

PUB. 191
SAILING DIRECTIONS
(ENROUTE)



ENGLISH
CHANNEL



Prepared and published by the
NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY
Bethesda, Maryland

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2006



TWELFTH EDITION

Pub. 191, Sailing Directions (Enroute) English Channel, Twelfth Edition, 2006, is issued for use in conjunction with Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea. Companion volumes are Pubs. 192, 193, 194, and 195.

This publication has been corrected to 9 September 2006, including Notice to Mariners No. 36 of 2006.

Explanatory Remarks

Sailing Directions are published by the National Geospatial-Intelligence Agency (NGA), under the authority of Department of Defense Directive 5105.40, dated 12 December 1988, and pursuant to the authority contained in U. S. Code Title 10, Sections 2791 and 2792 and Title 44, Section 1336. Sailing Directions, covering the harbors, coasts, and waters of the world, provide information that cannot be shown graphically on nautical charts and is not readily available elsewhere.

Sailing Directions (Enroute) include detailed coastal and port approach information which supplements the largest scale chart produced by the National Geospatial-Intelligence Agency. This publication is divided into geographic areas called "Sectors."

Bearings.—Bearings are true, and are expressed in degrees from 000° (north) to 360°, measured clockwise. General bearings are expressed by initial letters of points of the compass (e.g. N, NNE, NE, etc.). Adjective and adverb endings have been discarded. Wherever precise bearings are intended degrees are used.

Coastal Features.—It is assumed that the majority of ships have radar. Available coastal descriptions and views, useful for radar and visual piloting are included in geographic sequence in each Sector.

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Courses.—Courses are true, and are expressed in the same manner as bearings. The directives "steer" and "make good" a course mean, without exception, to proceed from a point of origin along a track having the identical meridional angle as the designated course. Vessels following the directives must allow for every influence tending to cause deviation from such track, and navigate so that the designated course is continuously being made good.

Currents.—Current directions are the true directions toward which currents set.

Dangers.—As a rule outer dangers are fully described, but inner dangers which are well-charted are, for the most part, omitted. Numerous offshore dangers, grouped together, are mentioned only in general terms. Dangers adjacent to a coastal passage or fairway are described.

Distances.—Distances are expressed in nautical miles of 1 minute of latitude. Distances of less than 1 mile are expressed in meters, or tenths of miles.

Geographic Names.—Geographic names are generally those used by the nation having sovereignty. Names in parentheses following another name are alternate names that may appear on some charts. In general, alternate names are quoted only in the principal description of the place. Diacritical marks, such as accents, cedillas, and circumflexes, which are related to specific letters in certain foreign languages, are not used in the interest of typographical simplicity. Geographic names or their spellings do not necessarily reflect recognition of the political status of an area by the United States Government.

Heights.—Heights are referred to the plane of reference used for that purpose on the charts and are expressed in meters.

Index-Gazetteer.—Navigational features and place-names are listed alphabetically in the back of the book. The approximate position, along with the Sector and paragraph numbers (e.g. **1.1**), facilitate location in the text.

Internet Links.—This publication provides internet links to web sites concerned with maritime navigational safety, including but not limited to, Federal government sites, foreign Hydrographic Offices, and foreign public/private port facilities. NGA makes no claims, promises, or guarantees concerning the accuracy, completeness, or adequacy of the contents of the web sites and expressly disclaims any liability for errors and omissions of these web sites.

Light and Fog Signals.—Lights and fog signals are not described, and light sectors are not usually defined. The Light Lists should be consulted for complete information.

Ports.—Directions for entering ports are depicted where appropriate by means of chartlets, sketches, and photos, which facilitate positive identification of landmarks and navigational aids. These chartlets and sketches are not always to scale, however, and should be used only as a general informational guide in conjunction with the best scale chart. Specific port facilities are omitted from the standard format. They are tabulated in Pub. 150, World Port Index.

Radio Navigational Aids.—Radio navigational aids are not described in detail. Publication No. 117 Radio Navigational Aids and NOAA Publication, Selected Worldwide Marine Broadcasts, should be consulted.

Soundings.—Soundings are referred to the datum of the charts and are expressed in meters.

Special Warnings.—A Special Warning may be in force for the geographic area covered by this publication. Special Warnings are printed in the weekly Notice to Mariners upon promulgation and are reprinted annually in Notice to Mariners No. 1. A listing of Special Warnings currently in force is printed in each weekly Notice to Mariners, Section III, Broadcast Warnings, along with the notice number of promulgation. Special Warnings are also available on the Maritime Division website.

Wind Directions.—Wind directions are the true directions from which winds blow.

Charts, light lists, tide and current tables, and other documents in possession of the Agency.

Reference List

The principal sources examined in the preparation of this publication were:

British Hydrographic Department Sailing Directions.

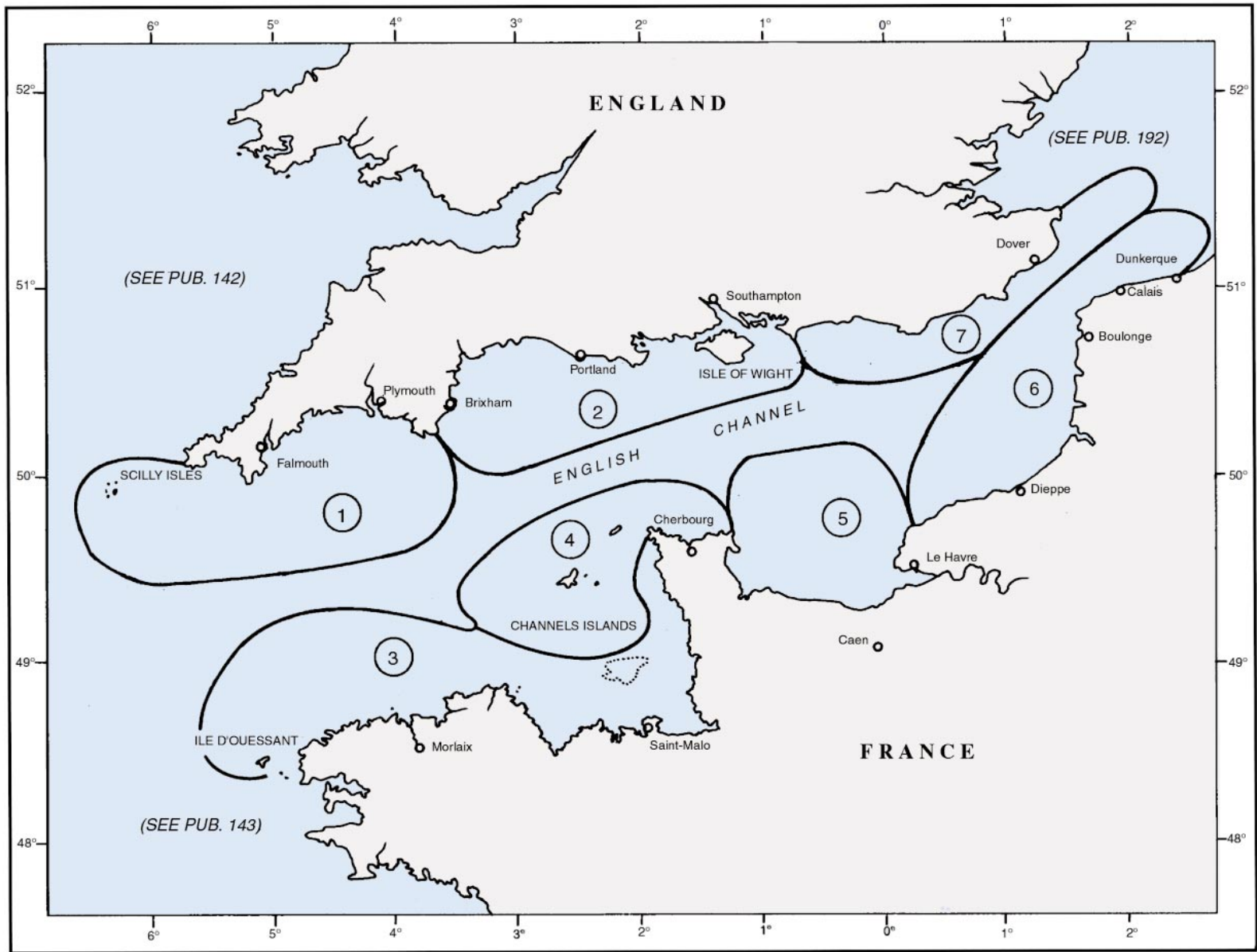
Various port handbooks.

Reports from United States Naval and merchant vessels and various shipping companies.

Other U.S. Government publications, reports, and documents.

Contents

Preface.....	III
Chartlet—Sector Limits	VII
Conversion Tables.....	VIII
Abbreviations	XI
Sector 1	
England—South Coast—English Channel Approaches—The Scilly Isles to Start Point	1
Sector 2	
England—South Coast—Start Point to Selsey Bill	23
Sector 3	
France—South Coast—Ile d’Ouessant to Nez de Jobourg, including Plateau des Minquiers and the Iles Chausey	55
Sector 4	
The Channel Islands and France—North Coast—The Cotentin Peninsula to Pointe de Barfleur	79
Sector 5	
France—North Coast—Baie de la Seine—Pointe de Barfleur to Cap d’Antifer	101
Sector 6	
France—North Coast—Dover Strait—Cap d’Antifer to the Belgian Frontier	121
Sector 7	
England—South Coast—Dover Strait—North Foreland to Selsey Bill	151
Glossary	167



SECTOR LIMITS — PUB. 191

Conversion Tables

Feet to Meters

Feet	0	1	2	3	4	5	6	7	8	9
0	0.00	0.30	0.61	0.91	1.22	1.52	1.83	2.13	2.44	2.74
10	3.05	3.35	3.66	3.96	4.27	4.57	4.88	5.18	5.49	5.79
20	6.10	6.40	6.71	7.01	7.32	7.62	7.92	8.23	8.53	8.84
30	9.14	9.45	9.75	10.06	10.36	10.67	10.97	11.28	11.58	11.89
40	12.19	12.50	12.80	13.11	13.41	13.72	14.02	14.33	14.63	14.93
50	15.24	15.54	15.85	16.15	16.46	16.76	17.07	17.37	17.68	17.98
60	18.29	18.59	18.90	19.20	19.51	19.81	20.12	20.42	20.73	21.03
70	21.34	21.64	21.95	22.25	22.55	22.86	23.16	23.47	23.77	24.08
80	24.38	24.69	24.99	25.30	25.60	25.91	26.21	26.52	26.82	27.13
90	27.43	27.74	28.04	28.35	28.65	28.96	29.26	29.57	29.87	30.17

Fathoms to Meters

Fathoms	0	1	2	3	4	5	6	7	8	9
0	0.00	1.83	3.66	5.49	7.32	9.14	10.97	12.80	14.63	16.46
10	18.29	20.12	21.95	23.77	25.60	27.43	29.26	31.09	32.92	34.75
20	36.58	38.40	40.23	42.06	43.89	45.72	47.55	49.38	51.21	53.03
30	54.86	56.69	58.52	60.35	62.18	64.01	65.84	67.67	69.49	71.32
40	73.15	74.98	76.81	78.64	80.47	82.30	84.12	85.95	87.78	89.61
50	91.44	93.27	95.10	96.93	98.75	100.58	102.41	104.24	106.07	107.90
60	109.73	111.56	113.39	115.21	117.04	118.87	120.70	122.53	124.36	126.19
70	128.02	129.85	131.67	133.50	135.33	137.16	138.99	140.82	142.65	144.47
80	146.30	148.13	149.96	151.79	153.62	155.45	157.28	159.11	160.93	162.76
90	164.59	166.42	168.25	170.08	171.91	173.74	175.56	177.39	179.22	181.05

Meters to Feet

Meters	0	1	2	3	4	5	6	7	8	9
0	0.00	3.28	6.56	9.84	13.12	16.40	19.68	22.97	26.25	29.53
10	32.81	36.09	39.37	42.65	45.93	49.21	52.49	55.77	59.06	62.34
20	65.62	68.90	72.18	75.46	78.74	82.02	85.30	88.58	91.86	95.14
30	98.42	101.71	104.99	108.27	111.55	114.83	118.11	121.39	124.67	127.95
40	131.23	134.51	137.80	141.08	144.36	147.64	150.92	154.20	157.48	160.76
50	164.04	167.32	170.60	173.88	177.16	180.45	183.73	187.01	190.29	193.57
60	196.85	200.13	203.41	206.69	209.97	213.25	216.54	219.82	223.10	226.38
70	229.66	232.94	236.22	239.50	242.78	246.06	249.34	252.62	255.90	259.19
80	262.47	265.75	269.03	272.31	275.59	278.87	282.15	285.43	288.71	291.99
90	295.28	298.56	301.84	305.12	308.40	311.68	314.96	318.24	321.52	324.80

Meters to Fathoms

Meters	0	1	2	3	4	5	6	7	8	9
0	0.00	0.55	1.09	1.64	2.19	2.73	3.28	3.83	4.37	4.92
10	5.47	6.01	6.56	7.11	7.66	8.20	8.75	9.30	9.84	10.39
20	10.94	11.48	12.03	12.58	13.12	13.67	14.22	14.76	15.31	15.86
30	16.40	16.95	17.50	18.04	18.59	19.14	19.68	20.23	20.78	21.33
40	21.87	22.42	22.97	23.51	24.06	24.61	25.15	25.70	26.25	26.79
50	27.34	27.89	28.43	28.98	29.53	30.07	30.62	31.17	31.71	32.26
60	32.81	33.36	33.90	34.45	35.00	35.54	36.09	36.64	37.18	37.73
70	38.28	38.82	39.37	39.92	40.46	41.01	41.56	42.10	42.65	43.20
80	43.74	44.29	44.84	45.38	45.93	46.48	47.03	47.57	48.12	48.67
90	49.21	49.76	50.31	50.85	51.40	51.95	52.49	53.04	53.59	54.13

Abbreviations

The following abbreviations may be used in the text:

Units

°C	degree(s) Centigrade	km	kilometer(s)
cm	centimeter(s)	m	meter(s)
cu.m.	cubic meter(s)	mb	millibars
dwt	deadweight tons	MHz	megahertz
FEU	forty-foot equivalent units	mm	millimeter(s)
grt	gross registered tons	nrt	net registered tons
kHz	kilohertz	TEU	twenty-foot equivalent units

Directions

N	north	S	south
NNE	northeast	SSW	southsouthwest
NE	northeast	SW	southwest
ENE	eastnortheast	WSW	westsouthwest
E	east	W	west
ESE	eastsoutheast	WNW	westnorthwest
SE	southeast	NW	northwest
SSE	southsoutheast	NNW	northnorthwest

Vessel types

LASH	Lighter Aboard Ship	ro-ro	Roll-on Roll-off
LNG	Liquified Natural Gas	ULCC	Ultra Large Crude Carrier
LPG	Liquified Petroleum Gas	VLCC	Very Large Crude Carrier
OBO	Ore/Bulk/Oil		

Time

ETA	estimated time of arrival	GMT	Greenwich Mean Time
ETD	estimated time of departure	UTC	Coordinated Universal Time

Water level

MSL	mean sea level	LWS	low water springs
HW	high water	MHWN	mean high water neaps
LW	low water	MHWS	mean high water springs
MHW	mean high water	MLWN	mean low water neaps
MLW	mean low water	MLWS	mean low water springs
HWN	high water neaps	HAT	highest astronomical tide
HWS	high water springs	LAT	lowest astronomical tide
LWN	low water neaps		

Communications

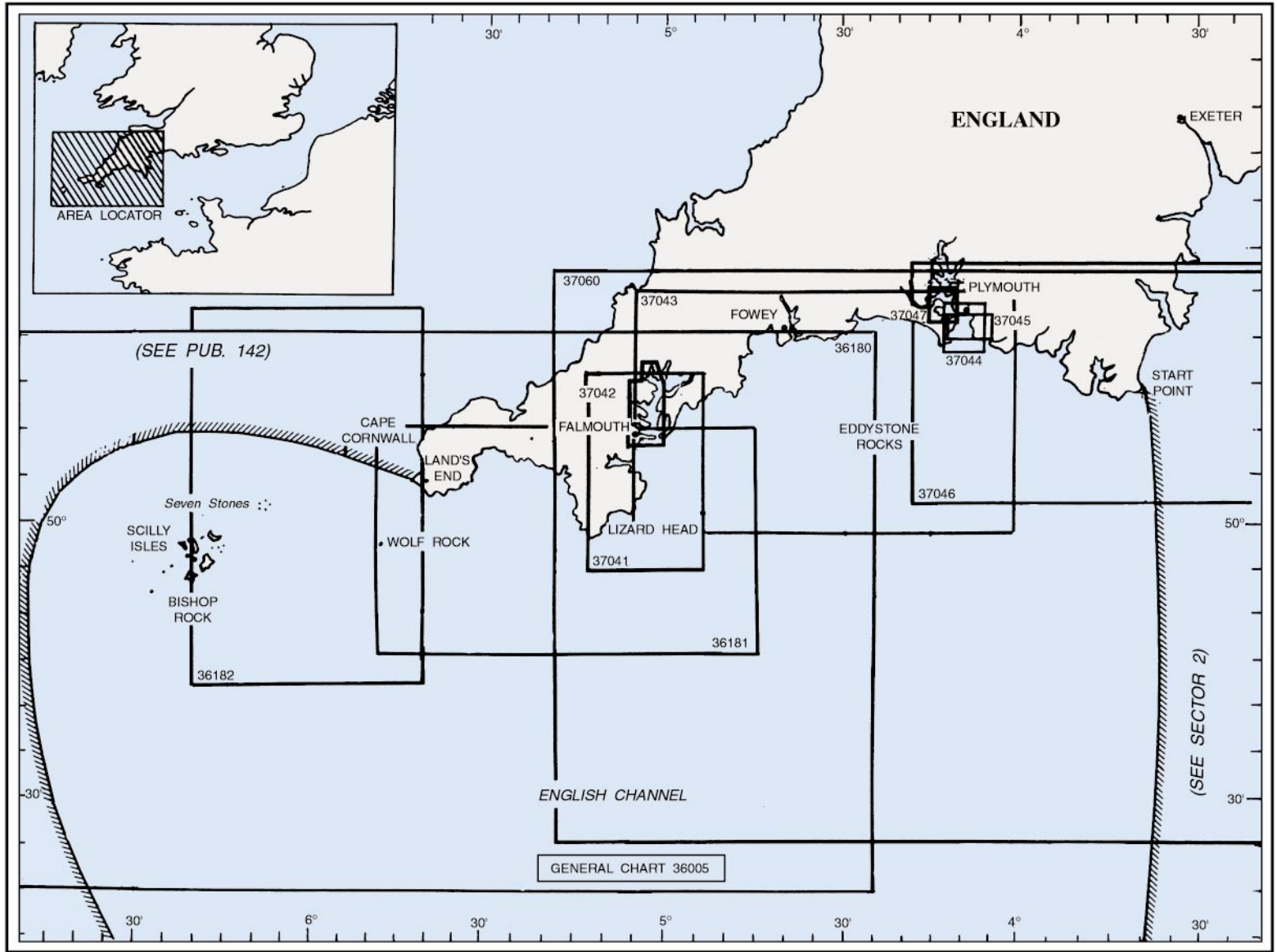
D/F	direction finder	HF	high frequency
R/T	radiotelephone	VHF	very high frequency
LF	low frequency	UHF	ultra high frequency
MF	medium frequency		

Navigation

LANBY	Large Automatic Navigation Buoy	SPM	Single Point Mooring
NAVSAT	Navigation Satellite	TSS	Traffic Separation Scheme
ODAS	Ocean Data Acquisition System	VTC	Vessel Traffic Center
SBM	Single Buoy Mooring	VTS	Vessel Traffic Service

Miscellaneous

COLREGS	Collision Regulations		
IALA	International Association of Light-house Authorities	No./Nos.	Number/Numbers
		PA	Position approximate
IHO	International Hydrographic Office	PD	Position doubtful
IMO	International Maritime Organization	Pub.	Publication
loa	length overall	St./Ste.	Saint/Sainte



Additional chart coverage may be found in NGA/DLIS Catalog of Maps, Charts, and Related Products (Unlimited Distribution).

SECTOR 1 — CHART INFORMATION

SECTOR 1

ENGLAND—SOUTH COAST—ENGLISH CHANNEL APPROACHES—THE SCILLY ISLES TO START POINT

Plan.—This sector first describes the approaches and passage through the English Channel to Dover Strait. It then describes the Scilly Isles and the SW coast of England from Land's End to Start Point. The descriptive sequence is from W to E.

General Remarks

1.1 The water separating the coast of England from that of France is known in the United Kingdom as the English Channel, and in France as La Manche.

The English Channel is entered from the W between Ile Vierge (48°38'N., 4°34'W.) and Land's End (50°04'N., 5°43'W.). The sea area lying W and SW of the English Channel and extending to the edge of the continental shelf forms part of the Celtic Sea. The W and SW approaches to the English Channel pass through deep water and there are no navigational hazards.

Winds—Weather.—The climate of the English Channel is controlled to a large extent by the series of cyclonic disturbances that usually move toward the E or NE, generally passing N of the British Isles. In such cases, the English Channel is under the influence of a mild and moist SW or WSW jet stream.

At other times, different conditions occur mainly when an anticyclone appears and develops over northern Europe. Winds from E may persist for several days and blow in the channel.

In winter, weather to the E is bitter cold and it is often accompanied by strong winds, but in summer there is usually fine weather. Winds are very variable. The term "predominant wind" is of little significance in this area.

The main features are the westerlies that occur from December to January and from July to August. During both these periods, more than 50 per cent of the winds are from SSW to NNW, often from SW more than NW.

Easterlies are from NE to E and occur most frequently from October to November and from February to June. The frequency is highest in May. Winds from SE are the least frequent. February and November have the most uniform distribution of winds from all directions.

Winds are characterized as predominantly W over the Scilly Isles, unlike over the English Channel. There is a tendency for wind shifts from W to NW more so than from SW to W in summer, and to a lesser degree in January.

In the approaches to Southampton and the Isle of Wight, winds often blow along The Solent and Spithead. Local variations are usually subordinate to the main stream which may sweep over much of the Isle of Wight. The island has not been observed to provide its own sea breeze.

The main breeze reaches force 3 or 4 on the coast and more over the water, then spreads out over the land. The land breeze

blows on clear nights throughout the year and may be more marked in winter than in summer.

At the Bill of Portland, the sea breeze effect results in a strong tendency for winds from N to NE to veer toward E, and those from W to NW to back toward SW between 0700 and 1300. The fluctuation of land and sea breeze at The Bill of Portland is sometimes NE to WSW, the general direction is parallel with the coast. The tendency is very pronounced during the warmer months and it is particularly marked for the N and S directions.

This is a land and sea breeze effect reinforced by the configuration of the river mouth. The effect is substantially repeated in similar topographical situations, in particular at Plymouth.

Tides—Currents.—A series of Tidal Stream Atlases, which shows the state of the currents on an hourly basis, is published by the United Kingdom Hydrographic Office for the English Channel and Dover Strait (NP 250 and NP 233).

Regulations—Reporting Systems.—The Ship Movement Reporting System (MAREP) is a voluntary reporting system and its objectives are to assist the mariner, to improve safety of navigation in the English Channel and Dover Strait, and to reduce the risk of pollution off the coasts of the United Kingdom and France in this area.

Vessels are requested to report to the appropriate shore station when approaching the following:

1. The TSS off Ile d'Ouessant.
2. The TSS off Casquets.
3. The TSS within the Dover Strait.

For further details of MAREP, see Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea.

The Dover Strait Reporting System (CALDOVREP) is a mandatory reporting system under SOLAS regulations which operates in a 65-mile stretch of the Dover Traffic Separation Scheme (TSS). In order to enhance safe navigation, shore based facilities at Gris Nez Traffic and Dover Coastguard monitor shipping movements and provide information pertaining to navigational hazards and weather conditions. For further details concerning CALDOVREP, see paragraph 6.4.

The CORSEN-OUESSANT Vessel Traffic Service (VTS) is a mandatory reporting system under SOLAS regulations which operates within a 40-mile circular area centered on Ile d'Ouessant. For further details of this VTS, see paragraph 3.1.

The Jobourg Vessel Traffic Service (VTS), known as MANCHEREP, is a mandatory reporting system under SOLAS regulations which operates in an area covering the Traffic Separation Scheme (TSS) off Les Casquets. For further details of this VTS, see paragraph 4.1.

Note.—Due to the CALDOVREP, CORSEN-OUESSANT, and MANCHEREP reporting systems being mandatory, vessels are advised that these systems take preference in those

specific areas over the Ship Movement Report System (MAREP), which is voluntary.

Special regulations and reporting procedures apply to tankers transporting hydrocarbons and to vessels transporting dangerous substances navigating in the approaches to the French coasts of the North Sea, the English Channel, and the Atlantic Ocean between the Belgian border and Spanish border. Such vessels preparing to pass through or stop within French Territorial Waters are required to send a message to the appropriate CROSS station giving their intended movements. In addition, such vessels must use the designated Mandatory Access Routes and Channels when approaching a port or roadstead.

For further details of these special procedures, see Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea.

An automatic ship identification and ship reporting system (AIRS) has been established to monitor the movements of vessels around the British Isles including the Dover Strait. The system utilizes the capability of the VHF DSC installations adopted for the Global Marine Distress and Safety System (GMDSS).

The WETREP (Western Europe Tanker Reporting System) is a VTS system, under SOLAS regulations, which operates in the W approaches to Spain, Portugal, France, Belgium, the United Kingdom (including the Shetland Islands), and Ireland. This system is mandatory for all oil tankers over 600 dwt carrying heavy crude oil, heavy fuel oil, or bitumen and tar and their emulsions. It does not apply to warships, naval auxiliary, or other vessels owned or operated by a contracting government and used, for the time being, only on government non-commercial service. For further details, see Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea (United Kingdom).

The WETREP (Western Europe Tanker Reporting System) operating areas have also been designated by the IMO as Particularly Sensitive Sea Areas (PSSA). For further details of PSSA, see Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea (United Kingdom).

Signals.—International traffic signals displayed at the majority of ports described within this volume are, as follows:

1. Three red lights displayed vertically indicate that vessels shall not proceed.
2. Three red flashing lights displayed vertically indicate that there is an emergency and all vessels must stop or divert according to instructions.
3. Three green lights displayed vertically indicate that vessels may proceed in one-way traffic.
4. Three lights displayed vertically, the two upper lights being green and the lower one being white, indicate that vessels may proceed in two-way traffic.
5. Three lights displayed vertically, the upper and lower lights being green and the center light being white, indicate that vessels may proceed only when they have obtained specific instructions to do so.

Directions—Traffic Separation Schemes.—Within the area covered by this volume, Traffic Separation Schemes and Inshore Traffic Zones have been established in the following areas:

1. To the W and S of the Scilly Isles, and between those islands and the English coast.
2. To the NW of Ile d'Ouessant.
3. To the N of Casquets.
4. In Dover Strait.

All these Traffic Separation Schemes (TSS) are IMO-adopted and Rule 10 of The International Regulations for Preventing Collisions at Sea (72 COLREGS) applies.

Special provisions have been adopted by IMO for use in the TSS lying NW of Ile d'Ouessant. French national regulations govern navigation in the Inshore Traffic Zone of this scheme and certain channels off the NW coast of Bretagne.

For details of the IMO special provisions and French regulations, see paragraph 3.1.

For details of the TSS lying N of Casquets, see paragraph 4.1.

For details of the TSS lying within the Dover Strait, see paragraphs 6.5 and 7.1.

Directions—Routes.—Vessels making a landfall SSW of Bishops Rock (49°52'N., 6°27'W.) and proceeding to Dover Strait should pass through the Traffic Separation Scheme (TSS) lying S of the Scilly Isles. They should then continue in a general E direction for about 135 miles and pass through the Off Casquets TSS (49°43'N., 2°22'W.).

Vessels making a landfall W of Bishops Rock (49°52'N., 6°27'W.) and intending to proceed N should pass through the TSS lying W of the Scilly Isles.

Vessels making a landfall WSW of Wolf Rock (49°57'N., 5°48'W.) and intending to proceed N should pass through the Off Land's End TSS lying E of the Scilly Isles between Seven Stones (50°02'N., 6°07'W.) and Longships, 14 miles E. For restrictions concerning this TSS, see Pub. 142, Sailing Directions (Enroute) Ireland and the West Coast of England.

Directions—Navigation.—The Netherlands Hydrographic Service publishes, in English, a Deep Draft Planning Guide covering the Deep Draft Route through Dover Strait to Europoort for vessels with drafts over 20.7m. However, the contents of the guide are not necessarily endorsed in every detail by the British authorities.

Vessels with drafts up to 22m, and up to 22.6m in favorable conditions, can use this Deep Draft Route. However, the recommended underkeel clearances should be taken into consideration.

For further details of the Deep Draft Routes within the Dover Strait and S part of the North Sea, see paragraph 6.5.

The United Kingdom Hydrographic Office publishes the Mariners' Routing Guide (chart 5500) which depicts routes through the English Channel, Dover Strait, and the S part of the North Sea as far as the entrance to Europoort. The guide also provides details concerning regulations, pilotage, and radio services.

The IMO has adopted a recommendation that all vessels navigating in the English Channel and Dover Strait should carry the latest edition of this guide or other equivalent publications.

The Channel Navigation Information Service (CNIS) is operated from Dover Strait Coast Guard and CROSSMA Griz Nez. It provides information by scheduled broadcasts or on request to vessels uncertain of their position on passage through the Dover Strait.

Approaching the English Channel

1.2 The continental shelf, which is approximately delineated by the 200m curve, lies more than 200 miles W of the SW coast of England. It may generally be recognized in calm weather by the numerous rippings in its vicinity, and in boisterous weather by a turbulent sea and the sudden alteration in the color of the water from a dark blue to green.

Within the 200m curve, the shoaling is irregular due to the banks and ridges described below; however, in general the surroundings shoal gradually E, the depth on a line joining Ile d'Ouessant and Bishop Rock being almost uniformly about 100m, decreasing a little within 20 miles of the Scilly Isles.

Approaching the English Channel from W, it is essential to use every opportunity to ascertain the vessel's position until a landfall is made. Although soundings will be of service, they give no exact determination of position as the inequalities in depths are generally too slight, with the exception of Hurd Deep (49°30'N., 3°30'W.). Careful consideration should be given to the effects of wind, currents, and tidal current in order to ensure keeping S of the Scilly Isles. Recent prevailing S and SW winds, combined with the influence of surface drift and tidal current, almost always result in a N set.

In low visibility, vessels should not approach the Scilly Isles within a depth of 100m unless certain of their position.

When approaching Ile d'Ouessant, which is surrounded by dangers, vessels should guard against the danger of setting E. Caution is also needed when rounding this island, as the tidal currents are strong and the extent of their influence to seaward is undetermined.

In low visibility, Hurd Deep will indicate the approach to Casquets from NW and N. Approaching from the W, vessels can avoid the dangers off Casquets, Alderney, and Cap de la Hague by following Hurd Deep.

In navigating the English Channel it is important that the mariner be acquainted with the general system of winds, as well as with the incidence of poor visibility. To this must be added the caution that the wind has a considerable effect on the strength and direction of the tidal current, as well as on the range of the tides.

The tidal currents are strong in the central part of the English Channel, especially at spring tides in the area lying between Portland, Isle of Wight, and the Cotentin Peninsula; strong winds opposing the tidal current raise steep seas which can be hazardous for small vessels.

Numerous ports and anchorages where vessels may seek shelter are found on both the English and French coasts; however, apart from the harbors of Dartmouth and Tor Bay, there is little shelter during strong SW winds between Start Point (50°13'N., 3°40'W.) and The Bill of Portland, 50 miles ENE.

A series of ridges, all of which lie in a NE to SW direction, are located W and SW of the Scilly Isles (49°52'N., 6°20'W.), within the continental shelf. However, some of these ridges, although being of considerable length, are very narrow.

The positions given below indicate the approximate location of the least depth on the named banks. It is to be noted that other shallower depths of less than 90m exist in this incompletely surveyed area.

Great Sole Bank (49°53'N., 9°36'W.), with depths of 95 to 126m, lies about 30 miles within the W edge of the continental shelf and 140 miles W of the Scilly Isles.

Cockburn Bank (50°01'N., 8°45'W.), with a least depth of 93m, and **Jones Bank** (49°53'N., 7°58'W.), with a least depth of 71m, lie between Great Sole Bank and the Scilly Isles.

Another depth of 73m lies 35 miles WSW of Jones Bank.

Melville Knoll (49°14'N., 8°16'W.), with a least depth of 104m, lies about 35 miles SSW of Jones Bank.

Little Sole Bank (48°27'N., 8°53'W.) lies between the edge of the continental shelf and Ile d'Ouessant (48°27'N., 5°08'W.). It has a least depth of 115m and consists of fine sand.

Shamrock Knoll (48°11'N., 7°34'W.), with depths of 95 to 128m, and **Parsons Bank** (48°25'N., 6°32'W.) lie 50 miles W of Ile d'Ouessant. Over Parsons Bank and within about 10 miles of it, the depths decrease from 148 to 99m and then increase again to 131m.

Kaiser-i-hind Bank (48°06'N., 6°34'W.), with a least depth of 117m, lies about 15 miles S of Parsons Bank.

Between Parsons Bank and Ile d'Ouessant, the bottom is more even and there are depths of 100m or more lying up to within about 3.5 miles of the westernmost danger located of Ile d'Ouessant.

La Fosse d'Ouessant, a remarkable trench, lies about 5 miles NW of Ile d'Ouessant. It is about 1 mile wide and has depths of 118 to 190m.

