193° distant 8450 m (45·64 cables) from Portcé Front Leading Light (47°10′N, 2°1′W) (6.44)
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See Status, Disclaimer and Copyright at Explanatory Notes at Page vii.

The CD–ROM below contains the following:

Text of this volume in Portable Document Format (PDF).

Software to install Adobe Acrobat Reader.

A link to the UKHO website: www.ukho.gov.uk.

Photographs in PDF, if they are available for the area covered by this volume.

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