The bottom of the W approaches to the English Channel appears to consist mainly of fine or coarse sand, a great deal of broken shell, and occasional patches of pebbles, gravel, and small stones. Mud may be found in places now and then. The sand is mostly white; although, in many places it is yellow, with black specks. The black specks are often found mixed both with the white and yellow sand; they are very fine, resembling fine cinder dust.

The greater proportion of yellow sand lies S of the parallel of 49°30'N, and that of black specks N of that line. This distribution is very marked, especially between the meridians of 9°40'W and 7°30'W.

Hurd Deep (49°30'N., 3°30'W.), with general depths of more than 90m, is 2 to 3 miles wide. It extends about 80 miles NE from a position located 38 miles N of Ile de Batz (48°45'N., 4°00'W.). In the NE part, lying about 9 miles NW of Casquets, the depths increase to about 170m. Although there are sudden variations in depths in various parts of the English Channel, there is none so marked as that of Hurd Deep.

Several fields of sand waves exist in the W part of the English Channel in deep water. The waves tend to run in a N to S direction. Two such fields are centered about 17 miles and 33 miles SE of Eddystone Light (50°11'N., 4°16'W.). Each field extends about 15 miles in a N to S direction and 10 miles in an E to W direction. A third field is centered about 30 miles SE of Start Point (50°13'N., 3°38'W.). It extends about 10 miles in a N to S direction and 12 miles in an E to W direction. Average amplitudes are from 1 to 2m, with a maximum amplitude of 5m, and average wavelengths are between 100 and 300m.

Average amplitudes are from 5 to 15m with occasional sand waves exceeding heights of 20m. The average wavelengths are between 250 and 1,500m.

For information concerning fields of sandwaves in the Dover Strait, see paragraph 6.5.

Pilotage.—Pilotage is available at every port of any consequence on the British side of the English Channel and in the Channel Islands; relevant details are provided under the individual port descriptions. Mandatory pilotage for French ports is determined by the tonnage or length of a vessel, which is defined in the port description. Pilotage is obligatory for all vessels carrying hydrocarbons or dangerous substances.

Vessels inbound for ports in NW Europe, including the British Isles and The Baltic Sea, may embark deep-sea pilots before reaching the complex Traffic Separation Schemes and Deep Water Routes in the Dover Strait and the North Sea areas. Such pilots should be requested in advance through the various pilotage agencies based in the British Isles or other European countries.

Deep-sea pilots are normally embarked by prior arrangement off Brixham or Cherbourg for ports in NW Europe and The Baltic.

Caution.—British and French submarines exercise frequently in the English Channel and in its W approaches. The limits of submarine exercise areas are generally indicated on the charts.

Firing and bombing practices and other defense exercises take place within areas lying about 40 miles of the English coast.

Several former mine areas, within which sea bottom activities are prohibited, are situated in the English Channel.

Several explosive deposit zones, for use of vessels with suspicious devices, lie in French waters.

For further details of the above areas, See Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea.

Disused explosives dumping ground areas lie at the E and W ends of Hurd Deep (49°30'N., 3°30'W.).

Transshipment of liquid cargo between tankers takes place regularly in Lyme Bay and in the NW part of Baie de la Seine. Vessels engaged in those operations may be at anchor, or otherwise unable to maneuver, and should be given a wide berth.

Crossing traffic in parts of the English Channel and Dover Strait increases the risk of collision in these areas. Extreme caution is advised.

High speed ferries may be encountered in the English Channel and Dover Strait.

Fishing vessels of various sizes and of different nationalities may be encountered throughout the English Channel and Dover Strait.

Drilling rigs may operate in the English Channel throughout the year. Buoys, barges, and other equipment associated with the rigs may be moored within 1.5 miles of them and should be given a wide berth.

Seismic and other survey vessels, operating in connection with oil and gas rigs, may be encountered throughout the English Channel.

As stated in the Mariners' Routing Guide (chart 5500), vessels using TSS traffic lanes must proceed at a safe speed, tak-

ing particular account of conditions such as reduced visibility. It must be noted that vessels on through routes do not have any special privileges or right of way.

The Scilly Isles

1.3 The **Scilly Isles** (49°55'N., 6°20'W.) comprise a group of isles and numerous above and below-water dangers that occupy a bank, about 5 miles wide, lying between 21 and 31 miles WSW of Land's End, the SW extremity of England.

The largest isles are concentrated in the NE part of the bank and the small isles, rocks, and hidden dangers intersperse, rather sporadically, the SW part of the bank.

Bishop Rock (49°45'N., 6°35'W.), the SW extremity of the Scilly Isles, is the northernmost of a small detached group of above-water rocks which are mostly awash at HW.

Bishop Rock Light, equipped with a racon, is shown from a conspicuous granite tower, 49m high, standing on the rock. The light tower is radar prominent and generally the first sighting made when approaching the English Channel from the W. The light is obscured on some bearings.



Bishop Rock Light

Pol Bank (49°50'N., 6°28'W.), with a least depth of 23m, constitutes the southernmost danger in the Scilly Isles area. It should be avoided by all vessels, especially in periods of heavy swell, when strong overfalls are formed.

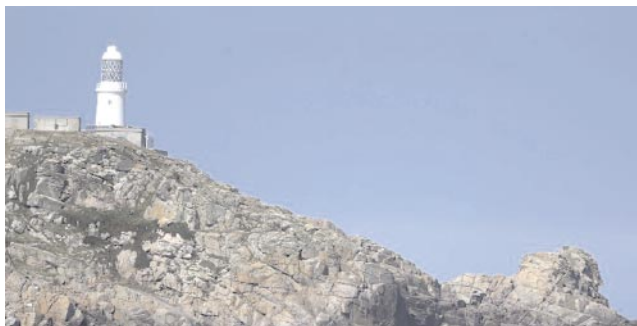
St. Agnes lies close SW of St. Mary's; an old conspicuous lighthouse stands on its summit.

St. Martin's, fronted by rocks and islets, lies at the NE side of the group about 1.5 miles N of St. Mary's. A conspicuous beacon, 56m high, is situated on the easternmost and highest end of this isle.

Round Island (49°59'N., 6°19'W.), the northernmost isle of the group, is low and surrounded by rocks. Round Island Light is shown from a prominent tower, 19m high, standing on its N side. The light is obscured on some bearings.

1.4 **St. Mary's** (49°55'N., 6°19'W.), with its summit in the N part, is the largest and principal isle of the group.

Hugh Town (49°55'N., 6°19'W.) (World Port Index No. 35230), the main harbor and settlement, is situated on the neck



Round Island Light

of a peninsula at the SW end of this isle. St. Mary's Road, the most spacious anchorage, lies NW of St. Mary's and has depths of 10 to 16m. Crow Sound, lying NE of St. Mary's, provides good anchorage, in depths of 12 to 14m. It is easy to access, but should not be used during strong E winds. Crow Bar, a shallow bank, separates Crow Sound from St. Mary's Road.

St. Mary's Road, fronting Hugh Town, can be entered via several channels. St. Mary's Sound and Broad Sound are marked by buoys and the easiest to navigate. St. Mary's Sound should be used by vessels approaching from E or S. It has a least depth of 9.9m on the range line and is entered between Peninnis Head and Spanish Ledges, marked by a buoy, about 0.4 mile SW. Broad Sound should be used by vessels approaching from SW. It has a least depth of 15m at the center of the fairway and is entered between Bishop Rock and Flemings's Ledge, about 0.7 mile N. North Channel, the NW approach, is not marked. It has a least depth of 12.3m and presents little difficulty. Smith Sound is deep and very narrow. It is not marked and requires local knowledge.

St. Mary's Harbour at Hugh Town has a pier with depths of 2m alongside. There are facilities for small coasters, ferries, and pleasure craft.

Several radio masts and a conspicuous television tower stand on the NW side of St. Mary's and can be seen from a considerable distance in clear weather. A prominent coast guard station stands close S of the tower.

Peninnis Head Light is shown from a framework tower with a cupola, 14m high, standing on Peninnis Head, at the SW side of St. Mary's. The Star Castle Hotel, a prominent building, stands on the N end of the peninsula at the SW side of the isle.

Pilotage.—Pilotage is compulsory for St. Mary's Road and all the waters within the Scilly Isles with the exception of fishing trawlers less than 47.5m in length, yachts less than 20m in length, and HM vessels. Vessels should send an ETA to the Harbormaster at St. Mary's at least 24 hours in advance. The harbor can be contacted by VHF. Amendments to the ETA of over 3 hours should be sent immediately. Pilots board between 1 and 2 miles S of Peninnis Head or the same distance W of Bishop Rock.

Regulations.—An IMO recommendation states that laden tankers over 10,000 grt using the Traffic Separation Scheme (TSS) lying between Land's End and the Isle of Scilly should keep at least 3 miles to seaward of Wolf Rock and should not use the scheme in restricted visibility or other adverse weather.



Peninnis Head Light (St. Mary's)

Laden tankers should avoid the areas between the inshore boundaries of each of the above schemes and the coasts of the Scilly Isles and the Cornwall Peninsula as these have been designated as Inshore Traffic Zones.

Vessels may pass between the TSS situated S of the Scilly Isles and the TSS situated NW of Ile d'Ouessant if it is considered safer to do so in the prevailing circumstances.

The recommended channel for large vessels leading between Seven Stones and Longships is approximately 12 miles wide, with a least depth of 34m, and passage is simple by day or by night in clear weather.

Laden tankers using the TSS lying between Land's End and the Isle of Scilly should report by VHF to Falmouth Coastguard Station at least 1 hour before ETA at the scheme and on final departure from the scheme. These vessels should provide the following information:

Designator	Information required
A	Name and call sign.
B	Date and GMT/UT time (6 figures).
C	Latitude (4 figures N/S) and Longitude (5 figures E/W).
D	True bearing and distance (miles) from landmark.
E	True course (3 figures).
F	Speed (knots and decimal 3 figures).
G	Last port of call.
I	Destination.
M	VHF channels monitored.
O	Draft (deepest in meters and centimeters).
P	Type and quantity of cargo.
Q	Any damage or deficiency.

Directions.—Traffic Separation Schemes (TSS), which may best be seen on the chart, are situated W of the Scilly Isles, S of the Scilly Isles, and between the Scilly Isles and the English coast. These schemes are IMO-adopted and Rule 10 of the Navigational Rules (72 COLREGS) applies.

Caution.—Many of the dangers in this area are steep-to and the soundings do not provide a warning of approach. In thick weather, the distinct differences (intervals and frequency) of the fog signals sounded by the adjacent aids should be carefully identified in order to avoid these dangers.

Exercise areas, in which ships and submarines carry out drills including firing practice, extend up to 40 miles S from the English coast as far as the meridian of 7°W.

A good lookout for submarines must be kept while passing through these waters.

In thick weather, vessels approaching the Scilly Isles from the W and SW should keep outside the 100m curve, (but should be aware of the existing TSS), which lies about 18 miles W, and 22 miles S of Bishop Rock.

An experimental area, about 1 square mile and in which several underwater obstructions exist, is located close off the NW side of the Scilly Isles.

1.5 Seven Stones (50°02'N., 6°07'W.), a large group of steep-to rocks, many of which dry, lies on a bank about 6.5 miles NE of the NE extremity of the Scilly Isles. In rough weather, the sea breaking on these rocks can be seen for a considerable distance, but vessels should never attempt to pass close to their position.

Seven Stones Lightfloat (50°04'N., 6°04'W.), equipped with a racon, is moored about 2 miles NE of the N part of the shoal.

When navigating between the Scilly Isles and Land's End, vessels should not pass between Seven Stones and this lightfloat.

Wolf Rock (49°57'N., 5°49'W.), a steep-to drying rock, is located about 8 miles SSW of Land's End and is awash at HWN. Wolf Rock Light, equipped with a racon, is shown from a prominent granite tower, 41m high, standing on the rock.



Wolf Rock Light

Land's End to Lizard Point

1.6 Land's End (50°04'N., 5°43'W.), the SW extremity of England, consists of a bold precipitous headland, 73m high, fronted by foul ground. It is radar conspicuous.

A church, with a prominent steeple, is situated 0.8 mile E of the headland and a coast guard station stands 0.5 mile NE.

Longships (50°04'N., 5°45'W.), a foul area with above and below-water rocks, lies about 1 mile W of Land's End with a narrow channel between. Longships Light is shown from a prominent granite tower, 35m high, standing on the tallest rock, at the W side of the area.

Carn Base, a rocky shoal with a depth of 9.9m, lies about 2 miles S of Longships, near the W edge of a bank. A heavy confused sea occurs on this bank during W gales, especially during W tidal currents.



Longships Light



Longships Rocks

Cape Cornwall, surmounted by a conspicuous disused mine chimney, is located 3.5 miles N of Land's End. A prominent television mast stands 1.8 miles NE of this cape.

For further information concerning the waters and landmarks N of Land's End, see Pub. 142, Sailing Directions (Enroute) Ireland and the West Coast of England.

1.7 Gwennap Head (50°02'N., 5°41'W.), the SW extremity of the Cornwall Peninsula, is a cliffy headland rising in

places to heights over 60m. A coast guard station, from which storm signals are displayed, stands on this headland.

Runnel Stone, a shoal awash, lies about 0.8 mile S of Gwennap Head and is marked by a lighted buoy. Two beacons standing in line on the headland mark the position of this danger. The channel leading between the shoal and the headland is foul and should not be attempted without local knowledge.

The coast trending ENE from Gwennap Head remains cliffy and craggy with numerous small points and coves.

Tater-du Light (50°03'N., 5°35'W.) is shown from a prominent tower, 15m high, standing on the coast, 3.8 miles ENE of Gwennap Head. A church, with a conspicuous tower, is situated at St. Buryan, about 2 miles NW of the light.



Tater-du Light

Carn du, the E entrance point of Lamorna Cove, lies about 1 mile NE of Tater-du Light. Gull Rock, 24m high and precipitous, lies close off this point.

Caution.—Several submarine cables, which may best be seen on the chart, extend seaward from the vicinity of Porthcurno, about 1 mile ENE of Gwennap Head and from a bay located about 1 mile NNE of Land's End.

1.8 Mounts Bay (50°04'N., 5°26'W.) indents the coast between Runnel Stone and Lizard Point, 18 miles ESE. This bay should be avoided in the winter, or during SW gales. No attempt should be made to enter any of the harbors within the bay, except Newlyn, when a ground swell is running or with onshore winds.

Penzance Bay (50°06'N., 5°30'W.) is located in the NW corner of Mounts Bay and entered between Carn du and Cudden Point, 5.5 miles NE. The best anchorages lie within this bay, but they should not be used with winds between SSW and SE.

St. Michael's Mount (50°07'N., 5°29'W.), a small conical island, is the best landmark in Penzance Bay. It is 80m high and surmounted by a castellated building with a conspicuous tower. This island bears a striking resemblance to the mount of similar name in Normandy, although much smaller, and is likewise connected to the shore by a drying ledge and causeway.

St. Clements Isle (50°05'N., 5°32'W.), about 8m high with an obelisk on its S end, lies 0.2 mile off the W shore of Pen-



St. Michael's Mount (Penzance Bay)

zance Bay, about 0.5 miles NNE of Carn du. This island provides shelter for the drying boat harbor of Mousehole which is located on the mainland, WNW of it.

Penzer Point, surmounted by a prominent building, and a conspicuous hotel are situated 0.8 mile and 0.3 mile, respectively, S of Mousehole. The cliffs near Penzer Point are 25m high and the land rises abruptly behind them.

Penlee Point is located 0.5 mile N of St. Clement's Isle and the cliffs here are 18m high. Low Lee and Carn Base, with depths of 1.5m and 1.8m, respectively, lie about 0.5 mile ENE and NNE of this point. Both are weed-covered rocks. Low Lee is marked by a lighted buoy.

A church, with a prominent tower, stands at Paul, 0.5 mile W of Penlee Point.

Newlyn (50°06'N., 5°33'W.) (World Port Index No. 35240) is situated on the W side of Penzance Bay, within a cove known as Gwavas Lake. This small port, formed by two piers, has a narrow entrance. It is used by coasters, fishing vessels, and pleasure craft.

Most of the harbor dries at LW, but the outer part, including the extremities of the piers, can be entered by small craft at any stage of the tide. There is about 920m of quayage with depths of 1.9 to 2.7m alongside. Small coasters up to 108m in length, with drafts up to 5.5m at HWS and 5.1m at HWN, can be handled. See Penzance for pilotage information.

A light is shown from a prominent metal tower, 10m high, standing on the head of the S pier.

1.9 Penzance (50°07'N., 5°32'W.) (World Port Index No. 35250) is situated in the NW part of Penzance Bay. This small port is used by coasters, fishing vessels, and pleasure craft. It is also the terminal of the ferry which runs to the Scilly Isles.

Winds—Weather.—Winds are generally from the N to NE in the morning and S to SW in the afternoon. During winter, numerous gales effect the bay area and no attempt should be made to enter during those from the S. Coastal fog is encountered mostly during the spring.

Tides—Currents.—Tides rise about 5.6m at springs and 4.4m at neaps.

Depths—Limitations.—The harbor, which consists of a tidal basin and a wet dock basin, is formed by two piers. The tidal basin mostly dries. A ferry berth, located near the head of the S pier, has a depth of 7.6m alongside at HW. The wet dock basin is entered through a gate, 15.3m wide. It usually has a depth of 4.3m, but at HWS there is a depth of 5.3m.

Vessels up to 92m in length, with drafts up to 5.6m at HWS and 4.2m at HWN, can be accommodated.

Aspect.—Gear Rock lies about 0.5 mile S of the harbor entrance and is marked by a lighted buoy. A light is shown from a tower, 9m high, standing on the head of the S breakwater. A church, with a prominent tower, stands close W of the wet dock basin. The dome of the market, situated 0.3 mile NW of the wet dock basin, is conspicuous from seaward.

Pilotage.—The harbor can be contacted by VHF from 0830 to 1730 weekdays and on all tides from 2 hours before to 1 hour after HW. Pilots are not available but the Harbor Master can provide navigational advice.

Newlyn can be contacted by VHF and provides information on vessel movements and general navigation matters in or near the harbors of Newlyn and Penzance. The harbor office hours are 0800 to 1700 weekdays and 0800 to 1200 Saturday.

Anchorage.—The best anchorage in Penzance Bay is in a depth of 15m, sand, about 0.5 mile SSE of Gear Rock. The anchorage should be used with caution in winter. Vessels can also anchor, in depths of 12 to 13m, about 0.9 mile ENE of the S pier at Newlyn; in a depth of 15m, about 0.7 mile E of the S pier at Newlyn; and in a depth of 7m, about 0.3 mile SE of the S pier at Newlyn.

Caution.—Vessels with drafts over 4m should contact the harbor or pilot prior to entry to ensure there is sufficient water.

1.10 Cudden Point (50°06'N., 5°26'W.) is located on the NE side of Mounts Bay, 2.2 miles ESE of St. Michael's Mount.

Iron Gates (50°04'N., 5°26'W.), a rocky shoal patch with a depth of 7.2m, lies on a bank which extends up to about 2 miles S of Cudden Point. Mountamopus, Carn Mallows, and Great Row, all shoal patches with depths of less than 5m, lie within about 1.7 miles N and E of Iron Gates. A channel, about 0.7 mile wide, leads between these dangers and Iron Gates. It is marked by a lighted buoy, but local knowledge is advised.

A conspicuous water tower stands at Saint Hilary, 1.4 miles N of Cudden Point. A church, with a prominent tower, is situated at Perranuthnoe, 1.2 miles NW of Cudden Point.

Porthleven (50°05'N., 5°19'W.), used only by fishing boats, is situated in the NE part of Mounts Bay. This small and shallow harbor is entered between the head of a pier and Deazle Rocks, about 90m W. The entrance is open to the SW and, when necessary, heavy timbers are placed across the inner harbor for protection.

The coast trends 1 mile SE from Porthleven to Loe Bar, a bar of shingle, and is low and sandy. From Loe Bar to Lizard Point, 8 miles SSE, the coast consists of cliffs, 15 to 75m high.

Mullion Island (50°01'N., 5°16'W.), 30m high and precipitous on its seaward side, lies about 0.2 mile offshore. It protects the drying boat harbor of Porth Mellin which is situated 0.3 mile NE. Landing on the island is prohibited.

Anchorage in E winds only can be obtained, in depths of 14 to 16m, about 0.8 mile NNW of Mullion Island.

The general trend of the coast from Porth Mellin is SSW for 0.8 mile to Predannack Head, a rocky and cliffy headland that rises sharply to a height of 61m.

Vradden, a drying rock, lies about 0.2 mile SW of Predannack Head and is steep-to on its seaward side.

A conspicuous hotel stands on the cliffs above a cove 1 mile N of Predannack Head and about 0.4 mile NE of Mullion Island.

The Boa (49°58'N., 5°17'W.), a rocky patch with a least depth of 11m, lies 1.5 miles offshore about 2 miles SSW of Predannack Head. It is known to break heavily in SW gales. The bottom is irregular in the vicinity of this shoal and strong tide rips usually occur.

Caution.—A submarine cable, which may best be seen on the chart, extends seaward from the vicinity of a cove located 1.3 miles N of Mullion Island.

Lizard Point to Falmouth

1.11 Lizard Point (49°57'N., 5°12'W.), the S extremity of the mainland of England, is a bold and precipitous promontory at which vessels generally make their landfall when proceeding into the channel from the SW. It is radar conspicuous.

A building with two prominent white octagonal towers, 19m high, stands about 0.5 mile E of the point. Lizard Point Light is shown from the easternmost tower. It is obscured from N until WNW of the point.



Lizard Point



Lizard Point Light

A conspicuous large hotel is situated at the head of a small bay, 0.4 mile NE of the light. Several dish-shaped antennas stand on Goonhilly Downs, 5 miles N of the light and are conspicuous from seaward.

A cluster of rocks, collectively known as The Stags, extends up to 0.5 mile S of Lizard Point, terminating in Men Hyr, a rock which dries 4m.

A tide race extends up to 2 miles S of these rocks and during SW gales, the sea in this area is short and heavy.

Spernan Shoals, several rocky patches with depths of 6.9 to 9.6m, lie up to 0.8 mile E of Bass Point, about 0.5 mile ENE of Lizard Point.

Vrogue Rock, with a depth of less than 1.8m, lies about 0.4 mile ESE of Bass Point, with depths of less than 10m close around. Craggen Rocks, with a least depth of 1.5m, lie nearly 0.5 mile offshore about 1 mile NNE of Bass Point.

Anchorage.—Anchorage in W winds is available to small vessels, in a depth of 11m, about 0.3 mile E of Balk Beacon, which is situated at Parn Vose Cove, 0.7 mile N of Bass Point.

Caution.—A submarine pipeline extends 0.3 mile E from a point on the shore located 0.5 mile N of Bass Point and its seaward end is marked by a buoy.

Several submarine cables, which may best be seen on the chart, extend seaward from the vicinity of Kennack Cove, about 3 miles NE of Lizard Point.

1.12 Black Head (50°00'N., 5°06'W.), a cliffy and steep headland, rises to a height of 70m about 4.8 miles NE of Lizard Point.

A hotel, situated on the heights above the shore, stands 0.8 mile NNE of Black Head and is conspicuous from the E.

Coverack Cove (50°01'N., 5°06'W.) is entered between Chynhalls Point and Lowland Point, 1.5 miles NE. The shore is fronted by drying rocks and ledges. The village of Coverack stands on Dolor Point, 0.4 mile N of Chynhalls Point. A pier extends NW from this point and is used by small craft which can take the ground at LW.

Anchorage is available to small vessels, in a depth of 9m, about 0.2 mile ENE of Dolor Point.

A small jetty is situated 0.3 mile N of Lowland Point. It is used by coasters up to 1,500 tons to load stone from the nearby quarries. The jetty dries at LW and a rock, which dries 1.5m, lies about 0.2 mile ESE of the head. The gantries on the jetty and the buildings standing behind it are prominent.

It is reported that the quarry operators keep a listening watch on VHF channels 16 and 19 whenever blasting is due to take place in order to warn vessels navigating close inshore.

Manacle Rocks (50°03'N., 5°02'W.), also known as The Manacles, lie up to 0.8 mile offshore E of Manacle Point, about 3.3 miles NNE of Black Head. Steep-to on their seaward edge, these drying and submerged rocks can be particularly dangerous in thick weather when rounding the coast for Falmouth. A lighted buoy is moored about 0.3 mile E of the outer rock.

The **Helford River** (50°06'N., 5°06'W.), entered about 3 miles NNW of The Manacles, is used only by yachts and pleasure craft. Numerous oyster beds lie in the river and adjoining creeks. Gillan Creek, a yachting center, is situated close within the river entrance, on the S side.

Vessels can anchor, in a depth of 12m, about 0.5 mile NNE of Nare Point, the S entrance point, sheltered from SW winds.

Several mooring buoys are situated SE and NE of the river entrance points and their positions are likely to be frequently changed.

Falmouth Bay (50°08'N., 5°04'W.) lies between the N entrance point of the Helford River and Pendennis Point, 2.5

miles NE. The coast consists of cliffs up to 15m high in the S part and is fronted by drying ledges in the N part.

Saint Anthony Head (50°08'N., 5°01'W.) forms the SW extremity of a headland. Saint Anthony Head Light is shown from a conspicuous white octagonal tower, 19m high, standing on the head.



Saint Anthony Head Light

Falmouth (50°09'N., 5°03'W.)

World Port Index No. 35290

1.13 Falmouth Harbour is centered between Saint Anthony Head and Pendennis Point, 1 mile W. There are extensive facilities for repairs and refuelling. The harbor extends N for about 4 miles with numerous coves and inlets. The main facilities, available to ocean-going vessels, are situated on the E side of the town, NW of Pendennis Point.



Falmouth Docks from NE

Winds—Weather.—During summer, the land and sea breeze effect is very pronounced with winds from the N in the morning and S in the afternoon. During winter, Falmouth experiences numerous gales, many of which are severe, but Lizard Point gives some protection from those from the SW.

Sea fog is most likely to occur in early spring during SW winds when moist air is driven over the cooler waters.

Land fog occurs most regularly in winter on calm clear nights, but it usually clears by early morning.

Tides—Currents.—The tides rise about 5.2m at springs and 4.1m at neaps.

The tidal currents run generally in the direction of the channel. At the harbor entrance, they attain a rate of 1 knot at

springs and about 0.5 knot at neaps. Off the Docks Basin, the rate rarely exceeds 0.5 knot.

Depths—Limitations.—The approaches to Falmouth are deep, but Old Wall, a rocky shoal with a least depth of 6.4m, lies about 1.3 miles SSE of Saint Anthony Head and should be avoided, especially in periods of swell.

Black Rock, marked by a beacon, is a drying rock fringed by shoals lying in the entrance, about 0.4 mile ENE of Pendennis Point. This rock divides the entrance into two channels.

The main entrance channel passes E of Black Rock. It is wide and clear with a least depth of 11.3m. The channel passing W of Black Rock has a least depth of 5.4m and should only be used with local knowledge.

The fairway channel leading to Docks Basin and Inner Harbour has a least depth of 5.4m. A buoyed channel leads 1.3 miles NNW from the entrance to Carrick Road, the main anchorage area.

The port provides about 2,400m of total quayage. There are facilities for general cargo, tanker, fishing, and offshore exploration support vessels. In addition, there are extensive facilities for ship repairs. The principal berths are listed below.

Falmouth Berth Information		
Berth	Depth	Length
Eastern Breakwater	7.1m	259m
Western Breakwater	6.1m	172m
Northern Arm, S side	6.1m	198m
Northern Arm, N side	6.1m	209m
Queen's Jetty, N side	7.6m	189m
Queen's Jetty, S side	7.6m	152m
Empire Jetty, N side	5.8m	168m
Empire Jetty, S side	7.3m	122m
King's Jetty, N side	7.6m	192m
King's Jetty, S side	7.6m	183m
Duchy Wharf	8.1m	220m
County Wharf	9.1m	160m

The berth on the Eastern Breakwater is mostly used by tankers. Vessels up to 265m in length and 8.4m draft can be accommodated at HW, subject to length.

There are lay-up berths in the River Fal for vessels, including oil rigs, up to 219m in length and 15m draft.

Mooring buoys are situated 500m NW of the Docks Basin. The maximum size of vessel normally permitted at either of these buoys, except by special permission, is 61m in length with a draft of 3.5m. Larger vessels can moor between the buoys.

There are three drydocks in the harbor. The largest is 259m long and 39.6m wide, with a depth of 11m over the sill at HWS. It can handle vessels up to 100,000 dwt.

Aspect.—In addition to Saint Anthony Head Light, the port entrance may be easily identified by the conspicuous castle, radio mast, and coast guard station standing on Pendennis



Pendennis Point (Castle—Mast—Coast Guard Station)

A prominent hotel is situated near the shore, 0.6 mile WNW of Pendennis Point. The Observatory Tower stands 1.2 miles WNW of Pendennis Point and is also prominent. The Eastern Breakwater is located 0.7 mile NW of Pendennis Point. It extends 0.2 mile NNE and is illuminated by floodlights.

St. Mawes Castle, standing on Castle Point 0.7 mile N of the entrance, is prominent. A conspicuous water tower is situated 0.9 mile NNE of this castle.



Falmouth—St. Mawes Castle

Black Rock is marked by a conspicuous, conical stone beacon, 13m high, and a lighted buoy is moored close E of it. Penarrow Point, located about 2 miles NNW of the entrance, is marked by a prominent elm tree and a pillar, 3m high. This point is not easily identified from outside the harbor.

Pilotage.—The Falmouth Pilotage Area lies within a line extending between Black Head (50°00'N., 5°06'W.) and Dodman Point (50°13'N., 4°48'W.).

Pilotage is compulsory for vessels, as follows:

1. All vessels over 180m in length when navigating N of a line extending between Black Head and Dodman Point, 19 mile NE. This area is known as Zone A.
2. All vessels in commercial use over 30m in length when navigating W of a line extending between Rosemullion Head (50°07'N., 5°05'W.) and position 50°03.35'N, 5°01.60'W. This area is known as Zone B.



Falmouth—Black Rock Beacon

3. All vessels over 75m in length when navigating N of a line extending between Rosemullion Head and Zone Point (50°08'N., 5°01'W.) and when navigating S of a line extending between Messack Point (50°10.9'N., 5°01.5'W.) and Penarrow Point (50°10.5'N., 5°02.7'W.). This area is known as Zone C. Also, elsewhere in the Pilotage Area when navigating within 1 mile of the shore.

4. All vessels over 60m in length when navigating N of a line extending between Messack Point and Penarrow Point. This area is known as Zone D. Also, in the Penryn River to the W of a line extending between the Prince of Wales Pier (50°09.4'N., 5°04.2'W.) and Flushing New Quay (50°09.7'N., 5°04.2'W.).

5. All vessels navigating in the Pilotage Area carrying dangerous or polluting substances.

6. All vessels in commercial use navigating in the Pilotage Area not equipped with corrected Admiralty charts numbers 154, 32, and 18 (or equivalent) as required to cover the entire passage.

7. All vessels over 50m in length entering or leaving a drydock.

8. All manned vessels over 50m in length using the services of a harbor tug.

9. Vessels of any size when directed by the Harbormaster or Dockmaster in the interests of safety.

The rules above apply to tugs and tows as if the aggregate length of the tug and tow is the length overall of a single vessel.

The rules above apply to vessels underway. They do not apply to HM ships and foreign warships, vessels less than 20m in length, or registered fishing vessels less than 47.5m in length.

Vessels should send their request for pilotage and an ETA at least 24 hours in advance via telephone, fax, e-mail, or telex. A confirmation message should be sent 1 hour prior to arrival by VHF.

Pilots can be contacted by VHF and board vessels over 180m in length about 4.5 miles S of Saint Anthony Head Light. Smaller vessels should send their ETA at the pilot boarding station as above. However, they may be given instructions to embark the pilot closer to shore depending on weather conditions.

Pilotage services within Falmouth are available to any vessel subject to a minimum of 1 hour prior notice.

Falmouth pilots may be contacted by e-mail, as follows:

pilots@falmouthport.co.uk

Regulations.—All vessels should send an ETA to the Harbormaster 72 hours, 48 hours, 24 hours, and 12 hours in advance of arrival or on departure from their last port if nearer.

The port of Falmouth may be contacted by e-mail, as follows:

info@falmouthport.co.uk

All vessels anchoring within the Pilotage Area without a pilot should contact Falmouth Pilot Radio by VHF and report their arrival and anchorage position.

All vessels navigating or at anchor within the port limits must maintain a listening watch on VHF channel 16.

Vessels carrying dangerous or polluting substances are required to display the appropriate special signals by day and at night.

Commercial vessels at anchor in the river or outside the harbor should not immobilize their main engines without permission of the Harbormaster.

Anorage.—There is good anchorage with offshore winds outside the harbor, in depths of 13 to 20m, gravel and shell, about 1 mile SW of Saint Anthony Head. However, vessels must avoid the wrecks charted in the vicinity of the anchorage area. Within the harbor the usual anchorage for deep-draft vessels is in Carrick Road, in depths of 26 to 27m, coral and shells. However, winds from S may cause a considerable sea in this roadstead. Vessels over 203m in length usually anchor outside the harbor.

Vessels of unlimited size may anchor in the outer part of Falmouth Bay, which lies within the port limits, for bunkering purposes. Vessels up to 413,000 dwt, 366m in length, and 25m draft have been handled.

Caution.—Transshipment of explosives is occasionally carried out at the anchorages.

Several dangerous wrecks lie in the approaches to the harbor and may best be seen on the chart.

Ferries may be encountered within the port.

A small circular foul area lies centered 3.3 miles ESE of Saint Anthony Head and may best be seen on the chart.

Spoil ground areas, the limits of which are shown on the chart, lie centered 4.5 miles SE of Saint Anthony Head and 0.7 mile WSW of Pendennis Head.

Numerous uncharted buoys used for yacht races may be moored in the vicinity of the harbor from March to September.

Falmouth to Plymouth

1.14 Dodman Point (50°13'N., 4°48'W.), a precipitous bluff, is 111m high. It has a steep E face and is surmounted by a prominent stone cross near the S extremity.

The Bellows, with a depth of 6.1m, and The Field, with a depth of 7m, are two rocky patches lying about 0.9 mile S and 0.8 mile SSE, respectively, of the point. The depths extending up to about 1 mile S of the point are very irregular and heavy

overfalls are formed in bad weather in this area. It is advisable to stay at least 2 miles S of Dodman Point.

Nare Head, 78m high, is a bold headland located 4.8 miles WSW of Dodman Point. The Bizzies, a group of rocky patches, lies at the seaward extremity of a spit which extends about 1 mile offshore, 2.5 miles SW of the headland. Overfalls are formed in the vicinity of these patches.

Gull Rock, 38m high, is located about 0.6 mile E of Nare Head. The Whelps lies at the S end of a group of detached drying rocks extending 0.4 mile SSW from Gull Rock. Lath Rock, with a least depth of 2.1m, lies about 1 mile off the shore of Veryan Bay, 1.6 miles NE of Gull Rock.

The spire of the church standing in Gerrans, 2.5 miles SW of Nare Head, is conspicuous from seaward. A beacon, prominent from SW, is situated on a hill with an elevation of 102m standing about 1 mile N of Nare Head. It consists of a mound, 6m high, surmounted by a hut.

Chapel Point, located about 2.5 miles NNE of Dodman Point, is the S entrance point of Mevagissey Bay and is fronted by shoals.

Gwineas Rock, 8m high, lies on a detached shoal bank about 0.8 mile SSE of Chapel Point and is marked close SE by a lighted buoy.

Mevagissey (50°16'N., 4°47'W.), a small port, is situated in the SW part of Mevagissey Bay. It consists of an outer harbor and an inner harbor and is used by fishing vessels and pleasure craft. The entrance to the outer harbor is 50m wide and has a depth of 2.1m. The inner harbor dries. The harbors afford good shelter except in strong E winds. A light is shown from a prominent structure, 8m high, standing on the S pier head. The port can be contacted by VHF during the day.

Anchorage is available within Mevagissey Bay in depths of 10 to 20m, sand.

Black Head (50°17'N., 4°46'W.), the N entrance point of Mevagissey Bay, also forms the W entrance point of a large bight in the coast, of which Gribbin Head, located about 3 miles ENE, forms the E entrance point. St. Austell Bay, located in the W part of the above bight, affords good temporary anchorage.

1.15 Charlestown Harbour (50°20'N., 4°45'W.) (World Port Index No. 35320) is located in the NW part of St. Austell Bay and is used by coasters and yachts. The harbor consists of an outer tidal basin and an inner wet basin. The entrance to the outer basin is 13.7m wide and has depths of 4.3m at HWS and 3m at HWN. The outer basin dries at LWS. The entrance between the lock gates of the wet basin is 10.7m wide and has depths similar to the entrance of the outer basin. There are three berths. Vessels up to 1,050 dwt and 3.7m draft can be accommodated in the wet basin. Such vessels are limited to a length of 56m with a beam of 10m or a length of 58m with a beam of 9m.

A mooring buoy is located about 0.2 mile SSE of the harbor entrance. A red light is shown from a flagstaff at the N side of the entrance when the harbor is closed.

A conspicuous hotel stands at Crinnis, 0.8 mile ENE of the harbor, and a prominent building is situated 0.3 mile E of it.

Pilotage.—Pilotage is compulsory for all vessels over 37.5m in length except those exempt by law. The pilot normally boards in an arranged position up to 1 mile from the harbor entrance.

Pilots may be contacted by VHF. They are provided by the station at Fowey and are available 2 hours before to 1 hour after HW. See Fowey, in paragraph 1.17, for further information.

Anchorage.—Anchorage is available off the harbor, in depths of 2 to 6m, with good holding ground of firm sand.

1.16 Par Sands (50°21'N., 4°42'W.), at the head of Tywardreath Bay in the E part of the bight with St. Austell Bay, is a drying flat, the W part of which contains the small drying harbor of Par.

Par (50°21'N., 4°42'W.) (World Port Index No. 35330) is a small port used mainly by coasters. The harbor basin has three quays and is protected by a breakwater. It is tidal and vessels lie aground at LW. The entrance is 38m wide. Generally, vessels up to 130m in length, 13.5m beam, and 3.4m draft can be accommodated. Vessels with drafts up to 5.2m can be handled at HWS.

A lighted mooring buoy is located close ESE of the head of the breakwater. Puckey's Ground, an isolated shoal with a depth of 4.9m, lies in the approach, about 1 mile SW of the entrance. Several conspicuous chimneys stand close W of the harbor entrance.

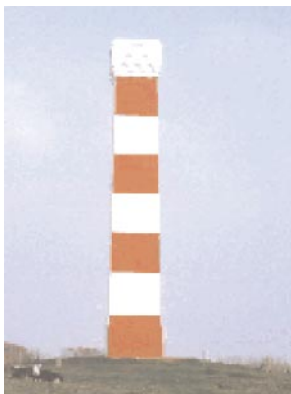
Pilotage is compulsory for all vessels over 37.5m in length except those exempt by law. The pilot will usually board in a position arranged with the vessel up to 1 mile from the harbor entrance. Pilots may be contacted by VHF. They are provided by the station at Fowey and are available 2 hours before to 1 hour after HW. See Fowey, in paragraph 1.17, for further information.

Anchorage is available off the harbor. A recommended berth lies about 0.8 mile SSE of the entrance, in a depth of 6m. Tywardreath Bay only affords anchorage in N or E winds; vessels should proceed to St. Austell Bay in the W part of the bight for shelter at other times.

Gribbin Head (50°19'N., 4°40'W.), with a conspicuous beacon tower, 26m high, standing on its E side, is bordered by numerous rocks which break heavily in bad weather. Cannis Rock, which dries, lies about 0.3 mile SE of the head and is marked by a lighted buoy.



Gribbin Head



Gribbin Head Beacon

Fowey Harbour (50°19'N., 4°39'W.)

World Port Index No. 35340

1.17 Fowey is a small harbor situated just within the entrance of the River Fowey, about 1.3 miles NE of Gribbin Head. It is a commercial port and an extensive yachting center. The entrance lies between St. Catherines Point, on the W side, and Punch Cross Rocks, about 0.2 mile ESE.

Tides—Currents.—The tides rise 5.5m at springs and 4.3m at neaps. The tidal currents in the river attain rates up to 1 knot on the flood and 1.5 knots on the ebb.

Depths—Limitations.—The fairway as far as Wiseman's Point, 1.5 miles above the entrance, has a least depth of 6.4m (1998). A swinging area, with a least depth of 4.3m, is situated opposite the town and close SW of Penleath Point. However, due to small craft moorings located in this vicinity, vessels swinging are limited to a length of 35m.

The main commercial loading facilities are situated on the W side of the river in the vicinity of Upper Cairn Point, about 1 mile above the entrance. There are five berths, 110 to 170m long, with depths of 6.7 to 8.5m alongside. Vessels up to 17,000 dwt, 164m in length, and 8.4m have been accommodated.

Several mooring buoys are located in the harbor. Cruise vessels up to 48,000 grt have been berthed at buoys in the lower section of the river.

Aspect.—The entrance can be easily identified by the comparatively high land on either side and also by Fowey Hall, a large mansion, and above it a large school, both standing just W of the town. St. Fimbarrus Church, located in the town, and the ruins of a church tower, standing 0.2 mile E of Punch Cross Rocks, are also both conspicuous. A prominent white house is situated in Polruan, about 0.3 mile ESE of Punch Cross Rocks.

Fowey Light is shown from a prominent octagonal tower, 6m high, standing close SW of St. Catherines Point. Whitehouse Point Light, with sectors indicating the entrance channel, is shown from a column, 4m high, standing 0.4 mile NE of St. Catherines Point. It can only be seen when in line with the harbor entrance. A prominent hotel is situated close W of this light.

Penleath Point is located on the E side of the river, 0.6 mile NE of Punch Cross Rocks, and is surmounted by a conspicuous monument.

Pilotage.—Pilotage is compulsory for vessels over 37.5m in length and is available from 2 hours before to 1 hour after HW for Charlestown and Par. Pilots for Fowey are available from 2 hours before to 1 hour after the vessel's ETA.

Vessels should send an ETA and request for pilotage at least 24 hours in advance, with a confirmation or amendment at least 6 hours prior to arrival. Pilots will generally board in a position arranged with the vessel up to 1 mile from the entrance of each harbor. However, pilots may board anywhere inside a line joining Pencarrow Head (50°19'N., 4°36'W.) and Cannis Lighted Buoy (50°18'N., 4°40'W.). The pilot vessels maintain a listening watch on VHF channel 9 when manned. Foreign warships and HM ships are exempt from pilotage.

Regulations.—Port regulations prohibit vessels from operating above Penleath Point without a pilot unless granted permission by the harbormaster.

Maximum speed over the ground within the harbor limits is enforced at 6 knots, and because of this and the narrowness of the channel, overtaking of vessels at night is prohibited.

Information concerning commercial vessel movements may be obtained from the pilot station on VHF channel 9. Information in regard to entering the port may be obtained from Fowey Harbor Radio on VHF channel 12.

The port may be contacted by e-mail, as follows:

fhc@foweyharbour.co.uk

Anchorage.—There is good anchorage outside the harbor, in depths of 14 to 16m, rock and gravel, about 0.5 mile SSE of Fowey Light. Vessels coming into this anchorage are cautioned not to close the W shore, where a rocky spit, with depths of less than 5m, extends up to 0.2 mile seaward of the light.

There is room for several small vessels to anchor on the SE side of the fairway between Polruan Point and Penleath Point, but they must remain clear of the swinging ground SW of the latter.

Caution.—Vessels are warned not to pass E of vessels layed-up on the E side of the fairway N of Penleath Point because they may be connected to the shore by breast ropes.

Salmon fishing takes place in the upper parts of the river.

A ferry transits the harbor between Polruan and Fowey.

1.18 Pencarrow Head (50°19'N., 4°36'W.), a cliffy headland which rises close inland to a height of 134m, is situated 1.8 miles E of Fowey Harbour and forms a good landmark from seaward.

Udder Rock, marked by a buoy close S, lies about 0.5 mile offshore, 1.5 miles ESE of Pencarrow Head. It should be given a wide berth. Shag Rock, marked with a white diamond, lies close offshore, N of this rock. The alignment of Shag Rock and a beacon, 5m high, standing on the mainland close NNE indicate the approximate position of Udder Rock.

Polperro, a small tidal harbor, lies at the head of a narrow inlet, 3.4 miles E of Pencarrow Head. It is used by fishing vessels and yachts. The entrance is about 10m wide. The harbor

dries and has depths of 3.4m at HWS and 1.5m at HWN. This picturesque town is a tourist resort and filming site.

A light is shown from pillar, 3m high, standing on Spy House Point, close E of the harbor. A prominent monument is situated on Downend Point, 0.3 mile E of the light.

Caution.—A spoil ground area, which may best be seen on the chart, fronts the shore in the vicinity of Pencarrow Head.

A measured distance (1,852.9m), indicated by pairs of beacons, is situated in the vicinity of Hore Stone Point, 1.5 miles E of Polperro, and may best be seen on the chart.

1.19 St. Georges Island (Looe Island) (50°20'N., 4°27'W.), nearly connected to Hannafore Point about 0.5 mile N by low shelving rocks, is surrounded by dangers and shoals.

Vessels proceeding to Looe Harbour should round the island at a distance of at least 1.5 miles and then pass to the E, with Looe Light bearing not more than 313°.

The Ranneys, which dry 4.6m, extends about 0.3 mile SE of St. Georges Island. Sherbeterry Rocks, with a least depth of 5.4m, extend up to about 2 miles S of the shore, 2.8 miles NE of St. Georges Island.

Knight Errant Patch, at the SE end of the shoals, has a depth of 6.2m and lies about 2.7 miles E of The Ranneys; a patch, with a least depth of 5m, lies near the SW end of the shoals.

Looe Harbour (50°21'N., 4°27'W.) lies at the mouth of the River Looe, about 0.5 mile N of Hannafore Point. This small drying harbor is used by fishing vessels and pleasure craft. It has depths of 4m at HWS and 3m at HWN. Vessels up to 16m in length and 2.9m draft can enter. A stone bridge spans the river about 0.4 mile above the entrance.

The roadstead off Looe affords good shelter from W winds and is exposed only to the S through E. The best anchorage is in depths of 7 to 13m, sand, between 0.5 and 1 mile SE of the river mouth.

Rame Head (50°19'N., 4°13'W.), located at the W side of the entrance to Plymouth Sound, appears from seaward as a conical hill. It rises to a height of 102m close within and an old chapel stands on the summit. This headland is very prominent and clearly defines the position of the sound.



Rame Head (chapel)

A prominent radio mast, 23m high, is situated 0.4 mile NE of Rame Head. A beacon stands at an elevation of 128m about 1.5 miles N of the head and is prominent from seaward.

Whitsand Bay lies W of Rame Head and is bordered by cliffs 30 to 75m high. Portwinkle, a small drying harbor, is situated 4.3 miles NW of Rame Head and is used by fishing boats.

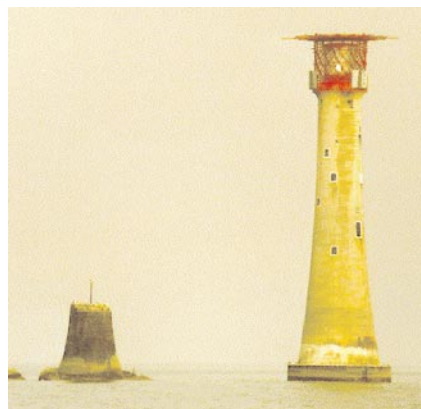
Caution.—A submarine exercise area lies in the approaches to Looe Harbor and Whitsand Bay.

A spoil ground and disused explosive dumping area lies centered 1.5 miles W of Rame Head and may best be seen on the chart.

A small arms firing range is situated on the shore of Whitsand Bay, about 1.5 mile E of Portwinkle. Red lights and red flags are displayed from flagstaffs in its vicinity when firing is in progress.

1.20 Eddystone Rocks (50°11'N., 4°16'W.), lying 8 miles S of Rame Head, do not completely cover. They are fairly steep to outside a radius of 0.3 mile, but vessels are recommended to give them a wide berth. Eddystone Light is shown from a prominent granite tower, 49m high and surmounted by a helicopter platform, standing on the rocks. This tower is radar conspicuous. A racon is situated at the light.

Hand Deeps, located about 3.5 miles NW of Eddystone Rocks, consists of a group of rocky shoals with a least depth of 7m. In bad weather the position of this shoal area is indicated by a short breaking sea in its vicinity, and in good weather usually by tide rips.



Eddystone Light

Plymouth (50°20'N., 4°10'W.)

World Port Index No. 35370

1.21 The port of Plymouth is entered between Penlee Point and the island of Great Mew Stone, 3.2 miles ESE. The commercial facilities, including a ro-ro ferry terminal, are situated in the areas of Mill Bay Docks and Cattewater. HM Naval Base, Devonport, a large naval dockyard, is situated in the W part of the port. It stands on the E bank of an area known as Hamoaze.

The Pilgrim Fathers set sail from Plymouth to New England on board the Mayflower on 6 September 1620.

Winds—Weather.—During the summer and winter the sea breeze is primarily from the SW during the day, the land breezes at night shifting mostly from NW or W. Gales obtain the highest incidence during the months of December and January, possibly reaching 3 to 4 days a month, but in summer they are rare.



Courtesy of M. J. Wilson, Brantag Inc, Wiltshire, UK

Plymouth

Fog occurs on the average of 2 to 4 days a month in the spring and fall, but haze with visibility reduced to 2 to 6 miles may occur about four times in as many days.

Tides—Currents.—The tides rise about 5.5m at springs and about 4.4m at neaps.

The tidal currents in the narrow channels can be irregular. Strong S winds usually prolong the flood current and delay the ebb by about 15 minutes. Strong N winds usually prolong the ebb current and delay the flood by about 15 minutes. Freshets after heavy rain have the same effect as a strong N wind and long summer droughts can prolong the flood current up to 30 minutes.

The flood current sets through Western Channel toward Asia Pass, and through Eastern Channel toward Smeaton Pass at a velocity of 1.2 knots at springs. The ebb current sets outward from the passes toward the respective channels at the same rate.

The tidal currents in Drake Channel, the Narrows, and Hamoaze set generally in the direction of the channels, with a spring velocity of 2.5 knots in the Narrows and about 1.5 knots in Hamoaze.

Depths—Limitations.—Penlee Point, dark and rocky, is located 1.5 miles ENE of Rame Head. Draystone, a shallow reef, fronts the SE side of this point and is marked by a lighted buoy.

Great Mew Stone (50°18'N., 4°06'W.) lies about 0.5 mile S of Wembury Point to which it is connected by a drying rocky reef. This island is 57m high, conical, and prominent.

Plymouth Sound, entered between the above point and island, has general depths of 26 to 5.5m. However, several shoal areas lie in the approach and may best be seen on the chart.

Plymouth Breakwater, about 0.8 mile long, is detached. This breakwater lies at the E side of the sound with its W end situated about 1.5 miles NE of Penlee Point.



Plymouth Breakwater

The Knapp extends up to about 0.6 mile S from the W end of the breakwater. This shoal area has depths of 5 to 8m and is marked on the SW side by a lighted buoy.

Tinker, with a least depth of 3.3m, lies at the S end of a shoal area extending up to about 0.8 mile S from the E end of the breakwater. This shoal patch is marked by two lighted buoys.

Two approach channels, which may best be seen on the chart, lead through the sound to the port.

Eastern Channel lies between the E end of Plymouth Breakwater and Staddon Point, about 0.4 mile ENE. It is not recommended for use by small craft during strong W winds due to a dangerous sea. The least depth in the approach is 6.2m over a width of about 100m. However, vessels are recommended to maintain an underkeel clearance of at least 2m due to scend and inequalities of the rocky bottom.

Western Channel, the main approach channel, rounds the W end of Plymouth Breakwater. It is maintained at a dredged

depth of 11m as far as a position about 0.5 mile NW of the E end of Plymouth Breakwater.

An entrance fairway, dredged to a depth of 8.6m, then leads NE and N from the inner end of Western Channel to the outer ends of Smeaton Pass, Asia Pass, and Cobbler Channel.

A recommended deep-water track, which may best be seen on the chart, leads through Western Channel, the entrance fairway, and Smeaton Pass. Its outer end lies about 0.8 mile SE of Penlee Point.

Cobbler Channel leads NE and E to the commercial berths of Cattewater and Sutton Harbour.

Smeaton Pass, with a least depth of 25m, and Asia Pass, with a least depth of 7.6m, lead NW between the shoals lying ENE of Drake's Island to Mill Bay Docks and the outer end of Drake's Channel.

The naval facilities along Hamoaze are accessible via Drake's Channel and The Narrows. Hamoaze is formed by the lower portion of the River Tamar.



Plymouth Naval Base (Hamoaze)

The Royal Albert Bridge, a railroad bridge, spans the river at the N end and has a vertical clearance of 30m. The Tamar Bridge, a road bridge, stands close N of the railroad bridge and has a vertical clearances of 35m.



The Royal Albert Bridge and the Tamar Bridge

Drake Channel is reported (1995) to have a least charted depth of 10.7m. Recommended tracks, which may best be seen on the chart, lead through the fairways to the Hamoaze.

Vessels intending to berth at the naval facilities are recommended to contact the local authorities for the latest information concerning depths, regulations, etc., prior to arrival.

The main berths at the E side of Hamoaze include Rubble Jetty, 130m long, with a depth of 10m alongside; and No. 1 Jetty, 145m long, with a depth of 9.8m alongside. No. 5 Basin is the largest and deepest. It is maintained at depths of 9 to 9.5m and may best be seen on the chart. The seawall extending S of the entrance to this basin provides the deepest berths. There is 508m of total quayage with a depth of 11.9m alongside. Weston Mill Lake Jetty, close N of No. 5 Basin, provides 503m of quayage with depths of 8.5 to 9.2m alongside.

The largest drydock at the naval base is 242m long with a depth of 14.7m on the sill at HWS. Its length can be increased by 12m by using a caisson. The dock is entered from No. 5 Basin, which has a maximum entrance width of 37.7m at HWS.

Yonderberry Point oil jetty is situated at the W side of Hamoaze. It has a berthing head, 61m long, with a depth of 11.6m alongside.

Ernesettle Pier is situated at the NE end of Hamoaze, close N of the bridges. It provides a berth, 100m long, with a depth of 6.1m alongside.

An extensive marina fronts the NW entrance point of Stonehouse Pool, at the N side of the channel, at the N end of The Narrows.

Mill Bay Docks has a ro-ro ferry and cruise ship terminal situated at the W side of the outer basin. The inner basin is only used by small craft. A marina lies at the E side of the outer basin. There are two berths with depths up to 9m alongside. Vessels up to 200m in length and 8.5m draft can be accommodated.

Cobbler Channel is maintained at a dredged depth of 5.5m as far as the entrance to Sutton Harbour. The fairway in Cattewater has a dredged depth of 5m (1995).



Plymouth—Entance to Cattewater

Sutton Harbor has a non-tidal basin, which is entered via a small lock with a width of 12m. It provides two quays, with depths of 3.5m alongside, for fishing vessels and facilities for small craft and yachts.

Victoria Wharves, on the NW side of Cattewater, provide two berths, 145m and 103m long, with depths of 6.5m alongside. Vessels up to 5,000 dwt, 130m in length, and 7m draft can be handled at HW. Vessels are generally limited to a maximum beam of 15m.

Cattledown, on the N side of Cattewater, provides facilities for general cargo, bulk, and tanker vessels. The berth is 216m long and has depths of 6.5 to 7.4m alongside (1995).

Aspect.—Plymouth Breakwater West Light is shown from a prominent granite tower, 23m high, standing on the W end of Plymouth Breakwater. A lighted beacon is situated at the E end.



Plymouth Breakwater West Light

The entrance channels are indicated by directional sector lights and ranges which may best be seen on the chart.

An orange flashing light is shown from all principal directional lights when the main power supply at the port is interrupted. Special high intensity fog lights are shown on request from several positions within the harbor and sound.

Two special lighted buoys (OSR North and OSR South) are moored about 1.2 miles SSW of the W end of Plymouth Breakwater, at the E side of the recommended approach track.

Within the sound the coast extending N of Staddon Point, located 2 miles NNW of Great Mew Stone island, is formed by high, steep cliffs. Two conspicuous radio towers stand at elevations of 175m and 173m on Staddon Heights, 0.7 mile NE of Staddon Point.

Picklecombe Point is located 0.7 mile NW of the W end of Plymouth Breakwater. An old fort, which has been converted into a prominent block of apartments, stands on this point.

Drakes Island, privately owned, lies 1 mile NE of Picklecombe Point and is fronted by drying rocky ledges. It is prominent and cliffy. The tower of a former signal station is situated on this island.

Within the harbor, Mountbatten Tower stands on a small peninsula, 1.3 miles N of Staddon Point. A short breakwater extends W from the W side of this peninsula.

A conspicuous silo, 61m high, stands at the W side of Mill Bay Docks outer basin. It is surmounted by a tower and a flagstaff. A prominent hotel and the conspicuous Civic Center building are situated 0.3 mile and 0.6 mile, respectively, NE of the entrance to this dock basin.

Ocean Court is a long, white block of apartments standing on the N side of the channel at the N end of The Narrows. It is prominent and fronted by an extensive marina.



Drakes Island



Plymouth—Entrance to Mill Bay Docks (silo)

Smeaton Tower, 28m high, stands on The Hoe, a park area, about 0.5 mile E of the entrance to Mill Bay Docks outer basin. This historic monument, a former lighthouse, is conspicuous and easily identified by its white and red bands. The tower was erected on Eddystone Rocks in 1759 and moved to its present location in 1882 when the foundation was discovered to be unsafe.



Smeaton Tower (disused)

The Naval War Memorial consists of a stone column, 30m high, surmounted by a copper sphere. It stands close N of Smeaton Tower and is prominent.

The city of Plymouth is radar conspicuous.

Pilotage.—Pilotage is compulsory for the following vessels:



Plymouth—The Hoe



Plymouth—Naval War Memorial

1. All vessels over 50m in length proceeding to or from an alongside berth or buoy berth within the port.
2. All vessels over 100m in length proceeding within the areas lying N of lines extending from Maker Point Light (50°20.5'N., 4°10.9'W.) to the West Breakwater Light and from East Breakwater Lighted Beacon to Staddon Point (50°20.2'N., 4°07.6'W.).
3. All vessels over 125m in length proceeding to an anchorage in Cawsand Bay (50°20'N., 4°11'W.).
4. All vessels carrying hazardous, noxious, or polluting cargo proceeding to or from a berth in the port, including vessels not gas-free from a previous cargo.
5. All vessels over 150m in length proceeding N of a line extending from Penlee Point to Shag Stone.
6. All vessels over 50m in length not having navigational charts showing all numbered anchorages of Plymouth (1:12,500 or larger) on board.

Pilotage of the following vessels will be at the discretion of the Queen's Harbor Master Plymouth, using an Admiralty Pilot when required:

1. HM ships.
2. Government owned ships/auxiliaries and foreign warships/auxiliaries navigating in port for the purpose of securing to or departing an anchorage or Ministry of Defence owned berth, dock or mooring.

3. Any vessel enroute between the Sound and a Ministry of Defence owned berth, dock or mooring.

Pilots board vessels of 150m in length and less within 0.75 mile of the W entrance to the Sound and vessels over 150m in length in position 50°18.5'N, 4°10.5'W (about 0.9 mile SE of Penlee Point). The pilot vessel is black with orange upperworks.

The call sign for commercial pilots is "Plymouth Pilots" and the call sign for Ministry of Defence pilots, for the naval berths, is "Long Room Port Control."

All vessels over 25m in length must send an ETA to the "Long Room Port Control" at least 24 hours in advance of arrival or on leaving the last port, if later. The message should include name; nationality; draft; and berthing, anchorage, pilotage, or tug requirements.

Vessels carrying hydrocarbons or dangerous cargo must send an ETA at least 48 hours prior to arrival. The message must include a description, quantity or weight, and classification of the cargo.

All arriving vessels must contact "Long Room Port Control" when within VHF range to confirm pilotage requirements or report any serious defects.

Vessels are required to maintain a continuous VHF watch while underway or at anchor.

All vessels must report their position to "Long Room Port Control" when passing a line joining Penlee Point and Shag Stone (50°19.0'N., 4°08.1'W.) and attain permission to enter the sound. They must then report when passing Plymouth Breakwater and when berthed.

Commercial vessels should use VHF channel 16 or 4. Ministry of Defense vessels should use VHF channel 16, 8, 11, 12, or 13.

The Devonport Dockyard and Hamoaze signal station, call sign "Flagstaff Port Control," may be contacted on VHF channels 13 and 73. This station controls movements of vessels N of The Narrows.

Reporting vessels will be advised of traffic movements in the approaches. Tidal and wind speed information is available on request. Information on fog conditions is available on VHF channel 13, 14, or 16 from "Longroom Port Control" or "Flagstaff" stations.

Vessels may obtain information on the Traffic Signals displayed at Drake's Island from "Longroom Port Control" or "Flagstaff" stations.

When the Port Control Traffic Light System displays no lights there are no restrictions in force unless notified on VHF channel 13, 14, or 16.

Plymouth pilots may be contacted by e-mail, as follows:

pilot@plymouthport.org.uk

Regulations.—Submarines frequently operate within the sound and the approaches with equipment extending up to 800m astern. Vessels should not pass within 200m of any submarine or cross astern within 800m. If in doubt, vessels should contact the submarine directly on VHF channel 13 or 16 to seek advice. If contact with the submarine cannot be established, vessels should call "Longroom Port Control."

The Dockyard Port of Plymouth is a naval port under the control of the Queen's Harbour Master. Special rules and regulations concerning navigation within the port are in force. Mariners are urged to consult the pilot for information on such regulations, and to obtain a copy on arrival.

A speed limit of 10 knots is in force N of latitude 50°20'N (Plymouth Breakwater). A speed limit of 8 knots is in force E of a line joining Fisher's Nose and Mount Batten Breakwater. A speed limit of 8 knots is also in force within the bathing areas of Crowsand Bay, Firestone Bay, Tinside East, and Bovisand Bay.

When two power-driven vessels proceeding in opposite directions are about to meet one another in any narrow channel of the Dockyard Port, the power-driven vessel navigating against the tidal current shall give priority of passage through such narrow channel to the vessel navigating with the current.

When, within the limits of the Dockyard Port, power-driven vessels underway (including a tug with a tow) are about to turn round at night or by day, such vessels shall signify their intention by sounding five short blasts of the whistle in rapid succession, followed after a short interval, if turning to starboard, by one short blast, and if to port, by two short blasts. While turning, vessels shall repeat such signals for any approaching vessel. These sound signals are only to be used by vessels in sight of one another.

All vessels over 60m in length, shall, when leaving the Outer basin of Millbay Docks and prior to entering the main channel, sound one prolonged blast in order to warn other traffic of their movement in accordance with Rule 34 of the Collision Regulations.

Anchorage.—Anchorage can be obtained in Cawsand Bay to the W of the W end of Plymouth Breakwater. The roadstead is sheltered from all but SE winds and has depths 5.6 to 10.5m. The berths are numbered 11 to 17 and may best be seen on the chart.

An anchorage area for vessels with drafts of less than 7.5m lies close S of Drake's Island. The berths are numbered 3 to 5 and may best be seen on the chart. Another anchorage for these vessels, which may best be seen on the chart, lies E of the entrance channel and 0.3 mile S of Mount Batten Tower.



Plymouth—Mount Batten Peninsula

The quarantine anchorage lies in the S portion of Jenny Cliff Bay, about 0.7 mile S of Mount Batten Tower.

An anchorage area for vessels with drafts of 7.5m and over lies N of Plymouth Breakwater and on the NW side of the entrance channel. The berths are numbered 1, 2, 6, and 7 and may best be seen on the chart.



Plymouth—Mount Batten Tower

Anchorage berths, numbered 21 to 23, lie S of the W end of Plymouth Breakwater and may best be seen on the chart.

Four main mooring buoy berths are situated N of the breakwater and may best be seen on the chart. Buoy C, 0.4 mile ENE of the W end of the breakwater, has a maintained depth of 12m; Buoy D, 0.7 mile ENE of the W end of the breakwater, has a maintained depth of 11.6m; Buoy E, 0.8 mile NE of the W end of the breakwater, has a maintained depth of 9.7m; and Buoy F, 1.2 miles NE of the W end of the breakwater, has a maintained depth of 8.6m.

Special anchorage rules apply to vessels carrying hydrocarbons, hazardous liquid chemicals, and liquefied gases. Also to vessels in ballast but not gas-freed after carrying such cargo.

Directions.—If approaching from seaward, vessels should pass about 3 miles E of Eddystone Light, and steer for the light on the W end of Plymouth Breakwater bearing N. When Maker Light (50°20.5'N., 4°10.9'W.) is in sight, steer for it on a bearing of 350°; this course will bring the vessel to the pilot boarding ground.

Approaching from the W, pass about 1 mile S of Rame Head, with the summit of Great Mew Stone ahead bearing 080°. When Plymouth Breakwater Light bears about 020°, change course for the boarding ground, with Maker Light ahead bearing 350°.

From the E, steer to pass not less than 1 mile offshore, with Rame Head bearing 290°. When Maker Light bears 350°, steer for it and the boarding ground.

From the boarding ground, follow the recommended track, which may best be seen on the chart, through Western Channel.

In certain portions of Hamoaze, light-draft and deep-draft recommended tracks have been established. Vessels should consult the pilot before selecting one of these tracks.

Caution.—Strong tidal currents may be encountered within the narrow channels.

Submarine cables extend across the channels at several places within the harbor limits and may best be seen on the chart.

Diving training areas are situated within the port and may best be seen on the chart.

Small boat training by naval craft is carried out within an area lying on the SW side of Hamoaze. The area is marked by buoys and may best be seen on the chart.

Several small craft mooring areas and groups of mooring buoys are situated within the port and may best be seen on the chart.

Local ferries cross the channel in a number of places within the port and may best be seen on the chart.

Degaussing ranges are situated within the port limits and may best be seen on the chart.

Several prohibited anchorage areas lie within the port and may best be seen on the chart.

Submarines may be frequently encountered in the sound and the approaches (see Signals).

High speed craft may be encountered in the approaches to the sound.

A navy shore establishment, HMS Cambridge, situated in the vicinity of Wembury Point (50°19'N., 4°06'W.), occasionally conducts gunnery training. The firing area extends up to 13 miles seaward between the bearings of 130° and 210°, and 12.5 miles between the bearing of 210° and 245°. When the range is operational, information may be obtained on VHF channel 16 from "Wembury Range."

Warships and auxiliary vessels, carrying out training exercises, may be encountered in the approaches and N of the breakwater. In addition, ships may carry out minelaying exercises in an area lying 3 miles S of the entrance to the sound. Such vessels may not follow the regular traffic patterns.

Warships frequently enter the port via both channels to transfer personnel to and from support craft. These transfers are usually carried out 0730 to 0830, Monday to Friday except in August, in the vicinity of C, D, and E mooring buoy berths. Information regarding these operations may be requested from "Longroom Port Control."

Plymouth to Start Point

1.22 Yealm Head (50°18'N., 4°04'W.), located 1.2 miles E of Great Mew Stone, is the W extremity of a hilly peninsula. It forms the E entrance point of Wembury Bay and the S side of the mouth to the Yealm River.

Wembury Bay, with irregular depth of less than 15m, is used by small craft as an anchorage. The Yealm River, a yachting center, has a bar which dries.

The coast E of Yealm Head is craggy and reef strewn, with numerous dangers lying within the 20m curve. Stoke Point, located 2 miles E of Yealm Head, is the SE extremity of the above peninsula. Conspicuous cliffs stand about 0.5 mile NNE of this point.

Bigbury Bay lies between Stoke Point and Bolt Tail, 6.5 miles ESE. The mouth of the Erme River, located near the head of the bay, can be identified by clumps of trees just within the W entrance point. The river dries and can only be entered by small craft with local knowledge.

Wells Rock, with a depth of 1.2m, lies about 0.5 mile S of the E entrance point of the river.

The River Avon, used only by small craft, enters the bay 2.3 miles NNW of Bolt Tail. Burgh Island, 47m high, lies close off the N entrance point of the river. It is connected to the shore by

a drying sandy neck and a small ruined chapel stands on the summit. A church, with a conspicuous spire, stands at Bigbury, 1.8 miles NE of the island.

Thurlestone Rock, 10m high and resembling the hull of a stranded vessel, lies close offshore, 1 mile N of Bolt Tail.

From a distance the coast in this vicinity appears as a line of even topped hills backed by the irregular mountainous outline of Dartmoor Hills, which rise to heights of over 500m, about 10 miles inland.

Bolt Tail (50°14'N., 3°52'W.) rises to a height of 87m about 0.3 mile within its extremity and is prominent from seaward.

Anchorage, according to draft, can be taken by small vessels in Hope Cove, on the N side of the point. It is only safe in offshore winds and local knowledge is required.

East Rutts (50°13'N., 3°59'W.), a steep-to isolated shoal, lies about 4.5 miles WSW of Bolt Tail and has a least depth of 8.9m. Two special lighted buoys (NGS West and NGS East) are moored about 2.3 miles S of the shoal.

Caution.—A spoil ground area, the limits of which may best be seen on the chart, lies 3.4 miles SSW of Stoke Point.

A continuous area of sandwaves, about 9 miles wide, lies with its centerline extending between 4.5 and 16.5 miles S of East Rutts.

The sand waves in this area attain an average height of 2 to 3m with isolated peaks of 5m. The distance between crests varies from 100m to 300m. The waves usually form in a N to S direction.

1.23 Bolt Head (50°13'N., 3°47'W.), a prominent headland, is located 3.8 miles SE of Bolt Tail. The coast between consists of a prominent succession of dark rugged cliffs rising abruptly to a height of about 120m. Large vessels are recommended to keep at least 1.5 miles off this part of the coast.

Several prominent radio masts, each 50m high, stand at an elevation of 180m near the coast, about 2.5 miles NW of Bolt Head. A fairly conspicuous notch in the cliffs exists about 0.8 mile SE of the masts.

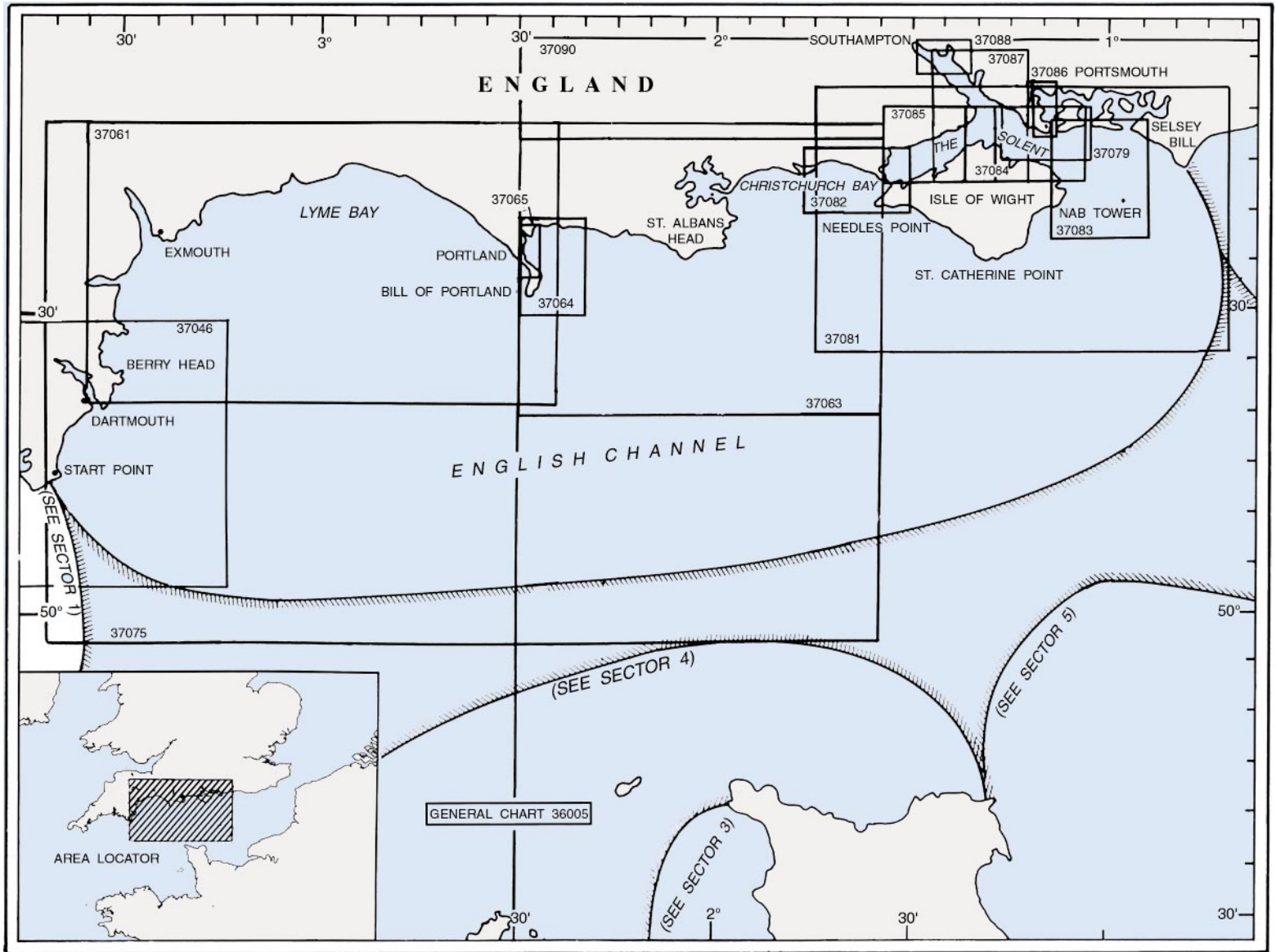
A coast guard station stands on Bolt Head and a conspicuous radio tower is situated about 1 mile NNW of it. The headland is fronted by two small islands, known as The Mewstones.

Salcombe Harbour (50°14'N., 3°46'W.) (World Port Index No. 35380), approached between Bolt Head and Prawle Point, 2.5 miles E, is a small, well-sheltered inlet. The harbor is primarily an extensive yachting center. Vessels up to 30m in length and 5.5m draft can enter at HW. The entrance is obstructed by a bar with a least depth of 1m. A heavy sea breaks on this bar during S gales.

A range and a directional light indicate the channel across the bar; however, local knowledge is recommended. The harbor can be contacted on VHF channel 14 by day. Anchorage is available within the harbor, in depths of 5 to 8m. Anchorage is also available outside the bar, in a depth of 11m.

The town of Salcombe stands along the W side of the harbor. A ferry crosses the river between the town and Portlemouth, on the E bank. Local pilots may be obtained from Plymouth.

Start Point (50°13'N., 3°38'W.), located 3.3 miles ENE of Prawle Point, is described in paragraph 2.2.



Additional chart coverage may be found in NGA/DLIS Catalog of Maps, Charts, and Related Products (Unlimited Distribution).

SECTOR 2 — CHART INFORMATION

SECTOR 2

ENGLAND—SOUTH COAST—START POINT TO SELSEY BILL

Plan.—This sector describes the S coast of England from Start Point to Selsey Bill, including the Isle of Wight and The Solent. The descriptive sequence is W to E.

General Remarks

2.1 From Start Point to the Bill of Portland, 50 miles NE, the coast curves inward in a broad sweep, the N portion of which is Lyme Bay. Between the Bill of Portland and Saint Catherine's Point, at the S end of the Isle of Wight, the coast is divided into two bays by the Isle of Purbeck.

The Isle of Purbeck is a peninsula, the S extremity of which is formed by Saint Alban's Head. The Solent lies between the Isle of Wight and the mainland. This stretch of water provides access to the ports of Southampton and Portsmouth. Selsey Bill is located 11 miles E of the E end of the Isle of Wight.

Winds—Weather.—From Start Point to the Bill of Portland, the ports of Dartmouth, Torquay, and Brixham offer the only shelter in S and SE gales.

During such storms the sea breaks right across the entrances of the small ports along this part of the coastal stretch.

Tides—Currents.—The tidal currents are fairly strong off Start Point, and very strong off Bill of Portland. In the W part of the bay between the two points the current is weak, but becomes much stronger towards Portland Peninsula.

Midway between the two points the current attains a maximum spring rate of 1.5 knots. The currents in the bays on either side of the Bill of Portland form strong eddies. There is a N set into either bay, and a S set, S of Bill of Portland. The current maybe felt 8 to 10 miles W and E, and 5 to 6 miles S of the peninsula.

Vessels are advised to keep well S of the Bill of Portland to avoid the currents.

Pilotage.—Deep-sea pilots may be embarked off Brixham (see paragraphs 2.4 and 2.5).

Regulations.—See Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea for information pertaining to vessels sailing within the waters of the United Kingdom.

Note.—For information concerning the offshore route along this stretch of the English Channel, including Traffic Separation Schemes (TSS), Reporting Systems (VTS), and Regulations, see paragraph 4.1.

Start Point to Portland

2.2 Start Point (50°13'N., 3°38'W.), the W entrance point of Start Bay, may be identified by its rugged and serrated appearance. It is radar conspicuous. Start Point Light is shown from a prominent round tower, 28m high, standing near the extremity of the point. Within 1 mile of the point the land rises rapidly to a height of about 120m. Two conspicuous radio masts stand on the heights, about 1 mile WNW of the point.

Tide rips occur up to 1 mile S and E of the point.



Start Point Light

Skerries Bank (50°15'N., 3°36'W.), with a least depth of 2.1m, extends between 0.7 mile and 4 miles NE of Start Point. Its northeasternmost and outer extremity is marked by a buoy. During heavy weather the sea breaks on all parts of this bank, especially on the SW end. A narrow passage leads between the S end of the bank and Start Point. It should not be used during periods of heavy weather.

Start Bay lies between Start Point and Combe Point, 7 miles NNE. The shore consists of an almost continuous beach. A church, with a conspicuous tower, stands at Stoke Fleming, about 1 mile WSW of Combe Point.

The bay, within Skerries Bank, provides good anchorage, in depths of 12 to 14m, sand and gravel. Anchorage is not recommended in the bay during SE gales or within 0.5 mile N of Start Point. In strong E winds there is no shelter between the bank and the land, and broken water extends to the shoreline.

2.3 Dartmouth Harbour (50°21'N., 3°35'W.) (World Port Index No. 35390) lies at the mouth of the River Dart. It is entered between Combe Point and Inner Froward Point, 1 mile ENE. The town of Dartmouth is situated on the W bank, about 0.5 mile above the entrance. The smaller town of Kingswear stands on the E side of the river. Britannia Royal Naval College stands on high ground at the N side of Dartmouth.

Generally, the harbor does not function as a commercial port and is used mainly by pleasure craft, fishing vessels, and yachts. However, cruise ships, up to 3,000 dwt, occasionally enter and berth at the mooring buoys.

Tides—Currents.—Tides rise about 4.9m at MHWS and 3.8m at MHWN.

Depths—Limitations.—The harbor is capable of accommodating vessels up to 10,000 tons, 183m in length, and 8.2m draft. The controlling depth on the entrance range is 7.9m. It is presently used mainly by yachts and pleasure craft.

Sandquay Jetty fronts the town. It has a depth of 7.5m alongside and can accommodate vessels up to 100m in length.

Several mooring buoys, which can be used by vessels up to 10,000 tons, are situated in the harbor.

A bar, with depths of less than 5m, crosses the river about 0.7 mile above Dartmouth. Totnes, situated about 10 miles above Dartmouth, is accessible to small vessels up to 75m in length with drafts up to 3.6m at springs and 2.5m at neaps.

The entrance fairway is about 185m wide between the dangers. Abreast the town it is about 140m wide between the 5m depth contours, having depths of 6 to 8m.

Aspect.—Dartmouth Castle and Saint Petrox Church, joined together, stand out in bold relief on Castle Point, on the W side of the harbor entrance about 0.9 mile NNE of Combe Point. A prominent row of white cottages stands on the hillside, 0.3 mile S of the castle.



Dartmouth—Castle Point

A directional sector light, located on the E bank about 0.3 mile N of the castle, indicates the entrance fairway. The dangers at the sides of the entrance are marked by lighted buoys.

Pilotage.—The area lying between the river entrance and Totnes is divided into two pilotage zones. The Outer Zone extends from the entrance to Anchor Stone. The Inner Zone extends from Anchor Stone to Totnes.

Pilotage in the Outer Zone is compulsory for the following vessels:

1. Vessels of 20m and over in length carrying any passengers or carrying dangerous goods in bulk (including non-gas free tankers).
2. Towing vessels and tows, with a combined length of 50m and over, where the towing vessel or one or more of the vessels in the tow is 20m or over in length.
3. All other vessels of 50m and over in length.

Pilotage in the Inner Zone is compulsory for the following vessels:

1. Fishing vessels of 47.5m and over in length.
2. Towing vessels and tows, with a combined length of 20m and over, where the towing vessel or one or more of the vessels in the tow is 20m or over in length.
3. All other vessels of 30m and over in length.

The harbor office (call sign DartNav) operating hours are given in the accompanying table.

Dartmouth Harbor Office Hours		
Day	Summer hours	Winter hours
Monday	0900 to 1700	0900 to 1700
Tuesday	0900 to 1700	0900 to 1700
Wednesday	0900 to 1700	0900 to 1700
Thursday	0900 to 1800	0900 to 1700
Friday	0900 to 1600	0900 to 1600
Saturday	0900 to 1200	Closed

Vessels are required to notify the harbor office 1 working day in advance if they require a pilot or will be arriving outside office hours. Vessels must then send a confirmation 30 minutes prior to arrival. Shorter notices can be accepted depending on the availability of a pilot, boat crew, linesmen, and port control staff. Information is required as soon as practicable if the ETA changes by more than 1 hour.

Vessels are required to notify the harbor office as early as possible, in any event prior to entering, if they do not require a pilot and will be arriving within office hours.

Vessels should request a pilot through the harbor office or their agent. They should also provide their draft, length, type and quantity of cargo, type and quantity of bunkers, and number of passengers.

The harbor office (pilots) can be contacted on VHF channel 11 and board in the entrance.

The harbor office can be contacted by e-mail, as follows:

dhna@dartharbour.org.uk

Caution.—There is a speed limit of 6 knots in the harbor.

Submarine cables cross the river in the area between Kingswear and Sandquay Jetty.

Ferries run between Dartmouth and Kingswear.

Marker buoys for yacht races may be moored in the approaches during spring and summer.

2.4 Berry Head (50°14'N., 3°29'W.) is the NE extremity of the broad rocky peninsula formed between the River Dart and Tor Bay. It consists of a steep-to limestone cliff, which rises from the sea nearly perpendicular to a height of 55m. Berry Head Light is shown from a structure, 5m high, standing on the flat top of this headland. A coast guard station is situated close to the light structure.

Seen from the SE, the head forms an excellent landmark because of the whitish appearance of the cliffs in relation to the surrounding land. Berry Head is reported to be very radar conspicuous.

Numerous steep-to dangers lie up to 0.5 mile offshore along the coast between the River Dart and Berry Head. Vessels approaching Tor Bay from the S should give the shore a wide berth.



Berry Head Light (Coast Guard Station)

Tor Bay (50°26'N., 3°28'W.), entered between Berry Head and Hope's Nose, about 4 miles N, affords good shelter in W winds, but E or SE gales send in a heavy dangerous sea.

The Ridge, a shoal area with depths of 6 to 7m, lies in the SW part of the bay and should be avoided.

Hope's Nose (50°27'N., 3°29'W.), the N entrance point of Tor Bay, is a sloping headland rising to a knoll, 105m high, about 0.5 mile inland.

Ore Stone, a conspicuous peaked rock lies about 0.5 mile SE of the point. It is 32m high and forms a good mark especially from the S. Thatcher Rock, 41m high, lies about 0.8 mile W of Ore Stone. It is conspicuous and more rounded than Ore Stone. On some bearings these two rocks could be mistaken for one another.

A conspicuous white block of flats stands on the N side of the bay, 0.7 mile WSW of Hope's Nose. A prominent hotel is situated about 0.5 mile W of this block.

Two prominent radio masts stand at the W side of the bay, about 5 miles WSW of Hope's Nose.

Torbay Harbour is the local name used to include Tor Bay and the harbors of Brixham, Paignton, and Torquay.

Pilotage.—Pilotage is compulsory within the Torbay Harbour limits for vessels 36m in length and over or 75 nrt and over.

Pilots board vessels bound for Brixham, Torquay, and Tor Bay Anchorage (paragraph 2.6) about 2.5 miles ENE of Berry Head Light. Vessels should send an ETA and a request for pilotage 48 hours in advance to the pilot station (Decade Brixham). Vessels should then contact the pilot on VHF channel 9 at least 2 hours prior to arrival.

The station also provides deep-sea pilots for the English Channel and North Sea. Deep-sea pilots board vessels with drafts over 18m about 4 miles E of Berry Head Light. Other vessels are boarded about 2.5 miles ENE of Berry Head Light. Vessels should send an ETA and a request for deep-sea pilotage 48 hours in advance to the pilot station (Decade Brixham). Vessels should then contact the pilot on VHF channel 9 at least 2 hours prior to arrival.

The pilot station at Brixham may be contacted by e-mail, as follows:

ops@tbsa.co.uk

2.5 Brixham Harbour (50°24'N., 3°31'W.) is situated on the S side of Tor Bay and consists of an outer and an inner harbor, protected by a breakwater. It has depths of 3 to 6m and extensive facilities for fishing vessels and yachts. The jetty berth, on the inner side of the seaward end of the breakwater, is 137m long and has a least depth of 5.1m alongside. It can accommodate vessels up to 150m in length. The harbor is no longer used for commercial shipping.

Paignton (50°26'N., 3°33'W.), an extensive resort town, occupies a large area on the W side of Tor Bay and is fronted by sandy beaches. The small harbor is formed by two jetties and is used by pleasure craft. A conspicuous promenade pier stands close N of the harbor.

2.6 Torquay Harbour (50°28'N., 3°32'W.) (World Port Index No. 35410) is situated on the NW shore of Tor Bay and is protected by two breakwaters piers forming an entrance, 50m wide. The harbor consists of an outer basin, an inner basin, and an extensive yacht marina. The resort town is situated at the meeting of two deep valleys and several prominent buildings stand in it.

Princess Pier has berths on both sides, with a depth of 3.9m alongside its head. Haldon Pier has a depth of 3.9m alongside and is used for cargo operations. It can accommodate vessels up to 90m in length and 3.6m draft.

There is a regular cargo ferry service between Torquay and the Channel Islands. The port operates commercially throughout the year, but such operations are limited during the summer months when the harbor becomes a yachting center.

Anchorage.—Almost all of Tor Bay, except in the vicinity of The Ridge, affords good anchorage, in depths of about 11m, mud and clay, sheltered from W winds.

Torquay Roads, S of the harbor entrance, has depths of 8 to 11m, sand and shells. Although the holding ground is good, this anchorage is open to the SE and should not be used during strong winds from that direction.

Paignton Roads, at the W side of the bay, affords anchorage, in depths of 5 to 10m.

Brixham Roads affords anchorage N or E of the harbor breakwater, in depths of 8 to 9m. However, areas lying up to about 1 mile NE and 0.4 mile NNE of the breakwater were reported (1995/97) to be fouled by wires.

Several designated anchorage areas are situated within the bay and may best be seen on the chart.

An anchorage area designated for deep-draft vessels, which may best be seen on the chart, lies centered about 4 miles NE of Berry Head.

Caution.—A number of off-port services are provided from Brixham and Torquay. These services include compass adjustment, divers, repairs, crew changes, surveys, provisions, and inspections. Vessels are serviced at the designated deep-draft anchorage area or underway.

2.7 Teignmouth Harbour (50°33'N., 3°30'W.) (World Port Index No. 35415) is situated at the mouth of the River Teign, 4.5 miles N of Hope's Nose. It can be identified by The Ness, a bold headland of red sandstone, located on the S side of the entrance. The town, situated on the N side of the entrance, is a tourist resort. It is situated mainly on a small peninsula, which is fronted by a sandy spit at its S end. St. Michaels

Church, with a tower and flagstaff, stands in the NE part of the town and is conspicuous from the approaches.

The coast between Teignmouth and Exmouth, about 5 miles NE, is bordered by low sandstone cliffs and numerous rocks.

The bar at the entrance of the river has a least depth of 0.3m, but has a tendency to shift and requires local knowledge. Tides rise about 5m at HWS and 3.7m at HWN.

Numerous drying banks lie in the vicinity of the entrance channel including East Pole Sand, which dries up to 0.6m. Due to the shifting nature of the fairway, local knowledge is required.

The harbor is used by coasters, pleasure craft, and yachts. It has three main quays, 117 to 140m long, which provide five berths, with depths of 1.6 to 2m alongside. There are facilities for bulk and ro-ro vessels. Vessels up to 3,500 dwt, 119m in length, and 5.2m draft can be accommodated at HW. Vessels should contact the local authorities to ascertain the latest information concerning the maximum draft allowed.

Pilotage.—Pilotage is compulsory. Vessels should send a request for pilotage and an ETA at least 12 hours in advance. The message should also state the vessel's length and exact draft. Pilots may be contacted on VHF channel 16 or 12 and board about 1 mile SE of The Ness.

The port may be contacted by e-mail, as follows:

teignmouth@abports.co.uk

Caution.—An outfall pipeline extends about 1.2 miles ESE from The Ness. Diffusers are situated at the seaward end and are marked by a lighted buoy.

2.8 Exmouth Harbour (50°37'N., 3°25'W.) (World Port Index No. 35420) lies in a coastal bight between Langstone Point and Straight Point, about 3 miles NE. The town fronts the shore on the E side of the entrance to the River Exe. It is approached through a narrow channel, which is fronted by a bar with a least depth of 0.3m. Numerous drying shoals and sand banks obstruct the entrance. The channel, which is subject to frequent change, is buoyed and lies close to the N shore.

The harbor is only used by small craft and is closed to commercial shipping. Prior to closure, vessels up to 3,200 dwt, 88m in length, and 5.1m draft could be handled at HWS.

The river leads to the entrance of the Exeter Canal, 3 miles above the town. The canal is 5 miles long and is entered through a lock. It can be used by small craft up to 350 tons, 37m in length, 7.9m beam, 11m vertical clearance, and 3m draft.

Holy Trinity Church, with a tower and flagstaff, and the Catholic Church, with a green spire, stand in the W part of the town and are prominent.

Caution.—Dawlish Rock, with a least depth of 2.1m, lies about 0.5 mile E of the town of Dawlish, 0.8 mile SSW of Langstone Point. An outfall pipeline extends from the shore in the vicinity of this rock.

2.9 Lyme Bay (50°36'N., 3°18'W.) lies between Straight Point and Bill of Portland, 35 miles E. The coastline of the bay curves inward in a broad sweep.

Straight Point (50°36'N., 3°21'W.), the W entrance point, is formed of earth cliffs and is radar prominent. A light is shown

from a mast, 7m high, standing on the point. It is reported that this light structure is difficult to identify.

The coast then trends 2 miles NE to Otterton Point. The River Otter empties into the sea close W of this point through a mouth obstructed by a shingle bar. Budleigh Salterton, a resort, is situated close W of the river mouth in a narrow valley. Sidmouth, another resort, is situated 4 miles NE of Otterton Point in a valley between two hills. It is fronted by two off-shore rock breakwaters.

Beer Head (50°41'N., 3°06'W.), a conspicuous and precipitous chalk cliff, is located about 9 miles ENE of Otterton Point. This headland is 130m high and forms the W end of the white chalk-colored cliffs that extend around the S and E coasts of England. The cliffs extending to the W of the point consist of red sandstone.

A conspicuous radio mast stands at an elevation of 445m on Stockland Hill, 7 miles N of Beer Head.

Beer Roads, a small anchorage, fronts the village of Beer, 0.7 mile NNE of Beer Head. A recommended berth, sheltered from N winds, lies about 0.4 mile SE of the village, in a depth of 8m, sand. A prominent water tower stands 1.2 miles NNE of the village.

Caution.—A firing range area, marked by two lighted buoys, extends up to 1.5 miles E of Straight Point and may best be seen on the chart. Red flags are displayed when the rifle range is in use.

Crab pots are often laid from 2 to 4 miles offshore close E of Beer Head.

2.10 Lyme Regis Harbour (50°43'N., 2°56'W.) (World Port Index No. 35430) lies 6.5 miles ENE of Beer Head and is used by fishing boats and pleasure craft. The harbor is protected from SW by The Cobb, a sizable stone pier. The harbor basin has depths of 2.7 to 4.3m at HWS, but dries at LWS. A lighted range indicates the approach to the harbor. During strong S winds, the sea breaks heavily around the piers. Fishing boats up to 11m in length and 1.9m draft can be accommodated.

The coast trends E from Lyme Regis and remains cliffy except near the mouth of the River Char, 1.8 miles ENE of the harbor. Golden Cap, where the cliffs rise to a height of 187m, is located 3.5 miles E of Lyme Regis. This cape is fringed by several shoals which extend up to 0.5 mile seaward.

High Ground and Pollock, two shoal areas with depths of 3 to 4m, lie up to 1 mile offshore, 1.8 and 2.6 miles SE of Golden Cape. These dangers should be given a wide berth.

Bridport Harbour (50°43'N., 2°46'W.) (World Port Index No. 35440) lies 3 miles ESE of Golden Cap and is known locally as West Bay. The town is situated 1.4 miles N of the harbor. This harbor is used by small commercial vessels, fishing boats, and pleasure craft. It has a canal-type entrance, about 200m long and 12m wide, formed by two piers. A basin, 160m long and 42m wide, lies at the N end of the entrance channel and mostly dries. The entrance is fronted by a bar which dries. There are two berths with depths up to 3.5m alongside. Small vessels up to 50m in length and 3.2m draft can be accommodated.

Pilotage is compulsory for vessels of 50 tons and over. Vessels should send an ETA and request for pilotage through the agent at least 24 hours in advance, confirming 6 hours prior

to arrival. Pilots can be contacted by VHF and board about 1 mile from the harbor entrance. During S gales, the sea breaks heavily at the entrance and renders the harbor unusable.

An outfall pipeline extends about 0.8 mile SSW from close E of the harbor entrance. It is marked by a lighted buoy at the seaward end.

From Bridport to the N end of the Portland Peninsula, 15 miles SE, the coast is almost straight. The SE part of this stretch is formed by Chesil Beach. This beach consists of a steep-to narrow isthmus of shingle, about 200m wide and 13m high. Lagoons lie between the inner side of this isthmus and the land. After continuous strong SW winds, the sea often breaks over the SE portion of the beach and floods the land.

Caution.—An outfall pipeline extends about 0.7 mile S from the mouth of the River Char. It is marked by a lighted buoy at the seaward end.

An outfall pipeline extends about 0.8 mile SSW from close E of Bridport Harbour entrance. It is marked by a lighted buoy at the seaward end.

Liquid cargo transfer takes place regularly in Lyme Bay, about 5 miles offshore, E of Tor Bay, S of Beer Head, S of Bridport, and off Chesil Beach. Tankers involved in the transfer may be at anchor and unable to maneuver.

It has been reported that vessels anchored in Lyme Bay awaiting berthing instructions must anchor beyond the 3-mile limit, and as far away from land as is possible. Tankers requiring urgent or necessary shore facilities can anchor NE of Hope's Nose on the 3-mile limit, but not off Tor Bay.

An area in which vessels are warned against anchoring, sweeping, and trawling, due to the existence of cables and buoys, extends 3 miles SSW from the shore 4 miles SE of Bridport. The seaward boundaries of the zone are marked by two buoys and the shore boundaries are each marked by a beacon. The area described above is best seen on the chart.

A submarine exercise area is centered 5 miles SW of the Portland Peninsula. Vessels should keep a good lookout when passing through these waters.

2.11 Bill of Portland ($50^{\circ}31'N.$, $2^{\circ}27'W.$), the S extremity of Portland Peninsula (Isle of Portland), is a low extended point. Portland Bill Light is shown from a conspicuous tower, 41m high, standing on the SE side of the Bill.



Portland Bill Light

A stone beacon stands at an elevation of 18m on the S extremity of the shore and is meant to warn small vessels of a rock shelf with several loose boulders which fronts the point. The prominent structure of a former light (Old Low Light) is situated 0.4 mile NNE of Portland Bill Light. A conspicuous coast guard station stands on The Grove at the E side of the peninsula, 2.5 miles NE of Portland Bill Light.

The Verne, a hill, is situated close to the N end of the peninsula. It is 149m high and precipitous on its N side. A conspicuous radar dome (red light) is situated on this hill. A prominent radio mast stands at an elevation of 158m about 0.3 mile SSE of the hill.

The land between this hill and the Bill, about 3 miles S, forms a conspicuous wedge-shaped landmark and is one of the best aids to navigation for vessels proceeding up and down the English Channel. The Bill of Portland is radar conspicuous.

Anchorage.—West Bay, lying on the W side of Portland Peninsula, is sheltered from nearly all E winds and affords anchorage nearly anywhere. The roadstead has depths of 25 to 30m, loose gravel and shells. However, the holding ground is poor. If a sudden, but not uncommon, shift of wind to the W takes place, the sea quickly rises and vessels should immediately vacate the anchorage.

Directions.—The offshore passage leads from S of the Bill of Portland ENE for 45 miles to S of St. Catherine's Point, the S extremity of the Isle of Wight.

Vessels proceeding to Portland or Weymouth may pass between the Bill and The Shambles or E of The Shambles.

Caution.—A tidal race, caused by the very strong S currents from both sides of Portland Peninsula meeting the E and W currents off the Bill, is formed from 1 to 2 miles S of the point with the strongest part of the race in the direction of the main current.

Though the currents run very fast in the immediate vicinity of the race, they are not especially strong within the race itself, but are subject to great and sudden changes in both direction and rate. In heavy weather, especially when the wind is blowing against the current, strong overfalls and breaking seas are formed and may be dangerous to boats and small vessels.

At certain times, currents greater than those indicated on the charts, possibly up to 10 knots, may be found in or near the race and care is advised.

2.12 The Shambles ($50^{\circ}30'N.$, $2^{\circ}22'W.$), a bank of broken shells with depths of 5 to 8m, lies centered about 3 miles ESE of the Bill of Portland. It may best be seen on the chart and is reported to be extending farther to the E. Except at slack water, the position of this bank is clearly shown by ripples or overfalls on the N or S side according to the direction of the tidal flow. Lighted buoys are moored off the E and W ends of this bank. However, these navigational aids should not be wholly relied upon, especially after stormy weather when the sea breaks heavily over the bank.

Caution.—Although the channel lying between The Shambles and the Bill of Portland can be used at any time, it is only recommended in good weather and with local knowledge.

All vessels not familiar with the area should pass E of The Shambles and W of Adamant Shoal when proceeding to Portland. Due regard should be allowed for the tidal current when transiting this area.

Portland Harbour (50°35'N., 2°26'W.)

World Port Index No. 35450

2.13 Portland Harbour, a former naval base, is situated at the N end of Portland Peninsula and affords shelter to deep-draft vessels in all weather. The harbor is protected by four breakwaters that form three entrances. The southernmost entrance is obstructed by a wreck and overhead cables.



Portland Harbour

Winds—Weather.—Although winds are variable in this area, the sea breeze effect results in a strong tendency for winds from the N to veer toward E and those from the W to back toward the SW, especially in the morning.

The fluctuation of land and sea breeze at Portland is sometimes NE to SW, usually blowing parallel to the coast.

During strong winds or gales, the harbor area, although protected from swell, is subject to a choppy sea and dangerous for boats.

Tides—Currents.—Tides rise about 2.1m at springs and 1.4m at neaps. The tidal currents in the harbor entrances attain a velocity of 1 knot at spring tides and are irregular. Inside the harbor the tidal currents are uncertain.

Depths—Limitations.—After clearing The Shambles, the approaches are deep and only the testing facilities (Noise Range) SE of the harbor must be avoided. The harbor may be entered either by East Ship Channel, which has a least depth of 13.8m decreasing to 12.5m within the entrance, or by North Ship Channel which has a depth of 12.4m.

Within the breakwaters the mooring berths in the E part of the harbor have a least depth of 11m.

The main berthing facilities and alongside depths are listed below:

1. Queens Pier—600m long with a depth of 8.3m.
2. Inner Breakwater—230m long with a depth of 15m.
3. Inner Coaling Pier—250m long with a depth of 7.7m.
4. Outer Coaling Pier—250m long with a depth of 9.5m.
5. Deep Water Jetty—250m long with a depth of 11.6m.
6. Q Pier—250m long with a depth of 7.6m.
7. Loading Jetty—340m long with a depth of 7m.

There are facilities for general cargo, bulk, ro-ro, tankers, and passenger vessels. Vessels up to 250m in length and 11m draft can be accommodated.

Aspect.—The Inner Harbour is protected by breakwaters which are 4m above HW. Inner Breakwater projects about 0.3 mile ENE from the NE side of Portland Peninsula. Outer Breakwater is separated from the N end of Inner Breakwater by South Ship Channel (closed). It curves in a N direction and is about 1 mile long. Fort Head is situated at its N end. Its S end is designated as “D” Head.

Northern Arm extends about 0.7 mile ESE from the shore. Its SE end is designated as “C” Head. Northeastern Breakwater, 0.7 mile long, lies between Northern Arm and Outer Breakwater. Its N end is designated as “B” Head and its S end is designated as “A” Head.



Portland Harbour Breakwaters

East Ship Channel leads between Fort Head and “A” Head. North Ship Channel leads between “B” Head and “C” Head.

Several prominent buildings on Torpedo Pier and an aluminum chimney stand near the root of Northern Arm. A conspicuous television mast stands about 1 mile W of the root of Northern Arm. A prominent crane is situated on Inner Breakwater.

“A” Head Light is shown from a prominent metal tower, 22m high, standing on “A” Head.

It is reported (2005) that East Ship Channel is indicated by a lighted range.

Pilotage.—A joint pilotage area for Portland and Weymouth has been established W of a line joining Grove Point (50°32.9'N., 2°24.6'W.) and White Norte (50°37.5'N., 2°19.3'W.).

Within the Weymouth Pilotage Area (N of The Nothe) pilotage is compulsory for all vessels of 50m and over, all vessels over 36.6m in length carrying dangerous cargo, and all vessels carrying 12 passengers or more.

Regular ferries and those passing only within the pilotage area, HM Ships, Foreign and Commonwealth Naval vessels, and those vessels exempted by law are excluded.

Vessels should send an ETA and request for pilotage 24 hours in advance to Weymouth, confirming 2 hours prior to arrival.

Pilots generally board vessels bound for Weymouth in position 50°36.6'N, 2°23.0'W, about 2 miles NE of “A” Head.

Within the Portland Pilotage Area (S of The Nothe) pilotage is compulsory for all vessels of 50m and over, all vessels 20m in length and over carrying dangerous cargo, and all vessels 20m in length and over carrying more than 12 passengers.

Ministry of Defence vessels in the Outer Harbour and in the Inner Harbour N of a line between Lattice Tower and Beacon E, and any vessels transiting the Outer Harbour Area to or from Weymouth are exempt.

Vessels should send an ETA and request for pilotage 24 hours in advance to Portland, confirming 6 hours and 2 hours prior to arrival.

Pilots generally board vessels bound for Portland, as follows:

1. In position 50°35.0'N, 2°22.3'W (about 1.6 miles E of "A" Head) for vessels 180m in length and over.
2. In position 50°36.0'N, 2°24.0'W (about 1 mile NE of "A" Head) for vessels less than 180m in length.

Regulations.—There is a compulsory reporting system for all vessels over 50m in length (20m for vessels carrying dangerous cargo) proceeding to or from Portland and Weymouth.

All vessels are required to report to Portland on VHF channel 74, when passing the designated reporting points CF, CG, and CH listed below.

The report should include the vessel's name, position (reporting point designator), destination, ETA (inbound vessels), and intended route, E or W of The Shambles (outbound vessels, where appropriate).

In addition, vessels entering or leaving Portland Inner Harbour are required to report when passing the designated reporting points PE and PN as listed below.

Within 3 miles of "A" Head (50°35.1'N., 2°24.9'W.) all vessels are required to maintain a continuous listening watch on VHF channel 74.

Vessels bound for Weymouth should establish contact with Weymouth Harbour on VHF channel 12 before entering the area, and change to the Weymouth VHF working channel at the pilot boarding position.

The reporting points are, as follows:

1. CH—3 miles bearing 150° from "A" Head (inbound for the Noise Range buoys or between these buoys and the shore, also outbound either to the W or the E of The Shambles).
2. CG—3 miles bearing 125° from "A" Head (inbound or outbound E of The Shambles).
3. CF—3 miles E of "A" Head (vessels approaching Portland or Weymouth from the E, or proceeding E from either harbor).
4. PN—About 0.5 mile bearing 077° from "C" Head (vessels inbound and outbound from Portland Inner Harbor).
5. PE—About 0.5 mile bearing 043° from "A" Head (vessels inbound and outbound from Portland Inner Harbor).
6. WH—0.1 mile bearing 040° from Weymouth South Pier Light (outbound only).

Naval vessels within 3 miles of "A" Head should maintain a continuous listening watch on VHF channels 16 and 74; elsewhere, naval vessels should maintain a continuous listening watch on VHF channels 16 and 71.

Vessels carrying or loading/unloading dangerous substances at Weymouth should maintain a listening watch on VHF channel 12.

Several prohibited anchorage areas, which may best be seen on the chart, lie in the approaches to Portland. Vessels must not attempt to anchor without instructions from the authorities.

The port of Portland may be contacted by e-mail, as follows:

marine@portland-port.co.uk

Anchorage.—Anchorage outside the harbor is restricted by submarine cable areas and testing areas, which may best be seen on the chart. Vessels seeking shelter from W winds generally proceed to Weymouth Roads (see paragraph 2.14). Anchorage may be obtained at designated berths lying NE of Northeastern Break-water, in depths of 12 to 18m.

There are numerous designated anchorages inside the harbor which are sheltered from the swell. The bottom of blue slimy mud provides good holding ground.

Caution.—Torpedo firing takes place periodically in a charted area E of Portland Harbour. When firing is underway, orange flags are displayed from the firing point on the NE breakwater and from safety craft as necessary.

Due to the naval facilities being moved from the harbor (1996), changes to buoyage, moorings, cable areas, etc., may be still be in progress.

Vessels should allow ample room for turning W to approach the entrances.

Eddies generally exist close to the breakwater heads and should be guarded against.

A Noise Range, the limits of which may best be seen on the chart, lies centered 0.7 mile ESE of "D" Head and is marked by four buoys. Restricted Areas, which may best be seen on the chart, lie N and S of this range. When the range is in use, anchoring and fishing are prohibited in these areas. Static fishing gear may also be encountered within these areas.

Portland to the Isle of Wight

2.14 Weymouth Harbour (50°37'N., 2°27'W.) (World Port Index No. 35460), a small commercial port, is situated at the mouth of the River Wey in the SW part of Weymouth Bay.



Weymouth Harbour

Depths—Limitations.—The harbor, long and narrow, is entered between two stone piers. The entrance is 137m wide and provides a channel fairway, 76m wide. The controlling depth in the approach channel is 5.2m, shoaling to 3.2m within 60m of the Town Bridge.

There is 360m of principal quayage providing three berths, with depths of 5.2m alongside. There are facilities for bulk, ro-ro, and vehicle ferry vessels. Vessels up to 135m in length, 28m beam, and 5.2m draft can be accommodated at HW.

The Town Bridge, a double bascule bridge, has an overhead clearance of 2.5m. It spans the harbor, 0.5 mile within the entrance, and blocks the channel to large vessels. A passage, 24.4m wide, leads through the bridge to an extensive marina. There are also facilities for fishing vessels and small craft.

Aspect.—Weymouth Bay lies between The Nothe, a bluff headland situated on the S side of the harbor, and Redcliff Point, 2 miles NE. A fort stands on the E end of The Nothe. Weymouth, a resort, is situated along the W side of the bay.

A lighted range indicates the approach channel. St. John's Church, with a conspicuous spire, stands near the shore of the bay. 0.6 mile NNW of the head of the N pier.

Pilotage.—For pilotage, reporting procedures, and regulations, see Portland Harbour in paragraph 2.13.

Anchorage.—Designated anchorages, which may best be seen on the chart, lie in depths of 9 to 18m, fine sand and shell, in the roadstead, NE and E of the harbor.

A refuge anchorage area, the limits of which may best be seen on the chart, lies centered about 2.3 miles ENE of the harbor. It has depths of 13 to 19m and is for the use of vessels seeking shelter during adverse weather. Vessels less than 150m in length are exempt from compulsory pilotage when arriving or leaving this anchorage area.

Caution.—The tidal currents in the bay are weak, but the rise and fall of the tide within the harbor is considerably affected by winds.

Two outfall pipelines extend up to 0.2 mile seaward from the S side of the S pier.

A Degaussing Range, the limits of which may best be seen on the chart, lies close E of The Nothe and is marked by buoys. A Restricted Area, which may best be seen on the chart, extends E and SE from The Nothe. When the range is in use, anchoring and fishing are prohibited in this area. Static fishing gear may also be encountered within this area.

A Mobile Degaussing Range, the limits of which may best be seen on the chart, lies centered 1.2 miles of The Nothe.

2.15 Redcliff Point (50°38'N., 2°24'W.), on the N shore of Weymouth Bay, is the W extremity of a line of cliffs which extends E for about 3 miles to White Nothe. A conspicuous hotel, with a white tower, stands near the shore of the bay, 0.4 mile WNW of the point.

Two beacons, in line bearing 048°, stand on the high ground about 0.6 mile E of the White Nothe.

Adamant Shoal, with depths of 15.3 to 18m, lies about 4.8 miles S of White Nothe.

The coast E of White Nothe is strewn with rocks and ledges. It provides no shelter from S winds except at Lulworth Cove, 3 miles E. This small circular basin is encompassed by chalk cliffs and provides anchorage to small craft. The entrance is reported to be difficult to identify. A prominent radar scanner is reported (1999) to stand close NE of the cove.

Worbarrow Bay (50°37'N., 2°12'W.), an open bight, lies 1.5 miles E of Lulworth Cove. It is entered between a group of rocks on the W side and Worbarrow Tout, a point surmounted by a conical hill, on the E side. The bay has high cliffy shores

divided in the center by Arish Mell Gap. This gap is fronted by a conspicuous white sandy beach.

The bay affords anchorage in its E part during all but S winds. The anchorage has a depth of 11m, fine sand.

A conspicuous tower stands near the shore, 2.2 miles ESE of the E entrance point of the bay.

Caution.—An outfall pipeline, marked at its seaward end by a lighted buoy, extends about 2 miles SSE from Arish Mell Gap.

2.16 Saint Albans Head (St. Aldhelms Head) (50°35'N., 2°03'W.) is a bold headland, 107m high, bordered by cliffs on all sides. It is radar conspicuous. A chapel and a coast guard station stand on this headland.

Saint Albans Ledge, with depths of 8.5 to 16m, extends up to 2.5 miles SSW of the headland.

Because of the uneven bottom, strong eddies form off this ledge and the overfalls within may be dangerous to small craft. The current runs continuously SE along the W side of the headland and, during the flood tide, a race forms to the SW.

Anvil Point (50°36'N., 1°57'W.), located 3.5 miles ENE of Saint Albans Head, is low and cliffy with higher land close within. Anvil Point Light is shown from a conspicuous tower with a dwelling, 12m high, standing on the point.



Anvil Point Light

A conspicuous castellated building is situated on Durlston Head, 0.3 mile NE of the light. Anvil Point is reported to be radar prominent.

Swange Bay, lying 1.5 miles N of Anvil Point, is entered between Peveril Point and Ballard Point, 1.5 miles NNE. Peveril Ledge, with depths of less than 5m, extends up to about 0.5 mile E of Peveril Point and is marked by a buoy. Swanage, a resort, occupies the S part of the bay and is fronted by a pier.

Handfast Point, which is conspicuous, is located 0.8 mile NNE of Ballard Point. The shore between is fronted by steep chalk cliffs. Old Harry, a prominent column of chalk 18m high with a flat grassy top, stands close off this point.

Anchorage, with good shelter from W winds, may be taken about 0.7 mile N of Peveril Point. There are depths of about 8m over good holding ground of mostly sand and clay.

Caution.—A firing range area extends up to 12 miles seaward between Saint Albans Head and Lulworth Cove. Lighted buoys associated with this range are moored in the vicinity of Saint Albans Ledge. When the range is in use, red flags and red lights are displayed from a hill close NNE of the cove and from above the coast guard station on the headland.

During summer, crab pots may be moored within 0.5 mile of the shore in the vicinity of Saint Albans Head.

A measured mile (1,849m), marked by two sets of range beacons, is situated close W of Anvil Point and may best be seen on the chart.

A spoil ground area lies centered 4 miles NE of Anvil Point and may best be seen on the chart.

2.17 Poole Harbour (50°41'N., 1°57'W.) (World Port Index No. 35480), one of the most extensive natural harbors in England, lies in the W part of Poole Bay. It is a ferry terminal and an extensive yachting center. However, entry is limited by a bar.



Poole Harbor

Tides—Currents.—The tide rises about 2.2m at springs and 1.7m at neaps.

Within the harbor the tidal cycle is abnormal and results in the phenomenon of a double HW with the tide standing at or near HW for 6 or 7 hours. The neap tides are very irregular and may produce a second HW, which is higher than the first. Barometric pressure and strong winds can change the tidal cycles significantly.

At the entrance the flood current attains a maximum rate of 3 knots at springs. The ebb current, which is weak for the first 3 hours, attains a maximum rate of 4.7 knots at springs. At neaps both tidal currents are weak and uncertain.

Depths—Limitations.—The harbor, which resembles a lake at HW, is spacious. At LW, large expanses of mudflats uncover and are intersected by numerous creeks and small channels. The bottom is mainly composed of sand over clay and gravel, but, in places, there is soft mud, known locally as quags, which is dangerous.

Swash Channel leads NW through Poole Bay and over the coastal bar to the harbor entrance. A training bank, which covers at half tide, lies along its W side. The fairway, which is buoyed, is about 130m wide and has a controlling depth of 6m. Strong S winds raise a heavy sea on the bar and strong E winds may change the depths.

The harbor entrance lies between South Haven Point (50°40.8'N., 1°57.0'W.), on the S side, and Sandbanks, a peninsula, on the N side. The peninsula extends 1 mile SW from Poole Head and is well built over. South Haven Point is low and sandy. A chain ferry runs across the harbor entrance between Sandbanks and South Haven Point.

Five main islands are situated within the harbor. Brownsea Island, the largest, lies close within the entrance and is thickly wooded.

Middle Ship Channel, with a minimum width of 80m, is the main fairway leading from the entrance, close E of Brownsea Island, to the principal commercial facilities in the S part of the port. It has a controlling depth of 6m and is marked by stakes and lighted buoys.

Little Channel, with a controlling depth of 3.9m (1999), leads from the inner end of Middle Ship Channel to the Town Quays and the bascule bridge in the N part of the port.

North Channel, a secondary buoyed fairway, also leads into the harbor from close E of Brownsea Island. It has a controlling depth of 4m (1999) but is reported (2005) to be not maintained by dredging.

A boat channel, used by pleasure craft and fishing boats with drafts up to 3m, lies on the W side of Swash Channel. Another similar channel, used by craft with drafts up to 1.5m, lies on the S side of Middle Ship Channel. East Looe Channel, used by light-draft small craft, extends parallel to the shore close S of Sandbanks.

The Poole Bridge, a bascule bridge, is situated in the N part of the port. It has an opening 18.3m wide and is located near the SW part of the town.

The ro-ro freight and ferry terminal, situated in the S part of the port, provides three main linkspan berths. The largest, 130m long, has a depth of 6m alongside and can handle vessels up to 165m in length.

The other main commercial facilities include the Oil Jetty, which is 82m long, with a depth of 4.9m alongside; New Quay, 158m long, which has a depth of 5m alongside and is used for bulk, general, and container cargo; Bulwark Quay, 89m long, which has a depth of 6m alongside and is used for bulk and general cargo; and Ballast Quay, 77m long, which has a depth of 6m alongside and is used for bulk and general cargo.

There is also a private timber wharf, which is 76m long and has a depth of 4m alongside.

Poole Town Quay, 400m long, has depths of 3.6 to 4.5m alongside and is normally used only by pleasure craft. There are also several marinas and numerous yacht moorings.

Vessels up to 20,500 grt, 160m in length, and 5.5m draft can be accommodated within the port.

Aspect.—The seaward entrance of Swash Channel is marked by Bar Lighted Buoy No. 1 (50°39.3'N., 1°55.2'W.).

Several prominent buildings, including a large hotel, stand on Sandbanks, the low peninsula situated at the N side of the entrance.

Brownsea Castle, with a square tower and a flagstaff, stands on the SE side of Brownsea Island, close inside the harbor entrance, and is very prominent from the approaches. A number of tall buildings are located in the vicinity of a marina on the NE side of the harbor, about 1.5 miles N of the entrance.

Pilotage.—Pilotage is compulsory for all vessels over 50m in length and vessels of 30m or more in length or 10m or more in beam capable of carrying more than 12 passengers, except those exempted by law.

Vessels should send an ETA 24 hours in advance to the agent and to the VTS Harbor Control Center (see Regulations). Vessels requiring pilotage should then contact the VTS Harbor Control Center on VHF channel 14 giving at least 1 hour 30 minutes notice of arrival at the boarding position. Pilots can be contacted by VHF and generally board in the vicinity of Bar Lighted Buoy No. 1.



Poole—Brownsea Castle

The port of Poole may be contacted by e-mail, as follows:

harbourmaster@phc.co.uk

Regulations.—A local Vessel Traffic Service (VTS) system operates in the vicinity of the harbor. Vessels of 25m or more in length should report to the VTS Harbor Control Center on VHF channel 14 when passing Bar Lighted Buoy No. 1 (50°39'N., 1°55'W.), North Haven Lighted Beacon (50°41'N., 1°57'W.), Aunt Betty Lighted Buoy No. 22 (50°42'N., 1°57'W.), and when arriving at the berth. Incident, Damage, or Oil Pollution Reports should be sent as necessitated.

Poole VTS may be contacted by e-mail, as follows:

harbourcontrol@phc.co.uk

The chain ferry will give way to vessels subject to compulsory pilotage proceeding in and out of the harbor. The ferry, when underway, will show a white strobe light; in addition, by day, a black ball is displayed at the forward end to indicate the direction of travel. It is reported (2004) that the ferry, at times, also displays an orange strobe light when heading S.

All yachts and small craft are required to keep clear of large commercial vessels navigating in the main channels.

Signals.—A yellow flashing light is shown from a mast standing on South Haven Point when a large vessel is about to enter that part of the channel lying between No. 6 Lighted Buoy and No. 22 Aunt Betty Lighted Buoy, 2 miles NNW. The light is shown for both arriving and departing vessels.

Bridge traffic lights are visible by day and night and are exhibited from towers on the bridges. A fixed red light indicates vessels are not to proceed, a flashing green light indicates vessels may proceed with caution, and a fixed green light indicates vessels are to proceed, bridge is almost fully open. The bridge will be opened at any time for commercial vessels.

Anchorage.—There are no anchorage berths within the harbor for commercial vessels. The best outer anchorage, sheltered from W winds, lies in a depth of 12m, sand and gravel, about 0.5 mile NE of Handfast Point (50°38'N., 1°56'W.). Anchorage can also be obtained 0.5 mile E of Bar Lighted

Buoy No. 1, but this roadstead is exposed and it can become very uncomfortable during S or SE gales.

Caution.—Numerous pleasure craft and fishing boats may be encountered in the approaches to the harbor.

A chain ferry runs across the entrance to the harbor between South Haven Point and Sandbanks (see Regulations).

A historic wreck, marked by a buoy, lies 0.6 mile ESE of the light shown at the SE end of the training bank.

High-speed craft (ferries) may be encountered in the approaches to the harbor.

2.18 The coast between the entrance to Poole Harbour and Hurst Point, 15 miles E is indented by Poole Bay and Christchurch Bay. The shores of the bays consist of a succession of earthy cliffs intersected by deep ravines. These ravines, known as chines, are worn by the action of small streams. Frequent landslides occur along this stretch of shore.

The shore of Poole Bay is almost entirely occupied by the resort of Bournemouth with its many buildings. A prominent coast guard station is situated on a hill near the shore, about 0.5 mile W of Hengistbury Head, the E extremity of Poole Bay. A conspicuous water tower stands, at an elevation of 52m, about 1.7 miles WNW of the coast guard station.

Christchurch Priory, with a conspicuous tower, stands 1.3 miles NW of Hengistbury Head.

Anchorage can also be obtained in Poole Bay as convenient. However, the roadstead is exposed and can become very uncomfortable in prolonged S or SE gales.

Hurst Point (50°42'N., 1°33'W.) is the E entrance point of Christchurch Bay. It is located at the SE end of a low-lying, narrow neck of land on the N side of Needles Channel.

Hurst Point Light, a directional sector light, is shown from a prominent round tower, 26m high, standing on the point. A conspicuous castle is situated in the vicinity of the point.



Hurst Point Light

Shingles (50°41'N., 1°35'W.) is a bank of sand, gravel, and shingles which extends about 4 miles SW of Hurst Point. This shallow bank is marked by lighted buoys; its steep-to SE side forms the NW side of Needles Channel. Due to the wash of the sea and the scour of the currents, this bank is subject to constant changes. With the least swell the sea breaks violently on the shallower parts. North Channel leads in a NW direction between Hurst Point and the NE end of Shingles. This narrow



Hurst Point Castle

channel has a least depth of 4.8m and local knowledge is required.

Stansore Point (50°47'N., 1°21'W.), marked by a beacon, is located 9 miles ENE of Hurst Point. The coast between forms the N side of the W part of The Solent. The shore is fronted by marshes and mud flats which are intersected by several shallow creeks.

Lymington (50°45'N., 1°32'W.), a small and shallow harbor, is located on the W side of the Lymington River, 3 miles NE of Hurst Point. It is used by local ferries and has extensive facilities for pleasure craft.

For information concerning Needles Channel, which leads through the W part of The Solent, see paragraph 2.22.

For information concerning landmarks located in the approaches to Southampton Water, see paragraph 2.27.

Caution.—An area, within which submarine power cables and gas pipelines exist, extends S between the mainland coast in the vicinity of Stansore Point and the N coast of the Isle of Wight. Anchoring and fishing are prohibited within this area, which may best be seen on the chart.

An area, within which obstructions exist, extends S between the mainland coast and the N coast of the Isle of Wight, about 4.5 miles ENE of Hurst Point. Anchoring and fishing are prohibited within this area, which may best be seen on the chart.

Isle of Wight

2.19 The Isle of Wight (50°40'N., 1°18'W.) is situated off the Port of Southampton and Portsmouth, on the S coast of England. It is separated from the mainland by a stretch of water known as The Solent. The Solent can be entered from W via Needles Channel and from E via several channels lying in the vicinity of the Nab Tower.

Needles Point (50°40'N., 1°35'W.) is the W extremity of the isle. Precipitous white chalk cliffs extend E from this point and are conspicuous.

Needles Rocks (50°40'N., 1°35'W.), three in number, extend up to 0.2 mile W of Needles Point. Needles Rocks Light is shown from a conspicuous round granite tower, 31m high, standing at the seaward side of the outermost rock.

The Bridge (50°38'N., 1°39'W.), a dangerous reef, extends up to about 1.2 miles W of Needles Point. A lighted buoy, equipped with a racon, is moored in the vicinity of the seaward extremity of this reef.



Needles Rocks Light



Needles Rocks

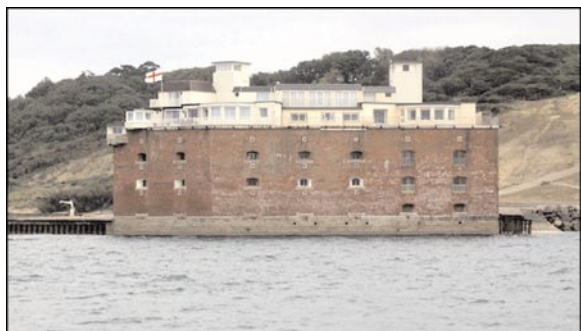


Needles Rocks from W

The Bridge is marked by ripples in calm weather and by distinctive overfalls in rough weather. During S gales it is marked by a well-defined line of broken water.

Alum Bay lies between Needles Point and Hatherwood Point, 0.9 mile NE. This bay has high white cliffs on its S side and cliffs of varying colors on its E side. The junction of these two different types of cliffs forms a conspicuous feature.

Fort Albert, which is also conspicuous, is built into the side of the isle about 2.1 miles NE of Hatherwood Point and 0.7 mile SE of Hurst Point.



Fort Albert

Sconce Point, located 0.6 mile NE of Fort Albert, forms the NW extremity of the isle. A ruined fort is situated on this point.

Yarmouth (50°42'N., 1°30'W.), a small harbor, lies 0.8 mile E of Sconce Point and is used by pleasure craft and local ferries. A wooden pier extends about 200m seaward from the E side of the harbor entrance. A church, with a conspicuous square tower, stands in the town.

Egypt Point (50°46'N., 1°19'W.) is located 9 miles ENE of Sconce Point. The coast between forms the S side of the W part of The Solent. This stretch of coast is fronted by several rocky ledges and banks which extend up to about 0.4 mile offshore. A prominent beacon column, 7m high, stands on Egypt Point.

Cowes Harbour is located 0.8 mile E of Egypt Point and is fully described in paragraph 2.26.

Caution.—A spoil ground area lies centered 2.5 miles SSE of Needles Point Light and may best be seen on the chart.

Dredging areas lie centered 4.7 miles SSE, 4.4 miles S, and 6.5 miles SW of Needles Point Light and may best be seen on the chart.

High speed craft and large ro-ro ferries may be encountered in the vicinity of the Isle of Wight.

During the summer, numerous pleasure craft and yachts may be encountered in the vicinity of the Isle of Wight.

2.20 Saint Catherines Point (50°35'N., 1°18'W.), low and rounded, is located 12 miles SE of Needles Point Light and forms the S extremity of the Isle of Wight. St. Catherines Point Light is shown from a prominent castellated tower and dwelling, 26m high, standing on the point. This light structure is very distinctive when viewed from E or W.

The land within the point rises gradually for 1 mile toward Saint Catherines Hill, which is the highest on the isle. A former disused light tower stands on this hill and is prominent. Hoy Monument, situated about 1 mile N of the hill, is also prominent from seaward.

Conspicuous television towers stand on the heights at Chillerton Downs, about 4.8 miles NNW of the point, and at Rowridge, about 6.8 miles NNW of the point.

Freshwater Bay lies about 3 miles E of Needles Point and a prominent hotel stands in its vicinity.



Saint Catherines Point Light



Saint Catherines Hill—Disused Lighthouse



Saint Catherines Hill—Hoy Monument

Tennyson's Cross, a prominent monument, stands near the top of the cliffs, 1.2 miles W of Freshwater Bay.

Hanover Point is located 4.7 miles ESE of Needles Point. Precipitous white chalk cliffs extend E from the latter point to within 1 mile of Hanover Point, where they merge into a shore of clay and sand. These cliffs, up to about 120m high, are conspicuous in contrast to the dark ground behind them.

Between Saint Catherines Point and Dunnose, about 5 miles ENE, the coast consists of a low cliff with large masses of rock, known as The Undercliff, rising behind it. This formation is backed by a precipitous rocky wall which rises to a height of almost 150m.



Isle of Wight—Tennyson's Cross

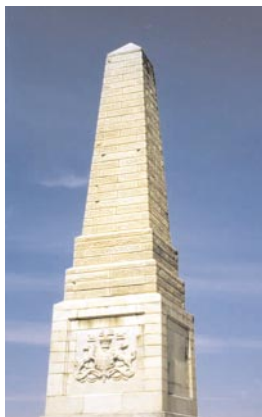
The town of Ventnor, a resort, stands close W of Dunnose. Its lights are conspicuous at night. Several conspicuous radio masts and radar scanners are situated on the downs in the vicinity of the town and may best be seen on the chart.

Culver Cliff, located about 10 miles NE of Saint Catherines Point, is very conspicuous. It can be easily identified by the marked contrast between the white chalk bluff and the land in the vicinity.



Culver Cliff

Yarborough Monument stands close W of the cliff, at an elevation of about 100m, and is conspicuous from seaward.

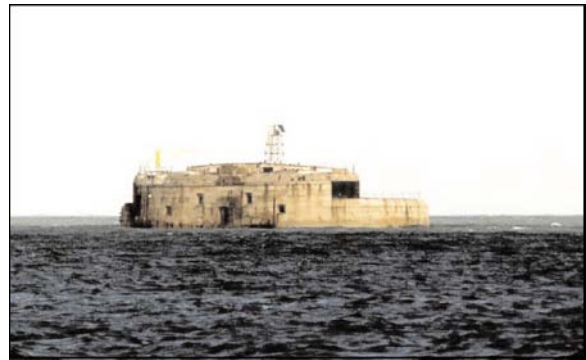


Yarborough Monument

Foreland (50°41'N., 1°04'W.), the E extremity of the isle, is low and fronted by dangerous reefs and shoals. Numerous prominent buildings stand in the vicinity of this point.

Nettlestone Point, on which the town of Seaview stands, is located 2.5 miles NW of Foreland. The coast between is fronted by several shoals.

Saint Helen's Fort (50°42.3'N., 1°05.0'W.), a round stone structure marked by a light, stands 0.6 mile offshore, 1.2 miles NW of Foreland.



Saint Helen's Fort

Ryde (50°44'N., 1°09'W.), a small and shallow harbor, is located 2 miles WNW of Nettlestone Point. The coast between is fronted by Ryde Sands, which dry and extend up to about 1 mile seaward. The harbor is used by local ferries, small hovercraft, and pleasure boats. It is fronted by a prominent pier, with a railway on it, which extends 0.4 mile N from the shore. The head of the pier is lighted.



Ryde Pier

Old Castle Point is situated 5 miles WNW of Ryde. The coast between is fringed by a drying bank.

Quarr Abbey, with a prominent turret, stands 1.7 miles W of Ryde. Osborne House, with a prominent tower and flagstaff, stands 1 mile SSE of Castle Point and is conspicuous.

The approach to Cowes Harbour lies between Old Castle Point and Egypt Point, 1.4 miles W. Cowes Harbour is fully described in paragraph 2.26.

Caution.—Dangerous reefs extend up to 1.5 miles offshore in the vicinity of Saint Catherines Point.

A tidal race occurs off Saint Catherines Point and may be violent when the wind opposes the current. The race may be especially violent in an area lying SE of the point when a W spring current is accompanied by a W gale.

A disused explosives dumping ground area, the limits of which may best be seen on the chart, lies about 3.5 miles E of Saint Catherines Point.

Submarines exercise in an area lying about 10 miles S of Saint Catherines Point.

A submarine outfall pipeline extends 1.5 miles SE from a point on the shore located 1.5 miles WSW of Culver Cliff.

A submarine outfall pipeline extends 1.7 miles NNW from a point on the shore located 0.7 mile ESE of Ryde.

Numerous submarine cables exist within an area extending between Nettlestone Point, on the Isle of Wight, and Southsea Castle, on the mainland. Anchoring and fishing are prohibited in this area, which may best be seen on the chart.

The Solent

2.21 The Solent separates the Isle of Wight from the mainland, and provides access to Portsmouth and the Port of Southampton. Several small harbors lie along the shores of this stretch of water and are used by pleasure craft, local ferries, and yachts. Entry into The Solent may be made from the W, through Needles Channel, or from the E, through the channels lying in the vicinity of Nab Tower. For entry regulations and directions, see paragraphs 2.22 and 2.23.

Pilotage

Southampton.—The Port of Southampton Compulsory Pilotage Area covers the Port of Southampton, Southampton Water, and The Solent. Its boundary is formed by a line joining the following points:

1. Western Limit:
 - a. Stansore Point (50°47.2'N., 1°20.4'W.).
 - b. Egypt Point, Isle of Wight (50°46.0'N., 1°18.7'W.).
2. Southern Limit:
 - a. Egypt Point, Isle of Wight (50°46.0'N., 1°18.7'W.).
 - b. Old Castle Point (50°45.9'N., 1°16.5'W.).
3. Eastern Outer Limit:
 - a. Culver Cliff, Isle of Wight (50°40.0'N., 1°05.6'W.).
 - b. Nab Tower Light (50°40.0'N., 0°57.1'W.).
 - c. 1.1 miles S of Selsey Bill (50°43.3'N., 0°47.2'W.).
 - d. 0.1 mile S of Selsey Bill.
 - e. Chichester Bar Light (50°45.9'N., 0°56.4'W.).
 - f. Horse Sand Fort Light (50°45.0'N., 1°04.2'W.).
 - g. Outer Spit Lighted Buoy (50°45.5'N., 1°05.4'W.).
 - h. Gilkicker Point Light (50°46.4'N., 1°08.4'W.).
4. Eastern Inner Limit:
 - a. Gilkicker Point Light (50°46.4'N., 1°08.4'W.).
 - b. West end of Ryde Pier, Isle of Wight.

Pilotage is compulsory within the above area for the following vessels:

1. All vessels over 61m in length, including fishing vessels.
2. All vessels of 20m or over in length carrying more than 12 passengers.

Ministry Of Defense (MOD) owned or operated vessels, HM vessels, and naval vessels of foreign and Commonwealth countries are exempted.

Inbound vessels requiring pilotage within the area should send an ETA at least 12 hours in advance to Southampton Ves-

sel Traffic Services (VTS). The message must state the maximum draft, the point of destination within the area, and the required pilot boarding position.

Vessels should also contact Southampton VTS directly on VHF channel 9 and report their ETA not later than 3 hours prior to arrival. Southampton VTS will confirm the pilot boarding arrangements. Vessels should maintain VHF contact if it is necessary to change the ETA.

Vessels requiring pilots for only Portsmouth, Cowes, or the River Medina should contact the appropriate competent harbor authority.

Pilots for the Port of Southampton board, as follows:

1. In the Eastern Approach:
 - a. Deep-draft oil tankers (VLCCs)—In position 50°36.06'N, 0°57.50'W (4 miles S of Nab Tower Light).
 - b. All other vessels of 150m and over in length:
 - i. In Nab West Pilot Boarding Area—an area between 0.5 mile and 1.5 miles from Nab Tower within a sector bound by the bearings of 270° and 195° from the tower, or
 - ii. In Nab East Pilot Boarding Area—an area between 1 mile and 2 miles from Nab Tower within a sector bound by the bearings of 090° and 145° from the tower.
 - c. Vessels less than 150m in length when carrying dangerous or polluting goods in bulk—In the Saint Helen's Pilot Boarding Area bound by the following positions:
 - i. 50°43.77'N, 1°02.24'W.
 - ii. 50°43.36'N, 1°03.10'W.
 - iii. 50°42.82'N, 1°01.22'W.
 - iv. 50°43.23'N, 1°00.37'W.
 - d. Vessels between 61m (20m if carrying more than 12 passengers) and 150m in length, other than those described in section c above—in position 50°45.83'N, 1°09.09'W (about 0.75 mile NW of North Sturbridge Lighted Buoy).
 - e. In the event of the visibility falling below 0.5 mile or traffic congestion occurring in the vicinity of North Sturbridge Lighted Buoy, the pilot boarding position for vessels described in section d above will be temporarily relocated to the the Saint Helen's Pilot Boarding Area (see section c above).
2. In the Western Approach:
 - a. All vessels subject to compulsory pilotage—In position 50°45.43'N, 1°21.64'W.

Vessels having carried dangerous or polluting goods, which are neither gas free nor inerted, will be subject to the same conditions as specified in section 1c above.

Pilotage on a voluntary/optional basis is available, by prior arrangement, for vessels less than 150m in length to/from the Eastern inner limit with boarding/disembarking at the Nab Tower.

Portsmouth.—The Portsmouth Compulsory Pilotage Area covers the harbor and approaches. Its boundary is formed by a line joining the following points:

1. Gilkicker Point Light (50°46.4'N., 1°08.4'W.).
2. W end of Ryde Pier, Isle of Wight, then along coast to:
3. Culver Cliff, Isle of Wight (50°40.0'N., 1°05.6'W.).
4. Nab Tower Light (50°40.0'N., 0°57.1'W.).

5. 1.1 miles S of Selsey Bill (50°43.3'N., 0°47.2'W.).
6. 0.1 mile S of Selsey Bill.
7. Chichester Bar Light (50°45.9'N., 0°56.4'W.).
8. Horse Elbow Foul Buoy (50°44.4'N., 1°03.4'W.), then due N to the shore (50°46.9'N., 1°03.4'W.).

Pilotage is compulsory within the above area for the following vessels:

1. All vessels of 48m or over in length.
2. All vessels of 20m or over in length carrying more than 12 passengers.

The categories of vessels that are exempted from compulsory pilotage by the Portsmouth Competent Harbor Authority include the following:

1. Vessels in government service except when berthing or unberthing at any non-MOD facility.
2. Vessels with an Admiralty Pilot (Federal Pilot) embarked while proceeding to or from any MOD facility. Such vessels proceeding between a MOD facility and a commercial facility are not exempt for berthing and unberthing at the latter facility.
3. Vessels in transit through The Solent on passage to or from any position W of a line joining Gilkicker Point Light and the W end of Ryde Pier. Such vessels should not cross N of a line joining Gilkicker Point Light, Horse Sand Fort Light (50°45'N., 1°04'W.), and Horse Elbow Foul Buoy.
4. Vessels inbound to any position W of a line between Gilkicker Point Light and Ryde Pier going to an anchorage in South Helen Roads.
5. Vessels not more than 150m in length while to the SE of a line joining Nenlestone Point (50°43'N., 1°06'W.), Warner Lighted Buoy (50°44'N., 1°04'W.), Horse Elbow Foul Buoy, and the shore due N.

Inbound vessels requiring pilotage within the area should send an ETA at least 24 hours in advance to Portsmouth Pilots, stating vessel's length, beam, draft, last port of call, and intended berth in Portsmouth.

Vessels should then confirm their ETA at the pilot boarding positions 8 hours in advance. Confirmations are also required on VHF channel 11 or by other means 2 hours in advance for the Nab boarding area (see paragraph No. 1 below) and 1 hour 30 minutes in advance for the Saint Helens and North Sturbridge boarding areas (see paragraphs No. 2 and No. 3 below).

Outbound vessels or vessels moving within the area should send ETD 8 hours and 1 hour 30 minutes in advance, stating draft destination and whether proceeding through East Solent or West Solent.

Pilots for Portsmouth may be contacted by e-mail, as follows:

pilotseta@portsmouth-port.co.uk

Pilots for Portsmouth board, as follows:

1. Vessels over 150m in length—in position 50°40.04'N, 0°58.64'W (1 mile W of Nab Tower Light).
2. Vessels between 48m and 150m in length—within a boarding area (Saint Helens) bound by the following:
 - a. 50°43.77'N, 1°02.24'W.
 - b. 50°43.36'N, 1°03.10'W.
 - c. 50°42.82'N, 1°01.22'W.

d. 50°43.23'N, 1°00.37'W.

3. Vessels 48m or more in length using the W approach—in position 50°45.8'N, 1°09.1'W (about 0.75 mile NW of North Sturbridge Lighted Buoy).

Regulations

Port Operations and Information Service.—A Port Operations and Information Service covers Southampton Water, The Solent, the Port of Southampton, and Portsmouth. The monitoring and coordination of shipping movements is carried out by the following two stations:

1. Vessel Traffic Services (VTS) Southampton, which coordinates the movements of all vessels 20m or more in length in The Solent and Southampton Water, excluding the Port of Portsmouth N of a line between Gilkicker Point and Horse Sand Fort Light.

2. Queen's Harbour Master (QHM), Portsmouth, which coordinates the movements of all vessels N of a line between Gilkicker Point and Horse Sand Fort Light.

All vessels carrying dangerous or polluting goods entering the area should comply with the Merchant Shipping Regulations. Such vessels are required to complete a Check List, a copy of which must be sent to the Harbor Master by fax or telex and another copy handed to the pilot upon boarding.

The following procedures are mandatory for all vessels over 20m in length:

1. Inbound vessels should establish contact with Southampton VTS on VHF channel 12 when approaching the Nab Tower or the Needles. Their report should include the following:

- a. Vessel's name, call sign, and nationality.
- b. Maximum draft, loa, and beam.
- c. Destination and last port of call.
- d. ETA at various locations as requested.
- e. Deficiencies of vessel, navigation equipment, machinery, and cargo.

- f. Tankers only are to notify of any changes to information previously given (see Tanker Regulations above) and confirmation that the Tanker Check List has been completed.

2. Unseaworthy, damaged vessels, or vessels from which oil or dangerous substances are escaping or liable to escape must obtain permission before entering the ports of Southampton or Portsmouth.

3. Vessels requiring to anchor in the small ship anchorage or controlled anchorages 1, 2, or 3 are requested to seek permission from Southampton VTS (VHF channel 12) before entering the W approach channel (Thorn Channel) or North Channel (this also applies to outbound vessels).

4. All vessels proceeding to and from the Town Quay Marina should contact Southampton VTS and obtain permission before entering or leaving.

5. Within the area, vessels should maintain a continuous listening watch on VHF channel 12 (vessels in Portsmouth Harbour, N of the line from Gilkicker Point to Horse Sand Fort Light, should monitor VHF channel 11 or 13 as appropriate). In addition, vessels should report, as follows:

- a. When passing the designated reporting points. (See Signals for list.)

b. Fifteen minutes before getting underway from an anchorage in The Solent to Southampton VTS (making an inbound or outbound report, as appropriate); vessels bound for Portsmouth should also report to QHM Portsmouth stating ETA at Outer Spit Buoy.

c. On berthing.

d. When anchored prior to berthing or seeking shelter.

e. When a pilot has boarded.

6. All gas tankers, loaded, partly loaded, or not gas free, navigating between North Sturbridge Lighted Buoy and Warner Lighted Buoy should contact QHM Portsmouth on VHF channel 11 for movement information.

7. Outbound vessels and vessels shifting berth should report to Southampton VTS on VHF channel 12, as follows:

a. From the Port of Southampton, at least 15 minutes before leaving the berth.

b. From the port of Portsmouth on passing Southsea War Memorial. In addition, vessels in Portsmouth Harbour should request permission from QHM Portsmouth before leaving the berth.

The VTS Center at Southampton offers radar coverage assistance to vessels upon request.

Vessels involved in an incident or accident should report immediately to Southampton VTS stating whether assistance is required.

All sightings of significant patches of oil pollution should be reported to Southampton VTS or QHM Portsmouth as appropriate.

Portsmouth Harbour Fog Routine will be announced on VHF channels 11, 13, and 73 when visibility is reduced so low that normal shipping movements are considered dangerous. Vessels of over 20m in length must obtain permission from QHM Portsmouth on VHF channel 11 before moving in the harbor or its approach channels.

Southampton VTS may be contacted by e-mail, as follows:

vtssouthampton@abports.co.uk

The Solent and Southampton Water Marine Emergency Plan (Solfire), incorporating the Oil Spill Contingency Plan (Solspill), has been developed to deal with any marine accidents, including pollution, within The Solent, Portsmouth, the Port of Southampton, and Southampton Water. Details of Emergency Solfire will be broadcast by Southampton VTS or QHM Portsmouth on VHF as deemed appropriate.

General—Special regulations are in effect for vessels constrained by draft and vessels restricted in their ability to maneuver. These regulations are in force within the Port of Southampton and Portsmouth.

Vessels “constrained by draft” are defined, as follows:

1. Vessels having a draft of 10.5m or over.
2. Vessels having a length of 220m or over.
3. Vessels having a tonnage of 100,000 dwt or over.

Extracts from the local regulations are stated below.

Any vessel other than a “vessel not under command” or a vessel “restricted in ability to maneuver” should, if the circumstances permit, avoid impeding the safe passage of a vessel which is displaying the shape or lights for a vessel “constrained by draft.”

A vessel “constrained by draft” and inbound from Nab Tower to Southampton is at particular risk from outbound vessels when off the entrance to Portsmouth and when off North Sturbridge Buoy and shaping a course to pass S of Ryde Middle Shoal.

Therefore, vessels proceeding seaward from Portsmouth, or from Southampton N of Ryde Middle Shoal, should take every precaution to avoid impeding a vessel “constrained by draft” and avoid presenting such vessels with a crossing situation.

All vessels “constrained by draft” or “restricted in ability to maneuver” must have permission from QHM Portsmouth or Southampton VTS before navigating in Portsmouth Harbour or the Port of Southampton.

A Precautionary Area has been established in Thorn Channel and may best be seen on the chart.

All vessels over 220m in length navigating in the Port of Southampton must be given “a clear channel” when within the Precautionary Area between Hook Lighted Buoy (50°49.5'N., 1°18.3'W.) and Prince Consort Lighted Buoy (50°46.4'N., 1°17.6'W.).

No two vessels, each having a length of 180m or more, are to pass or overtake each other while within the Precautionary Area between Hook Lighted Buoy and Prince Consort Lighted Buoy.

Special regulations are also in force to ensure the safe navigation of gas tankers. Such vessels may not enter areas within The Solent where the visibility is less than 0.5 mile.

Gas tankers navigating between Hook Lighted Buoy and West Bramble Lighted Buoy or between East Bramble Buoy and Calshot Lighted Buoy, in North Channel, shall be given sole occupancy of these channels.

No gas tanker exceeding 8,000 cubic meters total capacity or 6,000 grt is permitted to enter or leave via the West Solent and Needles Channel.

A Boat Channel extends between No. 4 Buoy (50°47.0'N., 1°06.4'W.) and Ballast Beacon (50°47.6'N., 1°06.8'W.), at the W side of the entrance into Portsmouth. The use of this channel is mandatory for all vessels less than 20m in length entering or leaving the harbor. All sailing vessels fitted with engines must proceed under power when in this channel. Vessels less than 20m in length proceeding to or from Gunwharf Quays or the town cambers must cross the main navigation fairway at right angles to the N of Ballast Beacon, after first obtaining permission from the Queen's Harbour Master (QHM).

Vessels are advised to consult the local authorities and the pilot for the latest information concerning the regulations.

For additional regulations concerning the approach to the Port of Southampton, see paragraph 2.27.

Signals

Vessels should report to Southampton VTS on VHF channel 12 at the designated Reporting Points, with the following exceptions:

1. Points marked * or ** are additional ones for vessels entering Portsmouth; vessels passing these should report to the QHM Portsmouth on VHF channel 11 or 13 as appropriate.

2. At points marked **, the report should include the ETA at Outer Spit Lighted Buoy. After reporting, such vessels should resume a listening watch on VHF channel 12. The designated Reporting Points are listed below.

1. Inbound—Solent—East approach:
 - a. On an arc, with a radius of 10 miles, from Nab Tower Light (50°40'N., 0°57'W.).
 - b. 50°36.4'N, 0°58.1'W (vessels constrained by draft).
 - c. Nab Tower (or when pilot boarded), specify distance W or E of tower.
 - d. **Nab Tower (or when pilot boarded).
 - e. * Warner Lighted Buoy.
 - f. Approaching No Man's Land Fort.
 - g. * Saddle Lighted Buoy.
 - h. * Before entering Swashway Channels.
 - i. South Ryde Middle Lighted Buoy.
2. Inbound—Solent—West approach:
 - a. Needles Channel Fairway Lighted Buoy (or when pilot boarded).
 - b. Yarmouth, Isle of White.
 - c. Between West Lighted Buoy and East Lepe Lighted Buoy.
 - d. ** Prince Consort Lighted Buoy, Cowes Roads.
 - e. * North Sturbridge Lighted Buoy.
 - f. * Before entering Swashway Channels.
 - g. * Saddle Lighted Buoy.
3. Inbound—Southampton Water—Calshot Castle: Hook Lighted Buoy.
4. Outbound—Southampton Water:
 - a. Eling Lighted Buoy.
 - b. Royal Pier, Southampton.
 - c. Crosshouse Beacon, River Itchen.
 - d. Hythe Pier.
 - e. Calshot Castle/Hook Lighted Buoy.
5. Outbound—From Portsmouth only:
 - a. Naval War Memorial (Southsea).
 - b. Saddle Lighted Buoy.
6. Outbound—Solent—Eastward:
 - a. No Man's Land Fort.
 - b. Nab Tower (specify distance E or W of tower).
7. Outbound—Solent—Westbound: Yarmouth, Isle of White.

Outbound vessels are requested to display an "E" flag over the Answering Pendant when proceeding E towards the Nab Tower and the Answering Pendant over a "W" flag when proceeding W towards The Needles.

Caution

Dredges may frequently be encountered within the approach channels leading to The Solent.

High speed craft and large ro-ro ferries may be encountered within the The Solent and its approaches.

During the summer, numerous pleasure craft and yachts may be encountered within The Solent and its approaches. Buoys of various shapes and colors, mostly yellow, are used for racing marks on a seasonal basis.

Large and deeply laden tankers may be encountered turning into Thorn Channel from the E. (See Southampton—Regulations.)

Numerous oyster dredgers may be encountered at certain times of the year working in the vicinity of Stanswood Bay, W of the Western Approach Channel and the S part of Thorn Channel.

Several submarine pipeline and cable areas are situated within The Solent and may best be seen on the chart.

The direction of buoyage changes in The Solent in the vicinity of Western Approach Channel and is indicated on the chart.

Western Approach to The Solent

2.22 Needles Channel (50°38'N., 1°39'W.), lying between the W extremity of the Isle of Wight and the mainland to the N, forms the W approach to The Solent. It has a least depth of 10.5m and may be used at any time. Vessels with drafts over 9.5m should not attempt to use this channel, especially at LW with any scend.

Solent Bank (50°44'N., 1°26'W.), with a least depth of 11.2m, divides the W part of The Solent into two channels. The S channel is usually favored because of its width and overall deeper depths.

Tides—Currents.—At Hurst Point (50°42'N., 1°33'W.), tides rise about 2.7m at MHWS and about 2.3m at MHWN.

The tidal currents run mainly in the direction of the channel and attain their greatest rates between Hurst Point and Fort Albert, where in mid-channel they flow at up to 4.5 knots. On the ebb, the current sets down on Shingles Bank. On the flood, the current comes off the bank with numerous overfalls.

Needles Channel is subject to strong tidal currents and its width is liable to change. The section in the vicinity of The Bridge is subject to dangerous overfalls during heavy weather at all stages of the tide.

The tidal currents in the vicinity of Solent Bank set generally E and W across the shoals and reach a maximum rate of 2.8 knots at springs.

Aspect.—For information concerning landmarks in the approaches to the W part of The Solent, see paragraphs 2.18, 2.19, and 2.20.

Outer Fairway Lighted Buoy (50°38'N., 1°39'W.) is moored in the approach about 3 miles SW of Needles Point. The fairway is marked by lighted buoys and indicated by directional light sectors which may best be seen on the chart.

Pilotage.—For pilotage information and details of outer boarding positions for Southampton and Portsmouth, see Pilotage under The Solent (paragraph 2.21).

Regulations.—The IMO has adopted a recommendation that laden tankers over 10,000 grt should avoid this channel.

Caution.—The W approach to The Solent, via Needles Channel, offers a savings of about 25 miles over the E approach. However, in poor weather, or with an unfavorable tidal current, the savings in distance will be more than offset by the loss in speed and the extra care required to navigate this channel. Local knowledge is advised when transiting this channel.

Eastern Approach to The Solent

2.23 Nab Tower (50°40'N., 0°57'W.) is situated 4.6 miles ESE of Foreland, the E extremity of the Isle of Wight, and marks the E approach to The Solent. It is constructed of steel and concrete, 28m high, and is equipped with a racon. Nab Tower Light is shown from the tower.

The E approach lies between Foreland and Selsey Bill, 11 miles ENE. The shore extending NW of Selsey Bill is mostly low-lying.

The main dangers on the SW side of the outer part of the approach are Princessa Shoal and New Grounds which extend up to about 2 miles SE and 3 miles E, respectively of Foreland. The main dangers on the E side of the outer approach are Bullock Patch and Pullar Bank, which lie about 5 miles WSW and 3 miles SSW, respectively, of Selsey Bill.



Nab Tower

Nab Channel (50°42'N., 0°57'W.), 396m wide, is entered about 1 mile NNE of Nab Tower. It leads 2 miles NNW and NW into The Solent. The channel, which is marked by buoys, is dredged to a depth of 13.3m and can be used by tankers, with drafts up to 14.9m at HW.

Nab Channel is intended for use by inbound deep-draft vessels. Such vessels include deeply-laden tankers, large container vessels, and vessels constrained by draft.

A Deep-Draft Vessel Approach Area, the limits of which may best be seen on the chart, extends up to 3.2 miles SSE and up to 1.2 miles N of Nab Tower. Deep-draft vessels maneuver within this area to enter Nab Channel.

Other vessels should keep clear of Nab Channel and not impede the safety of deep-draft vessels navigating in the Deep-Draft Vessel Approach Area.

Deep-draft vessels should note that a ridge, with depths of less than 13m in places, extends across the Deep-Draft Vessel Approach Area, about 2 miles seaward of Nab Tower. Depths of less than 13m also lie in an area about 0.7 mile ENE of Nab Tower and may best be seen on the chart.

Deep-draft vessels, with drafts of 13m or more, should exercise extreme care when approaching the pilot boarding positions, and should not proceed N of 50°37.3'N at LWS.

Deep-draft vessels, as described above, should approach from the S and pass between Outer Nab No. 1 Lighted Buoy (50°38.2'N., 0°56.9'W.), moored 2 miles SSE of Nab Tower, and Outer Nab No. 2 Lighted Buoy (50°38.4'N., 0°57.7'W.), moored 1.8 miles SSW of Nab Tower. They should then pass close E of Nab Tower and enter Nab Channel. The track leads NNW and WNW through this buoyed channel.

Deep-draft vessels should continue in a WNW direction and pass between Dean Tail Lighted Buoy (50°43.0'N., 0°59.2'W.) and Nab End Lighted Buoy (50°42.6'N., 0°59.5'W.). These two lighted buoys mark the outer entrance of a fairway, which leads WNW and NW through the E part of The Solent.

The fairway, which is marked by buoys, extends for about 5 miles to Spithead (50°45'N., 1°06'W.), an area lying S of Portsmouth.

Vessels, other than the deep-draft vessels described above, may pass either side of Nab Tower, but must remain clear of Nab Channel. Such vessels should pass between New Grounds Lighted Buoy (50°42.0'N., 0°58.6'W.) and the W side of Nab Channel. Vessels should then enter the buoyed fairway leading through The Solent by passing between Nab End Lighted Buoy (50°42.6'N., 0°59.5'W.) and Dean Tail S Lighted Buoy (50°43.0'N., 0°59.6'W.).

Light-draft vessels may pass over the NE end of New Grounds, in a least depth of 8.3m. They may then proceed in a NW direction and join the buoyed fairway by passing SW of Nab East Lighted Buoy (50°42.8'N., 1°00.8'W.).

It should be noted that a wreck, with a depth of 5.2m, lies on the N side of the buoyed fairway, about 0.3 mile WNW of Dean Tail Lighted Buoy (50°43.0'N., 0°59.2'W.). This wreck is marked by two lighted buoys; a prohibited area, with a radius of 50m, is situated over it. Diving, anchoring, fishing, or passage by any vessel through the area is prohibited. Another wreck, with a swept depth of 13.1m, lies in the middle of the fairway, about 0.3 mile S of the prohibited area.

For information concerning the fairway channel leading from Spithead into Portsmouth, see paragraph 2.24.

For information concerning the fairway channel leading from Spithead into Southampton Water, see paragraph 2.27.

Tides—Currents.—At Nab Tower, tides rise about 4.5m at MHWS and 3.7m at MHWN.

There is a stand at HW which lasts for 2 or 3 hours twice during every 24-hour period. This allows large vessels to proceed directly from the sea to the area of Southampton.

In the vicinity of Nab Tower, the currents rotate counter-clockwise from the E on the flood, through N to W on the ebb, and then through S to the flood again. The maximum rate of the current to be expected is about 2 to 3 knots at springs and 1 knot at neaps.

Aspect.—In addition to the landmarks described in paragraphs 2.19 and 2.20, and the Nab Tower, the landmarks described below are prominent from seaward.

No Man's Land Fort (50°44.4'N., 1°05.7'W.), a round stone structure marked by a light, stands on the S side of The Solent, 1.2 miles NNE of Nettlesome Point. A submerged barrier extends about 0.4 mile SW from this fort.

Horse Sand Fort (50°45.0'N., 1°04.3'W.), a round stone structure marked by a light, stands on the N side of The Solent, about 1 mile NE of No Man's Land Fort. A submerged barrier extends 1.7 miles N from this fort to the mainland shore.



The Solent—No Mans Land Fort



The Solent—Horse Sand Fort

Pilotage.—For pilotage information and details of outer boarding positions for Southampton and Portsmouth, see Pilotage under The Solent (paragraph 2.21).

Anchorage.—A Deep-Draft Vessel Anchorage Area, used by VLCCs, lies centered about 5.5 miles SSW of the Nab Tower and may best be seen on the chart. Vessels using this anchorage area are required to report by VHF to Southampton VTS Center and the QHM Portsmouth.

Anchorage may be obtained, clear of a foul area, within Saint Helen's Road. The recommended berth lies in depths of 10 to 12m, about 1.6 miles NNE of Foreland. This anchorage is sheltered from all but SE winds and has good holding ground of mud and stiff blue clay.

Vessels should not anchor in the Deep-Draft Vessel Approach Area extending SSE of Nab Tower.

Caution.—In the S approaches, about 7 miles SSE of Nab Tower, there are depths of less than 20m. Heavy overfalls have been observed in this area. Numerous wrecks lie in this vicinity and may best be seen on the chart.

A spoil ground area lies about 4 miles S of Nab Tower and may best be seen on the chart.

Dredges may be frequently encountered within an area, the limits of which are shown on the chart, lying centered about 2.5 miles SSE of Nab Tower.

Several wrecks, with depths less than 10m, lie close adjacent to the fairway channel leading through the E part of The Solent and may best be seen on the chart.

Numerous pleasure craft and high-speed ferries may be encountered in the approaches to The Solent.

Regular cross-channel ferries frequently use an inshore route which leads in a NW direction and passes about 1.5 miles off Foreland, the E extremity of the Isle of Wight.

Portsmouth (50°48'N., 1°06'W.)

World Port Index No. 35600

2.24 Portsmouth, situated on the N side of the E part of The Solent, is a major naval base, the dockyard of which fronts a large area at the E side of the harbor. There are also extensive facilities for commercial ro-ro ferries and pleasure craft.

Winds—Weather.—Winds often blow along The Solent and Spithead, with the main breeze blowing in either from the SW or SE.

The sea breeze, which reaches force 3 or 4 on the coast and more over the water, increases with the day. The land breeze, more prevalent on clear winter nights, is usually from the NW but is light. Fog occurs from 3 to 4 days a month in winter but is rare in summer. Most heavy fogs are radiation in nature and generally lift by mid-morning.

Tides—Currents.—The tides rise about 4.6m at MHWS and 3.8m at MHWN.

Vessels usually enter or leave the harbor during the first 3 or 4 hours of the flood current, during the first, second, and fifth hours of the ebb current, and at slack low water.

The best time for large vessels to enter the harbor is as soon after LW as there is sufficient depth in the channel. They may also enter after HW, arranging to pass Outer Spit Lighted Buoy between 30 minutes and 1 hour after HW, depending upon the distance to the berth which is to be occupied. The maximum currents are usually experienced on the ebb when spring rates may reach 5.5 knots in the entrance, about 3 hours and 30 minutes after HW.

During maximum tidal flow, countercurrents in the harbor are common.

Depths—Limitations.—Spithead, an area within the E part of The Solent, is bound by Spit Sand, on the N side, Horse and Dean Sand, on the NE side, and Ryde Sand and No Man's Land, on the S side.

The main entrance channel leads N and NW, between the dangers, from the N side of Spithead to the harbor. The entrance fairway is maintained at a dredged depth of 9.5m as far as the N end of the main naval base. Vessels up to 9.5m draft can enter the harbor.

A small craft channel, for vessels under 20m in length, lies to the W of the main entrance fairway. It is 50m wide and may best be seen on the chart.

The Cambers, a tidal basin, is entered close N of Round Tower, at the E side of the harbor. It has an entrance, 45m wide, and provides berths for small ferries and fishing vessels.

The naval base occupies a large portion of the harbor frontage on the E side of the harbour. In addition, several mooring



Portsmouth—Main Harbor Channel

buoys, for use by naval vessels, are situated within the harbor and may best be seen on the chart.

The naval installations, which may best be seen on the chart, include three basins. The largest basin, No. 3, is maintained at a depth of 5.7m. It may be entered through a series of locks situated between South Wall and North West Wall. The two largest locks, which are used as drydocks, are 259m long and 33.5m wide.

The naval base, which can accommodate the largest war ships, provides berths as given in the accompanying table.

Portsmouth Berth Information		
Berth	Length	Depth
South Railway Jetty	219m	10m
Boat House Jetty	40m	10m
Pitch House Jetty	70m	10m
Sheery Jetty	64m	5m
North Railway Jetty	37m	10m
Middle Slip Jetty	396m	12m
North Corner Jetty	183m	10m
South West Wall	152m	8m
South Wall	101m	8m
North Wall	126m	8m
North West Wall	259m	10m
Fountain Lake Jetty	650m	6-8m

Whale Island, occupied by a naval installation, lies 0.3 mile N of No.3 Basin and is connected to the shore at the E side by a causeway. A training vessel is moored alongside a jetty at the SW end of the island.

Haslar Lake, at the W side of the harbor, is entered close N of Fort Blockhouse. No. 1 Jetty, on the NE side of the lake, is fronted by a reserved area and has a maintained depth of 6m alongside. No. 2 Jetty, on the S side of the lake, has a maintained depth of 5m alongside. The W side of the lake has facilities for pleasure craft and yachts.

An oil fuel jetty, curving ESE and SSE, extends from the W side of the harbor, 0.6 mile N of Fort Blockhouse. The inner berth on the N side of the jetty has a depth of 9m alongside and

the outer berth has a depth of 12m alongside. A marina fronts the shore close S of this jetty.

Fountain Lake, lying between the naval base and Whale Island, is the main commercial area of the port.

Flathouse Quay, at the SE end of the area, provides a berth, 190m long, with a depth of 7m alongside. It can accommodate vessels up to 156m in length and is used for reefer cargo.

Albert Johnson Quay, at the E end of the area, is 285m long and has a depth of 7m alongside. Generally, it can accommodate vessels up to 175m in length and is used for container, reefer, and general cargo. It is reported (2005) that a cruise ship, 28,430 grt and 198m in length, has been handled at this quay.

Continental Ferry Port, a passenger and vehicular ro-ro terminal, is situated on the N side of the area. It provides five berths, 130 to 180m long, with depths of 5 to 7m alongside. Vessels up to 180m in length can be accommodated.



Portsmouth—Old Town Docks



Portsmouth—Fountain Lake and the Naval Base

Aspect.—The city of Portsmouth, along with its suburbs, and the town of Southsea occupy the whole of the area known as Portsea Island at the E side of the harbor. The town of Gosport occupies most of the frontage at the W side of the harbor.

Southsea Castle (50°47.6'N., 1°05.3'W.), with its stone tower painted in prominent black and white bands, is situated at the S extremity of the land at the E side of the approach. A directional sector light is shown from the tower.



Southsea Castle Light

A number of prominent buildings stand within 0.4 mile of Southsea Castle and may best be seen on the chart. South Parade Pier fronts the shore 0.5 mile E of the castle.

Outer Spit Lighted Buoy (50°45.6'N., 1°05.5'W.) is moored about 1.1 miles S of Southsea Castle, at the entrance to the channel.

Fort Gilkicker (50°46.4'N., 1°08.5'W.) stands at the W side of the approach, 2 miles W of Southsea Castle. It is surmounted by a signal mast and marked by a light.



Fort Gilkicker

Spit Sand Fort (50°46.2'N., 1°05.9'W.), a prominent round stone structure, is also known as Spit Bank Fort. It stands 0.6 mile SW of Southsea Castle and is marked by a light.



Spit Sand Fort

A conspicuous water tower, with an illuminated clock, is situated near the shore, 1.2 miles ENE of Southsea Castle.

Saint Jude's Church, with a conspicuous spire 45m high, stands 0.5 mile N of Southsea Castle.

Round Tower, marked by a light, stands at the E side of the harbor entrance, about 1 mile NW of Southsea Castle.

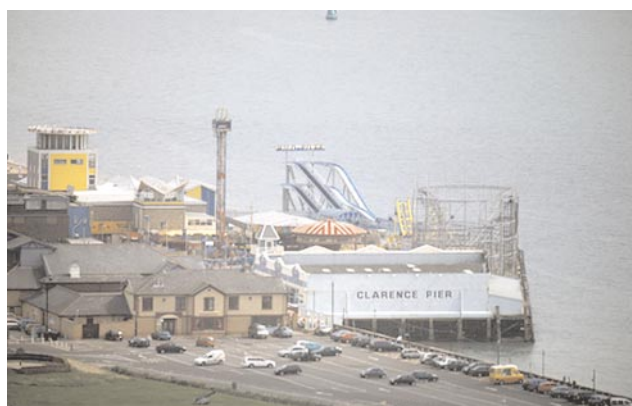
Saint Thomas Cathedral, with a prominent white cupola, stands about 0.2 mile E of Round Tower.

The Naval War Memorial is situated near the shore, 0.7 mile SE of Round Tower. It is 33m high, prominent, and stands on Southsea common overlooking the promenade. The memorial, which consists of a stone tower supported by four corner buttresses, commemorates the 24,589 names of the naval dead from both World Wars.



Portsmouth Naval War Memorial

Clarence Pier, with a prominent amusement park, fronts the shore, 0.3 mile NW of the Naval War Memorial.



Clarence Pier (Amusement Park)

Spinnaker Tower, 141m high, stands 0.3 mile N of Round Tower and is very conspicuous.

Several large buildings stand on the E side of the harbor. The Paul Europe Building, 63m high and the tallest, is situated 0.2 mile NNE of Spinnaker Tower.



Portsmouth Spinnaker Tower

HMS Warrior, Britain's first iron-hulled armored battleship, is berthed about 0.2 mile N of Spinnaker Tower. This vessel, powered by steam and sail, was launched in 1860.



Portsmouth Naval Base (HMS Warrior)

HMS Victory, the former flagship of Vice Admiral Lord Nelson, is berthed at the naval base in the SE corner of No.2 Basin, about 0.2 mile N of HMS Warrior. This 18th Century warship is the oldest serving Royal Navy vessel still in commission.

Fort Blockhouse, marked by a directional sector light, stands at the W side of the harbor entrance, about 0.1 mile W of Round Tower.

Holy Trinity Church, with a prominent tower 37m high, is situated in Gosport, 0.4 mile NW of Fort Blockhouse. Two conspicuous apartment buildings, 51m and 48m high, stand on the W side of the harbor, close E of the church. Extensive marinas front the NE and SE shores of Gosport.

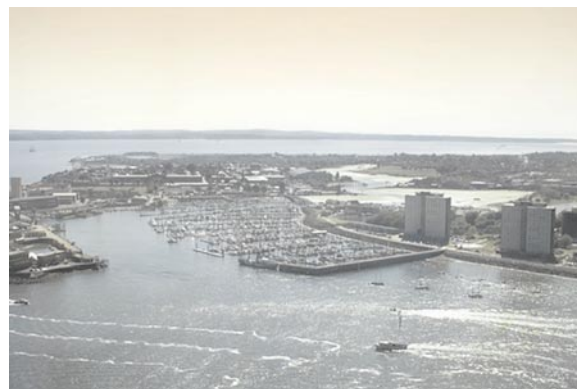
A prominent white tower, 43m high, stands near the shore, about 0.2 mile SW of Fort Blockhouse. HMS Alliance and the prominent buildings of the submarine museum are situated close WNW of the white tower.

Pilotage.—For pilotage information and details of the outer approaches, see Pilotage under The Solent (paragraph 2.21) and Eastern Approach to The Solent (paragraph 2.23).

Regulations.—For regulations concerning the approach to the harbor, see Regulations under The Solent (paragraph 2.21).



Portsmouth Naval Base (HMS Victory)



Portsmouth—Gosport South from N

Fog routine will be declared by the Harbormaster when visibility is so low that shipping movements would be dangerous. When in effect, no vessels over 20m in length are permitted to move within the harbor or in the approach without the prior permission.

A speed limit of 10 knots is in effect for most of the port.

Large vessels operating in the port are to be given the precedence accorded to vessels constrained by their draft.

Merchant vessels, or other private vessels, must not navigate within 50m of any HM vessels, foreign warships, or auxiliary vessels which are alongside or at anchor. Such vessels must also not navigate within 50m of any government facility/base or within 100m of any submarine which is alongside or at anchor.

Exclusion zones for warships underway may be activated by the Queen's Harbour Master (QHM). When in force, they will extend for 500m around the subject vessel or to the limits of navigable water if less. During activation, all vessels underway, except those involved in the escort or specifically authorized by the escort commander, are to remain clear of the zone.

An exclusion zone will be activated by direction from the QHM on VHF channel 11. It will be terminated on the subject

vessel crossing the Dockyard Port boundary or when notified by the QHM on VHF channel 11 or by Southampton VTS on VHF channel 12.

During activation, Southampton VTS, on behalf of the QHM, will direct traffic within the Dockyard Port of Portsmouth to remain at least 500m clear of the subject vessel. If this is not possible, commercial traffic will be held until the warship is clear. During the harbor entry or exit phase, all small craft traffic will cease in the harbor entrance.

The warship, for which the exclusion zone is activated, will display two vertically-disposed diamond shapes by day or two horizontally-disposed flashing red lights at the masthead at night. All escorting vessels will show a blue flashing light by day and at night.

Mariners are cautioned that vessels in contravention of an exclusion zone, after being warned by at least two methods (radio, flashing light, or voice), will be deemed to have the intention of committing a hostile act against the warship being escorted.

Anchorage.—Man of War Anchorage Area, with depths of 5 to 24m, lies off the S end of Spit Sand, 1.3 miles SW of Southsea Castle. The limits of the area and the designated numbered berths may best be seen on the chart. Merchant vessels are prohibited from using this anchorage area without prior permission from the Harbormaster.

Caution.—A submarine cable area, which may best be seen on the chart, lies in the approach to the port and is centered about 2 miles S of Southsea Castle.

A ferry runs across the fairway about 0.3 mile N of Round Tower.

Care must be exercised in the vicinity of Fort Blockhouse at the harbor entrance due to traffic congestion, especially during the summer.

High-speed craft, including hovercraft, may be encountered in the vicinity of the port.

It is reported (1998) that some of the areas in the harbor maintained by dredging have depths less than charted. The Harbormaster should be contacted for the latest information.

A minelaying practice area, the limits of which may best be seen on the chart, lies centered 2.3 miles SW of Southsea Castle. Anchoring and fishing are prohibited within this area.

A restricted area, with a 300m radius, lies centered about 1 mile SW of Southsea Castle. The area, marked by a buoy, is the former position of the wreck of the Mary Rose which sunk in 1545 and was raised 1982. Several unlit buoys may be moored within the area and the depths may be less than charted.

Central Portion of The Solent

2.25 The central portion of The Solent is considered to lie between a line extending from Stansore Point (50°47'N., 1°21'W.) to Egypt Point (50°46'N., 1°19'W.) and a line extending from Ryde (50°44'N., 1°09'W.) to Fort Gilkicker (50°46'N., 1°08'W.).

Stokes Bay, a slight indentation in the mainland coast, lies between Fort Gilkicker (see paragraph 2.24) and Browndown Point, 1.7 miles WNW, which is marked by a beacon.

Lee-on-Solent, a prominent resort, fronts the coast 1 mile NW of Browndown Point.

Hillhead, a resort town, stands in the vicinity of the mouth of the River Meon, 3 miles NW of Lee-on-Solent. A small boat harbor, which dries, lies at the mouth of the river and is marked by a beacon on its W side.

Ryde Middle (50°46'N., 1°14'W.) divides the E branch of The Solent into two channels, both equally used and easily navigated. This shoal bank is formed of mud, shells, gravel, and sand. It has a least depth of 3.4m and is marked by lighted buoys. The tidal currents in the vicinity of this shoal bank generally follow the direction of the channel, attaining maximum rates of about 2 knots.

For information concerning landmarks located on the S side, along the NE coast of the Isle of Wight, see paragraph 2.20.

For information concerning landmarks located in the approaches to Southampton Water, see paragraph 2.27.

Caution.—A submarine outfall pipeline extends 0.6 mile SSW from a point on the shore located about 0.3 mile ESE of Browndown Point. Its seaward extremity is marked by a lighted buoy.

2.26 Cowes Harbour (50°46'N., 1°18'W.) (World Port Index No. 35550), the principal port of the Isle of Wight, lies at the mouth of the River Medina and is entered from N. The river divides the harbor into East Cowes and West Cowes. Newport, the administration center of the isle, is situated 3.5 miles above the river mouth. The port, used by small commercial vessels, provides extensive facilities for pleasure craft and yachts.

Depths—Limitations.—The harbor has depths of 2 to 5m. The entrance fairway, marked by a lighted range and lighted buoys, lies at the W side of the mouth.

Medina Wharf, the longest commercial quay, lies at the W side of the river. It is 90m long and has a depth of 2m alongside. Generally, vessels up to 95m in length and 13.5m beam can be accommodated with drafts up to 5.3m at MHWS and 4.7m at MHWN. Vessels of greater length or beam will be considered on an individual basis after consultation with the Harbormaster. Vessels up to 60m in length with drafts up to 2.9m at MHWS and 2.1m at MHWN can reach Newport.

Pilotage.—Pilotage is compulsory in the approaches to the River Medina (Cowes Pilotage Area) for the following vessels, unless in possession of a Pilotage Exemption Certificate (PEC):

1. All vessels of 48m or more in length.
2. All passenger ferries and passenger vessels of 20m or more in length when carrying more than 12 passengers.
3. Defective vessels as initially determined by the pilot's or master's report or Department of Transport survey.
4. Sub-standard vessels and those which lack the proper amended charts and equipment.
5. All vessels engaged in towing with an overall length of 48m or more.
6. All vessels with a beam or aggregate beam over 15m.

The Cowes Pilotage Authority, after taking into account the nature and quantity of a dangerous substance, may also direct a vessel to employ the service of an authorized pilot.

The Cowes Pilotage Area is bound by a line joining the following points:

1. Egypt Point (50°46.0'N., 1°18.7'W.).
2. Position 50°46.3'N, 1°18.1'W.
3. Prince Consort Lighted Buoy (50°46.4'N., 1°17.5'W.).
4. Position 50°46.1'N, 1°16.5'W.

5. Old Castle Point (50°46.0'N., 1°16.6'W.)

Vessels requiring pilotage should send an ETA to the harbor office and Cowes Pilotage Authority 12 hours prior to arrival. The message must include the vessel's name, length, draft, berth destination, and ETA.

The following arrangements have been made with the Southampton Harbour Authority:

1. Vessels of 61m or more in length on passage to or from Cowes or Cowes Anchorage are subject to compulsory pilotage within the inner limits of the Southampton Pilotage Area.

2. On request, Cowes Pilotage Authority will provide pilots to conduct vessels to and from the E or W inner limits of the Southampton Pilotage Area or the E outer limit (Nab Tower Light) providing that a vessel is not on route to other locations within the Southampton Pilotage Area (N of the line 50°46.95'N passing through South Bramble Lighted Buoy).

Vessels bound for Cowes from the Western Solent and being navigated by a valid PEC holder must notify Southampton VTS of their intention to enter Cowes harbor and approaches when approximately 0.7 mile W of Gurnard Ledge Lighted Buoy.

All vessels, regardless of size and length, are strongly advised to maintain a watch on VHF channel 69 and listen to traffic reports and associated radio broadcasts concerning the movement of vessels within the harbor.

All vessels requiring a Cowes and bound for the Cowes or Newport pilotage area from the Western Solent are advised not to proceed E of the pilot boarding position (0.7 mile W of Gurnard Ledge Lighted Buoy) until the pilot boards.

Pilots may be contacted on VHF channel 69 and board, as follows:

1. Vessels less than 61m—In the vicinity of the Prince Consort Lighted Buoy (50°46.4'N., 1°17.5'W.).

2. Vessels between 61m and 150m in length:

a. Eastern Approach—in 50°45.83'N, 1°09.09'W (about 0.75 mile NW of North Sturbridge Lighted Buoy).

b. Western Approach—in 50°45.43'N, 1°21.64'W (about 0.7 mile W of Gurnard Ledge Lighted Buoy).

c. Vessels carrying dangerous or polluting goods as a bulk cargo and using the Eastern Approach—In the Saint Helen's Pilot Boarding Area bound by the following positions:

i. 50°43.77'N, 1°02.24'W.

ii. 50°43.36'N, 1°03.10'W.

iii. 50°42.82'N, 1°01.22'W.

iv. 50°43.23'N, 1°00.37'W.

d. Vessels may also embark a Cowes pilot, on a voluntary basis, in the vicinity of the New Grounds Lighted Buoy (50°41.8'N., 0°58.5'W.).

When the visibility falls below 0.5 mile, the pilot boarding position will be relocated to the Saint Helen's Pilot Boarding Area as specified by Southampton VTS.

Cowes pilots can be contacted through the appropriate local agents of Southampton VTS.

Regulations.—All commercial vessels and private recreational vessels of 30m or more in length are required to give notification of entry into, movement within, or departure from

the harbor on VHF channel 69. The notification, which should include the vessel name, position, and intention, must be made in the form of an "All Ships Call" prior to departure from any berth within the harbor and when passing the following positions:

1. Inbound vessels—Fairway approaches, East Cowes Ferry Terminal (50°45.53'N., 1°17.44'W.), and Folly Inn.

2. Outbound vessels—Folly Inn, Kingston Wharf (50°44.80'N., 1°17.35'W.), and East Cowes Ferry Terminal.

All vessels underway in the harbor that are required to give notification must, on hearing an "All Ships Call," respond by stating their name, position, and whether inbound or outbound. The purpose of this procedure is to assist vessels in determining the necessary actions for safe navigation.

The chain ferry gives way to all traffic. All commercial vessels and all other vessels over 30m in length are required to advise the ferry of their intention to pass through the ferry area on VHF channel 69. The ferry will acknowledge the call. The "All Ships Call" described above is supplementary to that required for the chain ferry.

Any incidents including damage to vessels, damage to navigational aids, damage to shore facilities, or pollution should be reported immediately to Cowes Harbor Master on VHF channel 69.

The Port of Cowes may be contacted by e-mail, as follows:

chc@cowes.co.uk

Anchorage.—Cowes Roads, lying off the entrance to the river, provides anchorage, in depths of 9 to 15m. This roadstead is bound on the NW side by Prince Consort Shoal.

Caution.—All vessels entering or leaving the harbor must keep a good lookout for high speed craft including hydrofoils and catamarans on regular service. Such vessels, which may enter and leave the fairway at speeds in excess of 6 knots, will exhibit a quick flashing yellow light.

Local knowledge is advised for entry.

Southampton (50°54'N., 1°24'W.)

World Port Index No. 35580

2.27 The Port of Southampton is situated at the head of a 5-mile long inlet known as Southampton Water. It is located at the junction of the River Test and the River Itchen and is one of the principal ports in England.

Winds—Weather.—During the day the sea breeze either blows from the SW up the W branch of The Solent or from the SE up Spithead and Southampton Water. The land breeze, which blows on clear nights throughout the year, generally is from the NW and comes down Southampton Water fairly steadily, but here it usually is light.

Gales from the SW occur on occasion in winter and close down Needles Channel, but the Nab approach is usually always open.

Fog occurs on the average of 4 or 5 days a month in winter, but is rare during the summer season. Morning radiation type fog is more common on calm winter nights and usually clears fairly early in the day.



Southampton—Queen Elizabeth II Terminal

Tides—Currents.—The tides rise about 4.5m at MHWS and 3.7m at MHWN.

In Southampton Water the unusual phenomenon of double HW occurs. The flood current and HW period have a duration of about 9 hours. The ebb current has a duration of only about 3 hours 30 minutes.

There is also a local phenomena called “Young Flood Stand.” This stand of the tide starts about 2 hours after LW at Southampton with a rise of about 1.9m. It is of considerable benefit for handling large vessels at other than HW.

Tidal currents generally follow the channels in Southampton Water except at the S end, where they become confused over Bramble Bank. The currents, at springs, attain rates of 2.5 knots near the entrance of Southampton Water and 1.7 knots close below the port facilities.

Depths—Limitations.—Vessels should continue in a WNW direction for about 7 miles from Spithead (see paragraph 2.23) through the central portion of The Solent to the entrance to Southampton Water. It is reported (2005) that the main fairway passes S of Ryde Middle (see paragraph 2.25).

Thorn Channel (50°48'N., 1°18'W.) and Calshot Reach, which may best be seen on the chart, lead in a N direction into Southampton Water from The Solent. These channels are enclosed within a Precautionary Area (see Regulations).

Southampton Water is considered to extend about 5 miles NW from the vicinity of Calshot Castle to the S end of Southampton Docks, at the junction of the River Test and the River Itchen. The River Itchen flows in a N direction; the River Test, which is a continuation of Southampton Water, leads NW.

The fairway is dredged to a depth of 12.6m through Thorn Channel, Calshot Reach, and the River Test, as far as the main container terminal. The area leading through the River Itchen to Eastern Docks and Empress Docks is dredged to a depth of 9.1m.

The River Hamble, with extensive yachting facilities, flows into the NE side of Southampton Water, 1 mile N of Calshot Castle.

A shipyard, with a large covered berth, is situated at Woolston, at the E side of the River Itchen, 0.8 mile above the mouth. A bridge spans the river close above this shipyard. The upper part of the river, above the bridge, provides facilities for yachts and pleasure craft.

A prominent marina, with residences, is situated on the S side of Southampton Water about 0.6 mile SW of the entrance to the River Itchen. It is entered via a small lock.

A base, leased to the U.S. Department of Defense, is situated 0.5 mile SE of the marina and is fronted by Admiralty Jetty. A ro-ro dolphin berth and several mooring buoys are situated near the head of this jetty.

Marchwood Military Port is situated on the S side of the River Test, 2 miles NW of Admiralty Jetty, and is fronted by three piers. These piers provide six berths, including a ro-ro facility. The area leading from the main fairway to the piers is dredged to a depth of 8m.

King George V drydock is situated at the W end of Western Docks. It is 365m long, 40.4m wide, and has a depth of 11m over the sill. This drydock can accommodate vessels up to 90,000 dwt, 350m in length, 39.5m beam, and 11m draft.

Town Quay, fronting the River Test, is situated close W of Eastern Docks. Berths for small automobile, passenger, and high speed ferries are situated in the vicinity of this quay.

Berths.—Fawley Marine Terminal (Esso Marine Terminal) is situated 1.5 miles NW of Calshot Castle. The terminal quay, 0.7 mile long, is connected to the shore by two piers. It provides five ocean berths on the outer face and four coastal berths on the inner face. The ocean berths are 213 to 366m long with depths of 10.2 to 14.9m alongside.

There are facilities for oil, liquefied gas, and chemical tankers. Partly-loaded VLCCs can be handled. Vessels up to



Southampton Docks



BP Hamble Marine Terminal



Southampton Container Terminal

421,680 dwt, 378m in length, and 14.9m draft have been accommodated at the terminal.

BP Hamble Oil Terminal is situated on the N side of the channel, 0.5 mile NW of the entrance to the River Hamble. It consists of a jetty head, with one berth, connected to the shore by a ramp, 450m long. The berth has a depth of 13.6m alongside. Vessels up to 110,000 dwt, 260m in length, and 13.1m draft can be handled.

Eastern Docks, which lie at the junction of the River Itchen and River Test, consist of Ocean Dock, Empress Dock, Itchen Quay, and Test Quay. Empress Dock and Itchen Quay face E toward the River Itchen. Ocean Dock and Test Quay face S toward the River Test. An area dredged to a depth of 10.2m leads from the main fairway to Eastern Docks. The entrance to Ocean Dock basin is 121.9m wide. The entrance to Empress Dock basin is 48.5m wide.

Western Docks front the N side of the River Test to the W of Eastern Docks. There are facilities for ro-ro, reefer, cruise, bulk, and general cargo vessels.

Southampton Container Terminal is situated W of Western Docks. Vessels up to 15m draft can be accommodated alongside this terminal at HW.

The main cargo facilities are listed in the accompanying table.

Southampton Berth Information			
Dock	Berth	Depth	Length
Southampton (Prince Charles) Container Terminal			
	207	15.0m	420m
	206	13.6m	310m
	204-205	12.8m	620m
Western Docks			
Cable Ship Berth	203	9.1m	274m
Vehicle Berth	202	12.1m	274m
	201	10.2m	280m
	107-109	11.7m	620m
Cruise Ship Terminal	105-106	11.7m	525m
Fruit Terminal	101-104	10.2m	1,118m
Eastern Docks			
Ocean Dock Basin	43-44-47	11.7m	692m
	45-46	10.2m	431m
Test Quays	48-49	7.1m	226m
	41	8.7m	172m
	40	9.3m	148m
Test Quays (passenger)	38-39	10.5m	360m
Dock Head	37	7.8m	143m
Empress Dock Basin	20-21	7.5m	258m
	22-23	6.8m	234m
	24-27	7.2m	502m

Southampton Berth Information			
Dock	Berth	Depth	Length
Itchen Quays	29	5.6m	106m
	34-36	9.9m	484m
	30-33	9.1m	263m
	34-36	9.9m	484m

Aspect.—Southampton Water is considered to extend N from the vicinity of Calshot Castle, which stands 2.5 miles NE of Stansore Point (50°47'N., 1°21'W.). The castle and a radar tower, 34m high, are situated at the end of a low spit and are both prominent.



Calshot Castle



Calshot Radar Tower

A house, with a conspicuous red roof, stands near the E shore of Southampton Water, 1 mile NW of Hillhead (see paragraph 2.25).

Luttrell Tower, with a flagstaff, stands 1.1 miles SW of Calshot Castle and is conspicuous.

West Bramble Lighted Buoy (50°47.2'N., 1°18.6'W.), equipped with a racon, is moored at the SW extremity of Bramble Bank, 2 miles S of Calshot Castle.

A very conspicuous chimney, with an elevation of 198m, stands in the vicinity of Fawley Power Station, 0.8 mile W of Calshot Castle. Numerous tanks, flares, and chimneys are situ-

ated near Fawley Marine Terminal, 1.2 miles NW of the power station.



Fawley Power Station

Netley Great Dome stands at the E side of Southampton Water, 3 miles NNW of Calshot Castle, and is conspicuous.



Netley Great Dome

A conspicuous silo, 53m high, stands on the S extremity of Eastern Docks at the W entrance point of the River Itchen. The VTS Center, with a prominent framework mast, is situated close W of the silo.

A conspicuous building, 70m high, stands about 1.1 miles E of the silo. Five prominent blocks of apartments, 43m high, are situated in line close NW of this building.

A prominent radar scanner, 34m high, stands on the seaward extremity of Admiralty Jetty, about 0.9 mile SSE of the silo.

Pilotage.—For pilotage information and details of outer boarding positions for Southampton and Portsmouth, see Pilotage under The Solent (paragraph 2.21).

Regulations.—A Precautionary Area, which may best be seen on the chart, encloses Thorn Channel and Calshot Reach.

All vessels over 150m in length while navigating within this Precautionary Area will be given a Moving Prohibited Zone around the vessel of 1,000m ahead and 100m either side of the vessel. Small vessels under 20m in length are prohibited from entering the Moving Prohibited Zone.



Eastern Docks Silo



Admiralty Jetty Radar Tower

All vessels of over 150m in length when navigating in the area are required to display, where it can best be seen, a black cylinder by day and three all round red lights in a vertical line at night to indicate visually the presence of the Moving Prohibited Zone ahead and either side of the vessel.

When operationally possible, such vessels will be preceded by the Southampton harbor patrol launch showing, in addition to normal steaming lights, a blue flashing light.

The Southampton VTS Center makes hourly broadcasts on VHF channel 12 giving information on Moving Prohibited Zones in operation in the Precautionary Area.

Vessels under 20m in length are prohibited from entering the channel between West Bramble Lighted Buoy (50°47.2'N., 1°18.7'W.) and Hook Lighted Buoy (50°49.5'N., 1°18.3'W.), when vessels over 100m in length are navigating in the main channel.

Speed restrictions are in effect for various portions of the harbor. The pilot should be consulted for details.

All tankers over 60,000 dwt, bound to or from Fawley Marine Terminal, are required to take the services of an escort tug from S of the Nab Tower to the berth.

It is reported that VLCCs are not permitted to enter Thorn Channel on the flood tide when the wind is between W and SW and in excess of 30 knots.

Special regulations apply to gas tankers entering the port.

Gas tankers in transit within The Solent may not enter any areas where the visibility is less than 0.5 mile.

Gas tankers navigating between West Bramble Lighted Buoy and Hook Lighted Buoy shall be given sole occupancy of the channel.

No vessel may anchor closer to a gas tanker than twice their combined lengths and at no time will more than three gas tankers be permitted to anchor within the designated Controlled Anchorage Area (See Anchorage).

No gas tankers exceeding 8,000 cubic meters or 6,000 grt are permitted to enter or leave the port via the W solent.

For regulations concerning the approach to the port, see Regulations under The Solent (paragraph 2.21) and Eastern Approach to The Solent (paragraph 2.23).

Signals.—Traffic signals are shown from a mast at the VTS Center at the S extremity of Eastern Docks. The signals displayed on the E side of the mast apply to the docks fronting the River Itchen, while the signals on the W side apply to those fronting the River Test. The day signals consist of colored semaphore-type boards. The night signals consist of lights.

The signals are, as follows:

1. A green board indicates a vessel may enter or leave the dock with great caution.
2. A red board indicates entry or departure is forbidden.
3. A red board over a green board indicates entry or any movement in the docks is forbidden in order to facilitate the departure of a vessel.
4. A green board over a red board indicates departure or any movement in the docks is forbidden in order to facilitate the entry of a vessel.

Anchorage.—A Controlled Anchorage Area, the limits of which may best be seen on the chart, extends for 2 miles above Calshot Castle. No vessel may anchor in the area without previous permission from the VTS Center.

Vessels over 91.4m in length must anchor in the berths designated No. 1, No. 2, and No. 3, which are indicated on the chart.

Smaller vessels may, with prior permission, anchor in an area on the E side of Calshot Reach. This area lies centered 0.5 mile NNE of Calshot Castle and has depths of 5 to 6m.

A submarine pipeline crosses the channel close N of the oil terminal. An area within which anchoring and fishing are prohibited lies in the vicinity of the pipeline and may best be seen on the chart.

Directions.—For details of directions in the outer approaches, see Eastern Approach to The Solent (paragraph 2.23).

Caution.—Large commercial vessels from E making the turn into Thorn Channel, after passing N of Prince Consort Lighted Buoy, may pass close N of Gurnard Lighted Buoy (50°46.2'N., 1°18.8'W.) before altering course to starboard to enter the channel WNW of West Bramble Lighted Buoy. Such vessels may be encountered anywhere in the Precautionary Area.

Radar Reference Lines, shown on the chart, are used to indicate the position of a vessel by the Harbour Radar Control. Dots are shown along the line at intervals of 0.1 mile with circles where the line changes direction. A vessel underway in the radar coverage area will at any time, on request by VHF to

the VTS Center, be given its position relative to the line, or, where the line is not shown, relative to navigational landmarks.

The shoal area fronting the shore to the S of Marchwood Military Port (50°53.7'N., 1°25.2'W.) is fouled by several sinkers with wire attachments.

The Solent to Selsey Bill

2.28 The mainland shore between The E part of Portsmouth and Selsey Bill, 10 miles ESE, is low-lying. It is backed by a range of chalk hills about 10 miles inland. The coast, which is fronted by an area of shallow sands, consists of an extensive inlet occupied by Portsea Island, Hayling Island, and Thorney Island. These islands are intersected by Langstone Harbour and Chichester Harbour.

Langstone Harbour (50°47'N., 1°02'W.) is entered between two drying flats known as East Winner, formed of sand, and West Winner, formed of gravel. The bar at the entrance has a least depth of 1.8m and local knowledge is required. This inlet is used only by pleasure craft, yachts, and small coasters. The harbor may be contacted by VHF and pilots are available from Portsmouth. There are two jetties, 73m and 105m long. Vessels up to 80m in length and 4.4m draft can be handled at MHWS.

Chichester Harbour (50°47'N., 0°56'W.) is low, marshy, and encumbered with shoals. The bar at the entrance lies between West Pole and Middle Pole, two drying sandbanks. It is normally dredged to a depth of 1.5m. However, shoaling often occurs after strong winds and depths over the bar may vary by up to 0.8m. Local knowledge is essential. The inlet, used only by pleasure craft, is an important yachting center and conservation area. Formal pilotage services are not available, although masters of large craft may obtain advice by VHF

from the Harbormaster's office. A prominent brick tower, in ruins, stands near the shore, about 1.4 miles ESE of the entrance to this inlet. During summer months, up to 5,000 yachts may be moored in the vicinity of the harbor.

2.29 Selsey Bill (50°43'N., 0°47'W.), fronted by dangerous shoals, appears from E and W as a low, sharp point. The tower of the coast guard station, situated 0.7 mile NW of the point, is conspicuous from seaward.

Several buildings stand on the point and are reported to be radar prominent, but difficult to identify. The spire of Chichester Cathedral, standing about 7 miles N of the point, is reported to be conspicuous from seaward.

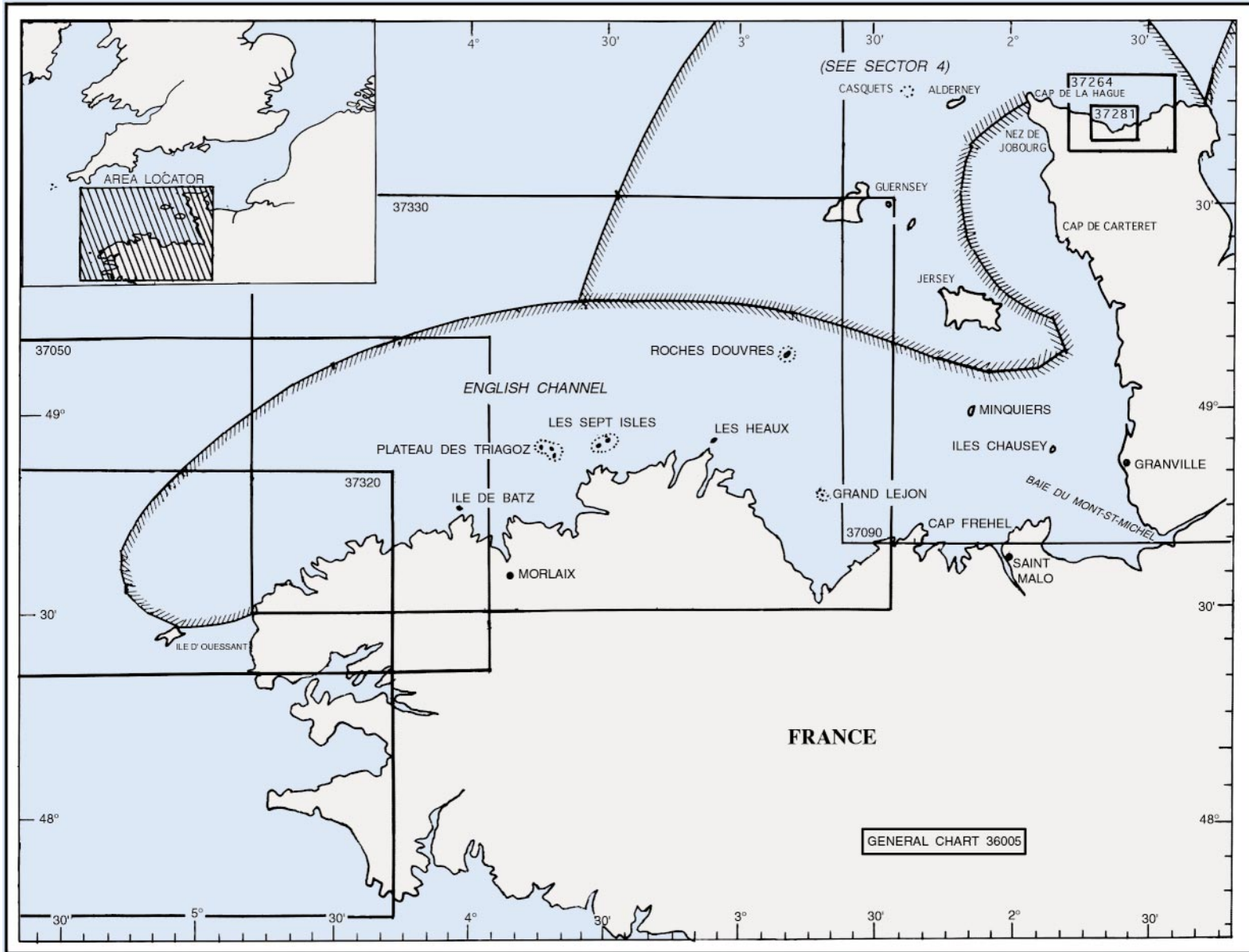
For a description of the coast extending E of Selsey Bill, see Sector 7.

The Owers (50°42'N., 0°44'W.) is the collective name for the areas of foul ground and rocky shoal patches fronting Selsey Bill. These dangers, which may best be seen on the chart, extend up to about 3 miles S, 6 miles SE, and 4 miles E of the point.

The Looe, a channel with depths of 6 to 7m, leads between the dangers fronting Selsey Bill. It is used only by small vessels. Passage should be only attempted during daylight and in clear weather. Local knowledge is advised. Buoys indicating the channel cannot be relied on and the leading marks are difficult to identify.

Owers Lighted Buoy (50°39'N., 0°41'W.), moored about 6 miles SE of Selsey Bill, marks the SE extremity of these dangers. It is equipped with a racon.

Vessels are recommended to pass clear to the S of this lighted buoy before changing course toward the E entrance of The Solent.



Additional chart coverage may be found in NGA/DLIS Catalog of Maps, Charts, and Related Products (Unlimited Distribution).

SECTOR 3 — CHART INFORMATION

SECTOR 3

FRANCE—SOUTH COAST—ILE D’OUESSANT TO NEZ DE JOBOURG, INCLUDING PLATEAU DES MINQUIERS AND THE ILES CHAUSEY

Plan.—The coast described in this sector comprises the S shore of the English Channel from Ile d’Ouessant to Nez de Jobourg. The sector does not include the Channel Islands, but does include Plateau des Minquiers and the Iles Chausey.

The descriptive sequence is from W to E, then N along the W coast of the Cotentin Peninsula.

General Remarks

3.1 The NW coast of Brittany, which comprises the NW part of France, is encumbered with dangers. Ile d’Ouessant (48°28’N., 5°05’W.), in the N part, lies 10 miles offshore with numerous islands and dangers extending SE between it and the mainland. Chaussee de Sein, in the S part, is a dangerous reef that extends up to about 14 miles seaward.

L’Iroise, a wide expanse of sea, lies between these two dangers and fronts the W approaches to the Port of Brest and Baie de Douarnenez, both of which deeply indent the coast. Safe anchorage, sheltered from all weather, can be obtained in Rade de Brest by all classes of vessels.

However, along this stretch of coast between Ile d’Ouessant and Les Heaux de Brehat there are no harbors or anchorages suitable for large vessels.

For additional information in regard to approaching and transiting the English Channel and Dover Strait, including details of navigation and routes, see paragraphs 1.1, 6.4, and 6.5.

Tides—Currents.—As the English Channel is entered, and the fairway narrows, the rotatory currents of the approach become gradually more and more rectilinear. The rates of the currents in the fairway vary with the width, and are greatest in the narrowest parts.

In the middle of the fairway, between Bill of Portland and Saint Catherine’s Point, on the English coast, and Cap de la Hague and Pointe de Barfleur, on the French coast, currents attain rates up to about 3.5 knots at springs. In the widest parts, currents seldom attain rates exceeding 2.5 knots at springs.

Although the surface current has a dominant NE and E directional set, it is influenced significantly by the wind, which is variable in direction during all seasons, although W winds predominate.

The prevailing direction of the North Atlantic current is therefore likely to be most in evidence after strong and long continued SW or W winds.

The time of HW changes rapidly along the French coast, and is about 6 hours later at Le Havre than at Ile d’Ouessant. The time at which the tide turns usually differs considerably from the time of local HW. The flows, therefore, cannot be described as “flood” and “ebb”, and are usually termed E and W. However, it must be understood that the E current is that which runs up the Channel, from the Atlantic towards Dover Strait, and the W current that which runs down the Channel, from Dover Strait towards the Atlantic.

The actual directions of the currents are reported to differ considerably from E or W, and, where this occurs, the directions are stated.

In the estuaries and rivers, currents are usually called the “incoming” and “outgoing” but may be referred to as flood and ebb.

Among the Channel Islands, the times and directions of the flow differ greatly from those in the fairway of the English Channel. Therefore, care is required when approaching the above localities. The tidal flows at locations to the W and NW of Ile d’Ouessant are significantly affected by current due to the prevailing wind.

Tidal currents in general run NE on the flood and SW on the ebb to the N Ile d’Ouessant; NNE on the flood and SSW on the ebb to the W of 5°10’W; and ENE on the flood and S on the ebb to the S of Ile d’Ouessant.

The currents near the N coast of France differ from those in the main fairway of the English Channel, especially off the W part of the coast between Ile d’Ouessant and Ile de Brehat.

In this locality, the time at which the current turns, at about 5 miles outside the islands and rocks that fringe the coast, may be as much as 3 hours later than inside them.

During inclement weather, when S of Ile d’Ouessant, it is essential to guard against being set towards the dangers SE of the island on the flood current, or towards Chaussee de Sein on the ebb current.

Regulations—Traffic Control.—An IMO-adopted Traffic Separation Scheme (TSS) lies NW of Ile d’Ouessant and may best be seen on the chart.

From NE of this TSS, the main traffic flow leads in a general ENE direction for about 110 miles to the vicinity of the TSS off Casquets.

Ouessant NE Lighted Bouy (48°59’N., 5°24’W.), equipped with a racon, is moored about 34 miles NNW of Creac’h Point Light (48°28’N., 5°08’W.), at the NE side of the TSS.

Ouessant SW Lanby (48°30’N., 5°45’W.), equipped with a racon, is moored about 25 miles WNW of Creac’h Point Light, at the SW side of the TSS.

The TSS consists of the following:

1. An inshore traffic zone.
2. A two-way traffic route, 2 miles wide, centered 10.5 miles NW of Creac’h Point Light (48°28’N., 5°08’W.).
3. A northeastbound traffic lane, 5 miles wide, centered 26 miles NW of Creac’h Point Light.
4. A southwestbound traffic lane, 5 miles wide, centered 37 miles NW of Creac’h Point Light.

The above routes and traffic lanes are bordered by separation zones which may best be seen on the chart.

The two-way route may be used only by the following vessels:

1. Passenger ships operating on regular schedules to or from a Channel port situated W of the meridian 1°W.

2. Vessels sailing between ports situated between Cape de la Hague (49°44'N., 1°56'W.) and Cape Finisterre (42°53'N., 9°16'W.), except for the following:

a. Vessels transporting oils as listed in Annex I, Appendix I, of the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78).

b. Vessels carrying substances in bulk classed in categories A and B listed in Annex II, Appendices I and II, of the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78).

The IMO states that navigation in the Inshore Traffic Zone at the SE side of this TSS is subject to French national regulations. These regulations state that traffic movements are to be in accordance with Rule 10 (72 COLREGS).

The following regulations, promulgated by the French authorities, affect the Inshore Traffic Zone (ITZ) and certain inner channels lying off NW Bretagne:

1. Navigation is prohibited in Chenal du Four, Chenal de la Helle, Passage du Fromveur, and in Raz de Sein except to the following categories of vessels:

- a. French government vessels.
- b. Rescue craft and those giving assistance to others.
- c. Passenger vessels employed on local services.
- d. Fishing vessels with lengths less than 35m.
- e. Pleasure craft.

Exceptions are possible under certain circumstances for other types of vessels, notably vessels under 1,600 grt not carrying passengers or dangerous goods.

2. Vessels transiting the ITZ or the above channels must report to the CORSEN-OUESSANT Vessel Traffic Service (VTS) 2 hours before commencement of their passage.

Special regulations and reporting procedures apply to tankers transporting hydrocarbons and to vessels transporting dangerous substances navigating in the approaches to the French coasts of the North Sea, the English Channel, and the Atlantic Ocean between the Belgian border and the Spanish border. Such vessels preparing to pass through or stop within French territorial waters are required to send a message to the appropriate CROSS station 6 hours in advance giving their intended movements. In addition, such vessels must maintain a listening watch on VHF channel 16 and use the designated Mandatory Access Routes and Channels when approaching a port or roadstead.

Navigation at less than 7 miles from the French coast is forbidden for vessels over 1,600 grt carrying dangerous cargo in bulk, except in Dover Strait.

For further details of these special procedures, see Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea.

Regulations—Vessel Traffic Reporting Systems.—The CORSEN-OUESSANT Vessel Traffic Service (VTS) system, with full radar surveillance, is in operation in the vicinity of the TSS lying off Ile d'Ouessant. This VTS is mandatory under SOLAS regulations and covers a circular area, with a radius of 40 miles, centered on Ile d'Ouessant.

The VTS Traffic Center broadcasts bulletins in French and English on VHF channel 79, following an announcement on VHF channel 16, concerning marine traffic, urgent warnings,

and weather information. These broadcasts are made at 10 and 40 minutes past every hour.

Regular weather bulletins are given every 3 hours from 0150 GMT (UT).

If required, the VTS Traffic Center is capable of providing individual information to vessels with regard to positioning and navigational assistance.

All vessels over 300 grt entering the area must report to Ouessant Traffic (Ushant Traffic) on VHF channel 13 or 79 and give the following information:

Designator	Information Required
A	Name, call sign, and IMO number.
C or D	Position.
E	Course.
F	Speed.
P	Cargo if presence on board of potentially dangerous cargo (for vessels in the northeastbound lane of TSS).
Q	Defects (if relevant).
R	Pollution/dangerous goods lost overboard.

The CORSEN-OUESSANT VTS operates the following shore stations:

1. Ouessant Traffic Control Center at CROSS Corsen (48°24.9'N., 4°47.2'W.)—VHF channels 13 and 79.
2. Le Stiff at Ile d'Ouessant radar tower (48°28.6'N., 5°03.1'W.)—VHF channel 16.
3. Saint-Mathieu Stiff at Vigie de Saint-Mathieu (48°19.8'N., 4°46.2'W.)—VHF channel 16.
4. La Chevre at Cap de la Chevre (48°10.2'N., 4°33.0'W.)—VHF channel 16.
5. La Raz at Vigie du Raz (48°02.3'N., 4°43.8'W.)—VHF channel 16.

Station 2, Station 3, Station 4, and Station 5 can be used to relay radio communications to the Traffic Control Center.

Ouessant Traffic Control Center may be contacted by e-mail, as follows:

ouessant-traffic@equipement.gouv.fr

The Ship Movement Reporting System (MAREP) is a voluntary reporting system operating in the English Channel and Dover Strait.

All merchant vessels over 300 grt are requested to report to the appropriate shore station when approaching the following:

1. The TSS off Ile d'Ouessant.
2. The TSS off Casquets.
3. The TSS within the Dover Strait.

For further details of MAREP, see Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea.

Note.—Due to the CORSEN-OUESSANT Vessel Traffic Service (VTS) being mandatory in this area, vessels are ad-

vised that this system takes preference over the Ship Movement Report System (MAREP), which is only voluntary.

The WETREP (Western Europe Tanker Reporting System) is a VTS system, under SOLAS regulations, which operates in the W approaches to Spain, Portugal, France, Belgium, the United Kingdom (including the Shetland Islands), and Ireland. This system is mandatory for all oil tankers over 600 dwt carrying heavy crude oil, heavy fuel oil, or bitumen and tar and their emulsions. It does not apply to warships, naval auxiliary or other vessels owned or operated by a contracting government and used, for the time being, only on government non-commercial service. For further details, see Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea (United Kingdom).

The WETREP (Western Europe Tanker Reporting System) operating areas have also been designated by the IMO as Particularly Sensitive Sea Areas (PSSA). For further details of PSSA, see Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea (United Kingdom).

Caution.—Fish havens, which may best be seen on the chart, lie within the inshore waters of the coasts described in this sector and are usually marked by buoys.

Ile d’Ouessant

3.2 Ile d’Ouessant (48°28’N., 5°05’W.), also known as Ushant Island, lies about 10 miles W of the WNW extremity of France. Viewed from N or NW, the E and NE coasts appear as high steep cliffs declining in a gentle slope towards the W and SW coasts.

Ile d’Ouessant is radar conspicuous and can easily be identified from SW by two headlands, which extend SW from the SW end of the island and portray the appearance of an open lobster claw when viewed on the screen.

Creac’h Light (48°28’N., 5°08’W.) is shown from a conspicuous tower, 55m high, standing on Pointe de Creac’h, near the W end of the island. A racon is situated at this light, but it can only be used by vessels passing NW of the island.



Creac’h Light

Le Stiff Light (48°29’N., 5°03’W.) is shown from a conspicuous structure formed by two adjoining towers, 32m high, standing near Pointe du Stiff, the NE extremity of the island. A prominent radar tower, 72m high, is situated 0.3 mile NE of this light.



Le Stiff Light

Nividic Light (48°27’N., 5°09’W.) is shown from a tower, 36m high, standing on the reef, about 1 mile WSW of Creac’h Light.



Nividic Light

La Jument Light (48°25’N., 5°08’W.) is shown from a conspicuous tower, 48m high, standing near the SW edge of the reefs, 2.3 miles S of Creac’h Light.

Kereon Light (48°26’N., 5°01’W.) is shown from a conspicuous tower, 41m high, standing near the NE edge of the reefs fronting the mainland, about 2.6 miles SSE of Le Stiff Light.

Vessels proceeding to the English Channel from the South Atlantic Ocean and Gibraltar generally head for Ile d’Ouessant. A vessel will pass well clear of the dangers surrounding the island by keeping in depths exceeding 100m; see paragraph 3.1 for details of the TSS.

La Fosse d’Ouessant, a remarkable deep about 1 mile wide and with depths ranging from 118 to 192m, lies about 5 miles NW of Ile d’Ouessant.



La Jument Light



Kereon Light

The bottom of the W approaches to the English Channel appears mainly to consist of fine or coarse sand, a great deal of broken shell, occasional patches of pebbles, gravel, small stones, and now and then, mud. The sand is mostly white, though in many places it is yellow, with black specks.

The greater proportion of yellow sand lies S of the parallel of 49°30'N, and that of black specks, N of that line. This distribution is very marked, especially between the meridians of 9°40'W and 7°30'W.

For details of the waters E and S of Ile d'Ouessant, see Pub. 143, Sailing Directions (Enroute) West Coast of Europe and Northwest Africa.

Caution.—The area lying between Ile d'Ouessant and the mainland to the SE is heavily encumbered with numerous small islands, reefs, and rocks. Passage du Fromveur leads between Ile d'Ouessant and the dangers lying SE. Chenal du Four and Chenal de la Helle lead between the dangers and the mainland. Vessels without local knowledge are advised not to approach this area.

Presqu'île de Saint-Laurent to Ile de Batz

3.3 The coast between Presqu'île de Saint-Laurent and Ile de Batz, about 32 miles ENE, is irregular, moderately high, and fringed with numerous dangerous reefs and shoals that extend up to 3 miles offshore.

Vessels should, in general, should give a berth of 5 or 6 miles to this section of the coast; at night this coast should not be approached within depths of 85m.

Several areas, within which fishing is restricted, front this section of the coast and may best be seen on the chart.

Presqu'île de Saint-Laurent (48°31'N., 4°46'W.), the NW extremity of France, is backed by moderately high cliffs and is bordered by numerous islets, rocks, and shoals.

Le Four Light (48°31'N., 4°48'W.) is shown from a prominent round tower, 28m high, standing 1 mile W of Presqu'île de Saint-Laurent. This tower is reported to be radar conspicuous.



Le Four Light

Corn-Carhai Light is shown from a tower, 20m high, standing about 1.5 miles offshore, 5 miles NE of Le Four Light. It can be distinguished from Le Four Light in thick weather due to the fact that no rocks can be identified to the W of Le Four. Portsall Cove lies about 2.5 miles SSE of Corn-Carhai Light. A conspicuous water tower stands in the village of Tremazan at the SW side of this cove. The wreck of the "Amoco Cadiz (1978)" lies about 0.7 mile ENE of Corn-Carhai Light.

Grande Basse de Portsall, with a depth of 12m, lies about 1.5 miles NW of Corn-Carhai Light. It is marked by a lighted buoy and forms the outermost danger in this area.

Ile Vierge Light (48°38'N., 4°34'W.), radar conspicuous, is shown from a prominent tower, 83m high, standing 1 mile offshore, 12 miles NE of Le Four Light. The shorter tower of a disused light is situated close NNW of the light.

3.4 **Pointe de Beg-Pol** (48°41'N., 4°21'W.) is located 9.5 miles ENE of Ile Vierge Light. Pontusval Light is shown from a prominent tower on a white dwelling, 15m high, standing on the point. A church with a prominent belfry is situated at Plouescat, 6.7 miles E of the light. Conspicuous water towers stand 1 mile SE, 1.7 miles SW, and about 5.3 miles SE of the light.

Plateau de Lizenn Wenn, a rocky shoal area, fronts the coast 8.5 miles W of Pointe de Beg-Pol. It extends up to 2.5 miles N from the shore and is marked by a lighted buoy.



Ile Vierge Light



Pontusval Light (Pointe de Beg-Pol)

Plateau d'Aman ar Rouz, a rocky shoal area, fronts the coast 4.2 miles W of Pointe de Beg-Pol. It extends up to 2 miles N from the shore and is marked by a lighted buoy.

Qeyn-Cos, a detached rocky bank, lies 4 miles E of Pointe de Beg-Pol and about 3.5 miles offshore.

A number of small drying harbors lie along this stretch of the coast. They are used by local fishing vessels and pleasure craft. Mogueriec, a small drying harbor, lies 10.5 miles E of Pointe de Beg-Pol. Ile de Sec lies in the approach to the harbor and is connected to the mainland at its SE end by a causeway that covers. This island is 15m high and a ruined house stands near its center. A conspicuous water tower stands at Sibiril, about 1.4 miles S of the harbor.

Tides—Currents.—The tidal currents off this coast are strong, attaining velocities of 2.5 to 3 knots, generally flowing parallel to the coast. The flood current sets E and the ebb current sets W; the velocity of the current increases closer inshore.

Caution.—A Prohibited Area surrounds the wreck of the “Amoco Cadiz” and may best be seen on the chart.

A former Mine Danger Area lies E of Ile Vierge Light. It extends up to about 3 miles from the coast and may best be seen on the chart.

3.5 Ile de Batz (Bas) (48°45'N., 4°01'W.), a low island, is separated from the mainland by a foul channel. The island is radar conspicuous and a conspicuous signal station stands on an old fort at its center.

Ile de Batz Light (48°45'N., 4°02'W.) is shown from a prominent grey tower, 43m high, situated on the island.



Ile de Batz Light

Canal de Ile de Batz is the channel separating the island from the mainland. It provides access to Port de Roscoff-Bloscon, a ro-ro ferry harbor, and Porz Kernok, a small drying fishing boat harbor. This channel is encumbered by numerous rocks and shoals. The fairway is marked by beacons.

Ile de Batz is surrounded by dangerous rocks. Grande Basse, with a least depth of 0.3m, lies about 0.8 mile offshore, 1 mile N of Ile de Batz. This rock forms the outermost danger to the N.

Porz Kernok (48°45'N., 4°01'W.), a small sheltered harbor, is located near the middle of the S side of Ile de Batz. It dries completely and is mainly used by local fishing vessels.

3.6 Roscoff (48°44'N., 03°59'W.), a small harbor, lies in the bight close W of Pointe de Bloscon and is used by small coasters, fishing vessels, and pleasure craft. The channel leading between Ile de Batz and the coast affords access to the port from the W. The main approach is from the NE through the controlled mandatory access channel. There are two quayed basins. The harbor dries up to 3 to 5m at LW. Local knowledge is required (see Baie de Morlaix in paragraph 3.8). Tides rise about 9.3m at springs and 7.6m at neaps.

Port de Roscoff-Bloscon (48°43'N., 3°58'W.) is situated 0.3 mile S of Pointe de Bloscon and used by ferries, fishing vessels, and coasters. The main approach is from the NE through the controlled mandatory access channel. The harbor is entered between the head of a breakwater and a lighted buoy moored 0.2 mile S. There are three quays and facilities for ro-ro vessels. The breakwater quay is 240m long and has a depth of 7m alongside. The other quays are 120m and 90m long, with alongside depths of 5m and 3.5m, respectively. Ro-ro ferries run to Plymouth and Cork. Vessels up to 5,000 dwt and 6m draft can be accommodated. Cargo vessels are limited to a length of 120m and ferries to a length of 150m. Pilots are available and board about 1.2 miles NE of the harbor. (See Baie de Morlaix in paragraph 3.8.)

A mandatory access channel for tankers transporting hydrocarbons and vessels carrying dangerous substances over 1,600 grt has been established in the approaches to Roscoff.

This channel may best be seen on the chart. See Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea for further information regarding French navigation regulations, as well as guidelines concerning hydrocarbons or dangerous substances.

3.7 The coast between Ile de Batz and Ile Grande, about 16.5 miles ENE, is indented by a wide bay. Plateau de Meloine extends across the center of the bay, and Baie de Morlaix and Baie de Lannion lie, respectively, in the W and E parts of the bay. The currents off this coast attain rates of 3 knots in either direction, and closer inshore the rates increase.

Plateau de Meloine (48°47'N., 3°47'W.), consisting of drying and sunken rocks, extends about 5 miles ENE from its drying SW extremity, which is located 2 miles N of Pointe de Primel. The center of the plateau consists of large rocks. Grande Roche, the tallest, is 23m high.

A prominent cathedral with twin spires, 86m high, stands on the W side of the bay at Saint Pol de Leon, 2.5 miles S of Pointe de Blosson.

Caution.—A narrow restricted area, which may best be seen on the chart, extends NW for about 18 miles from the vicinity of the N end of Plateau de Meloine. Anchoring, dredging, and trawling are prohibited within this area.

Baie de Morlaix

3.8 Baie de Morlaix (48°44'N., 3°54'W.) is entered between Point de Blosson (48°44'N., 3°58'W.) and Pointe de Primel (48°43'N., 3°49'W.), 6 miles E. It is encumbered by numerous islets, rocks, and dangers.

Plateau des Duons (Roches Duon) (48°44'N., 3°55'W.), on the W side of the bay, is marked by a gray tower standing on the highest rock of the group.

La Lande Light is shown from a prominent square tower, 19m high, standing 6.2 miles SE of Pointe de Blosson.

Riviere de Morlaix (48°40'N., 3°53'W.) is navigable by small vessels as far as Morlaix, about 6 miles within its entrance. Two approach channels, which should not be attempted without local knowledge, lead to the roadstead. Grand Chenal, with a least depth of 2m, is approached with La Lande Light and Ile Louet Light in range bearing 176°. Chenal de Treguier, with a patch drying 0.9m, is approached with La Lande Light and Ile Noire Light in range bearing 190°.

This channel can only be used at night if the weather is sufficiently clear for all landmarks to be identified.

Pilotage.—Pilotage is compulsory for all vessels over 50m in length entering Port de Roscoff and Port de Roscoff-Blosson, and for all vessels over 45m in length entering Morlaix. All vessels should send an ETA and a request for pilotage to Roscoff-Morlaix pilot station at least 24 hours in advance with any amendments of more than 3 hours.

Vessels bound for Port de Roscoff-Blosson should contact the pilot vessel 1 hour prior to arrival by VHF. Vessels using the mandatory controlled access channel should contact the signal station on Ile de Batz upon entering and maintain a listening watch on VHF channel 16.

Pilots for Port de Roscoff-Blosson generally board about 1.2 miles NE of the harbor. Pilots for Morlaix board in the vicinity of Pot-de-Fer Buoy (48°44.3'N., 3°53.9'W.).

Anchorage.—Anchorage can be taken, in 15 to 20m, sand and shells, good holding ground, between Plateau des Duons, Le Pot de Fer, and Le Rater, to NW and N, and La Vielle and Pierre Noire, to the S. This anchorage is sheltered from the SE, through S, to W winds.

3.9 Morlaix (48°35'N., 3°50'W.) (World Port Index No. 36360), comprising of an avant-port and a wet basin, formed by the damming of the river, can accommodate vessels up to 63m in length with drafts up to 4m at springs and 3m at neaps. It is used by coasters and pleasure craft.

The entrance channel is difficult to navigate for vessels more than 50m in length due to the bends. The river fairway, which dries up to 3.5m, is marked by beacons, buoys, and range marks.

The avant-port is 53m wide with drying quays on both sides of the river. The wet basin has depths of 3 to 4m alongside the quays. The lock has a usable length of 63m and is 16m wide. A marina is situated at the S end of the wet basin. The lock is operated from 1 hour 30 minutes before to 1 hour after HW.

Anchoring is prohibited in the river channel, and entry is prohibited at night unless the vessel is equipped with a searchlight capable of lighting a radius of about 200m.

A bridge with a vertical clearance of 30m spans the channel close seaward of the lock.

La Penze River (48°39'N., 3°57'W.) flows into the SW side of Baie de Morlaix. It is narrow, shallow, and the approach is encumbered by numerous dangers. A bridge with a vertical clearance of 10m spans the river close above the mouth. The drying river channel is marked by beacons and used by pleasure craft.

Baie de Lannion

3.10 Baie de Lannion (48°44'N., 3°40'W.), entered between Point de Primel, and **Ile Grande** (48°48'N., 3°35'W.), about 10.5 miles ENE, is encumbered with numerous islands, rocks, and shoals. Chaises-de-Primel, a chain of above-water, drying, and submerged rocks, extends about 2 miles NE of Pointe de Primel.

Haut-Fond-du-Chenal (48°46'N., 3°44'W.), with a depth of 9.3m, lies centered about 4.5 miles NE of Pointe de Primel. Toul Tan Bras, the deep channel leading between Chaises de Primel and Plateau de la Meloine, can be used by vessels coming from Canal des Sept-Iles in order to proceed directly into Baie de Morlaix. This channel should only be used when the visibility is satisfactory.

Ile Grande, an island with a conspicuous hummock, has foul ground extending up to about 2 miles N of it. Ile Milliau lies close W of the mainland shore, 2 miles SSW of Ile Grande. This island has two summits. A conspicuous white house with a flat roof surmounts the northernmost summit. Port Trebeurden, an extensive marina, fronts the mainland E of Ile Milliau and is protected by a breakwater. Small craft can anchor, in a depth of 5m, mud, close N of Ile Milliau. The holding ground is good and the tidal currents are not felt here.

A conspicuous church belfry is situated at Trebeurden, 1.2 miles E of Ile Milliau. A prominent water tower stands at Penvern, 1 mile NNE of the belfry.

A very conspicuous aluminum radar dome stands about 2.1 miles SE of Ile Grande. When approaching the coast, this dome will probably be the first object sighted because the shore in this area is relatively low.

Locquirec (48°42'N., 3°39'W.), a small drying harbor, lies close S of Ponte de Locquirec and is used by small craft.

Plateau du Crapaud (48°47'N., 3°44'W.), an area of foul ground extending about 3 miles W of Ile Milliau (48°46'N., 3°36'W.) is marked on its W extremity by a buoy.

Bar ar Gall (48°50'N., 3°35'W.), a shoal lying 1.5 miles NNW of Ile Grande, is marked by a lighted buoy about 0.2 mile W.

3.11 Leguer (Riviere de Lannion) (48°44'N., 3°33'W.), a drying river, leads to the port of Lannion, about 4.5 miles within the river entrance. Navigation in the river is difficult and should not be attempted without local knowledge. A bar fronts the mouth of the river. With NW winds the sea breaks on this bar and prevents entry. The river dries up to 2.5m as far as Le Yaudet, a village standing on the S bank about 1 mile above the entrance. It then dries up to 5m as far as Lannion. Overhead cables with a vertical clearance of 35m span the river 2 miles above Le Yaudet.

Pilots are stationed at Le Yaudet and board about 0.8 mile NW of the river mouth. The pilot vessel is a motor fishing boat. Vessels should send advanced notice of their ETA to the port authority at Lannion.

Lannion (48°44'N., 3°28'W.) (World Port Index No. 36320) has quays, which dry up to 5m, on both sides of the river. Vessels up to 50m in length with drafts up to 4m at springs and 2.2m at neaps can be handled.

Anchorage can be taken, in depths of 5 to 13m, sand and shells, about 0.5 mile S of Pointe de Bihit (48°45'N., 3°35'W.). The anchorage has good holding ground and is sheltered from E winds.

Ile Grande to Les Heaux

3.12 Generally, the tidal currents off this stretch of coast alternate parallel to the shore and attain, in both directions, rates of 3 to 4 knots. The tidal range is large with rises of about 7.6m at springs and 3.6m at neaps.

Plateau des Triagoz (48°53'N., 3°40'W.), extending for about 4 miles, has a group of tall rocks in its E part and numerous isolated below-water rocks in its E part.

Les Triagoz Light (48°52'N., 3°39'W.) is shown from a prominent stone tower, 30m high, standing on Rocher Guen-Bras, an above-water rock lying at the SE end of the plateau.

Vessels should give this plateau a wide berth as the sea breaks heavily on the dangers W of Rocher Guen-Bras.

Les Sept-Iles (48°53'N., 3°29'W.) consists of four main islands and numerous islets and rocks. The four principal islands are Ile aux Moines, Ile de Bono, Ile de Malban, and Ile Rouzic. They are reported to be radar conspicuous.



Les Triagoz Light



Les Sept-Iles Light

Les Sept-Iles Light is shown from prominent grey tower and dwelling, 20m high, standing on Ile aux Moines, the southernmost island of the group.

The main islands are reported to be radar conspicuous. Numerous drying and submerged rocks and shoals surround the islands. Les Cochons, which dry, and Baro Prignou, with a depth of 2.1m, lie 2 miles NNE, and 3 miles NE, respectively, of Les Sept-Iles Light. Le Bonnet, with a depth of 0.9m, lies about 1 mile ESE of Ile Rouzic.

Les Dervinis (48°52'N., 3°27'W.), which dries to 3m and is marked S by a buoy, lies about 1 mile ESE of Les Sept-Ile Light; Basse Melen, with a least depth of 3m, lies about 0.7 mile SW of the same light.

Canal des Sept-Iles (48°52'N., 3°27'W.) is the passage between Les Sept-Iles and the mainland. In bad weather, with the wind against the tidal currents, the sea in this passage becomes very rough.

The flood tidal currents flow SE near the W end of the islands, ENE in the middle of the canal, and E along the coast. The ebb currents flow in the opposite directions. The maximum velocity of the currents in the canal, in both directions, at

springs is about 4.6 knots at the W end, 3.7 knots in the center, and 2.7 knots at the E end.

3.13 The coast from Ile Grande to **Les Heaux** (48°55'N., 3°05'W.), about 20 miles ENE, is bordered by many small islands, rocks, and shoals extending up to 3.5 miles offshore.

Mean Ruz Light (48°50'N., 3°29'W.), shown from a square tower, 15m high, stands on Pointe de Mean Ruz. A prominent signal station is situated on top of a cliff, 1 mile SSE of the light. A conspicuous television mast stands on a headland, 2 miles SE of the light.



Mean Ruz Light

Ploumanac'h, a small drying harbor, is situated on the E side of the bay lying close W of Pointe de Mean Ruz. It is used by local fishing vessels and yachts.

Ile Tome (48°50'N., 3°24'W.), 64m high, lies 3 miles E of the light. Foul ground and shallow rocks surround this rocky island and extend up to about 2.3 miles NE and 1 mile NW of it. Anchorage is available, sheltered from W winds, in depths of 6 to 16m, sand and shells with good holding ground, E of the N end of the island.

Anse de Perros, a drying bight, lies 3 miles SE of Pointe de Mean Ruz. Two channels, passing either E or W of Ile Tome, lead into the bight. The fairways are marked by range and directional lights. The S part of the bight provides good drying berths on a bottom of mud and weed. Local knowledge is advised.

Perros-Guirec (48°48'N., 3°27'W.), a small harbor, lies in the SW part of Anse de Perros. An extensive marina, enclosed by a sea wall, is situated in the N part of the harbor. The sea wall is 7m high and covers at HW. A jetty, which dries up to 4m, extends S from the N side of the harbor. It can be used by vessels up to 40m in length with drafts up to 4m at HWS and 3m at HWN. The harbor can be contacted by VHF.

Port Blank (48°50'N., 3°18'W.), a small harbor, lies 3 miles E of Ile Tome and is used by fishing vessels and pleasure craft. A directional sector light indicates the approach channel leading between the dangers fronting the shore in this vicinity.

3.14 Pointe du Chateau (48°52'N., 3°13'W.), located 4 miles NE of Port Blank, is fronted by foul ground, islets, and rocks extending up to about 2.3 miles N.

The Riviere de Treguier (Le Jaudy) flows into the sea between this point and another point, 2.3 miles ESE. The approach to the river entrance is encumbered by numerous dangers. Basse Crublent, a shoal area, lies in the outer approaches, about 3 miles NE of Pointe du Chateau and is marked by a lighted buoy.

The slim spire of the church at Plougrescant, 1.5 miles S of Pointe du Chateau, and the spire of the cathedral at Treguier, are conspicuous.

La Corne Light is shown from a prominent tower, 23m high, standing on the E side of the river, 2 miles ESE of Pointe du Chateau.

3.15 Treguier (48°47'N., 3°14'W.) (World Port Index No. 36300), a port which dries, lies about 4.5 miles within the river entrance, at the confluence of the Jaudy River and the Guindy River.

There are three approach channels to the riviere de Treguier, which should not be used without local knowledge due to the foul ground and islands in the approach.

Grande-Passe, with a least depth of 4.4m, is the deepest and easiest to navigate by day or night; however, at night, passage should only be made when the beacons and buoys are clearly visible.

Passe du Nord-Est, with a depth of 1.4m, is approached from N, but is practicable only in good weather.

Passe de la Gaine, a foul channel, leads between Les Heaux and the rocks bordering the coast.

The fairways are marked by beacons, buoys, and ranges. Fishing structures, in certain places, may reduce the width of the channels. Vessels up to 110m in length can enter the port with drafts up to 6.7m at HWS and 3.7m at HWN.

A quay, with 400m of berthage, fronts the W bank of the river. There is a main berth, 75m long, with a dredged depth of 3m alongside. The remaining berths dry 0.5 to 4.2m. Tides in the river rise about 8.5m at springs and 4.2m at neaps. An extensive marina lies above the quay and close below a bridge, which spans the river.

Pilotage is compulsory for vessels over 45m in length. Pilots can be contacted by VHF and board in the vicinity of Basse Crublent Lighted Buoy (48°54.4'N., 3°11.1'W). Pilotage is provided by the station at Le Legue (Saint Brieuc) and vessels must send an ETA at least 48 hours in advance through the Agent. Vessels 100m in length and over may enter only during daylight.

Anchorage is available about 0.8 mile SW of La Corne Light, in depths of 8 to 10m, mud, good holding ground, sheltered from all winds except those from the N when the offshore banks are covered.

3.16 Les Heaux (48°55'N., 3°05'W.), a reef of above-water and sunken rocks, lies 6 miles NE of Pointe du Chateau. Les Heaux de Brehat Light, a sector light, is shown from a prominent granite tower, 57m high, standing on the E part of the reef.

Sillon de Talber, a narrow shingle spit, extends about 1.5 miles NE from the mainland, 2 miles S of Les Heaux de Brehat



Les Heaux de Brehat Light

Light. This spit is surrounded by reefs, which extend about 1.5 miles NE from its outer end. Ile Mondez, an islet, lies on the edge of the reef, about 2 miles SE of the outer end of the spit.

Queyn Enes Terch, with a depth of 5.8m, lies about 3.5 miles W of the light; La Jument, marked N by a lighted buoy, lies about 2 miles WNW of the same light.

3.17 Plateau des Roches-Douvres (49°06'N., 2°49'W.), the outermost of the off-lying dangers NE of Les Heaux, consists of above-water and sunken rocks and reefs.

Roches-Douvres Light (49°06'N., 2°49'W.) is shown from a prominent tower on a dwelling, 65m high, standing on the largest rock. Dangers extend about 1 mile N and S, and about 2 miles W and SE, of the light structure. Local magnetic anomalies have been reported in this area.



Roches-Douvres Light

Banc des Langoustiers (49°15'N., 3°21'W.), an off-lying bank, lies 23 miles WNW of Roches-Douvres Light and has a least depth of 26m. In fog, the soundings of less than 50m on this bank can be useful in ascertaining the position of a vessel.

Plateau de Barnouic (49°02'N., 2°48'W.), consisting of drying and submerged rocks, is separated from Plateau des Roches-Douvres by a channel with a navigable width of about 2 miles.

In this passage, the sea is very rough when the wind is against the tidal current. Roche Barnouic Light is shown from an octagonal tower beacon, 19m high, standing on a drying rock, about 5 miles S of Roches-Douvres Light.

Basse du Moulec (49°03'N., 2°15'W.), a detached rocky patch with a least depth of 3.9m, lies about 1.8 miles NW of Roche Barnouic Light. Shoal patches extend about 3 miles W and 1 mile S of the same light structure. A lighted buoy is moored about 3.3 miles WSW of the light.

Plateau des Roches-Douvres and Plateau de Barnouic rise abruptly from depths of 37 to 44m, and soundings give no accurate indication of approach to these dangers.

Basse Maurice (48°58'N., 2°56'W.), a detached rocky patch with a depth of 13m, lies about 6.5 miles SW of Roche Barnouic Light and should be avoided in bad weather.

Approaches to le Trieux and Anse de Paimpol

3.18 The approaches to **Le Trieux** (Riviere de Pontrieux) (48°50'N., 3°04'W.) and **Anse de Paimpol** (48°49'N., 2°56'W.), are encumbered with numerous islands, rocks, and shoals.

Carrec-Mingui (48°55'N., 3°00'W.), with a depth of 3.5m, and Roch-ar-Bel, with a least depth of 6.2m, lie about 3 and 4 miles, respectively, ENE of Les Heaux de Brehat Light, and are the outermost N dangers.

Vessels should give these dangers a wide berth as the tidal currents attain a velocity of 5 knots over them at springs, and the sea breaks heavily when the wind is against the current.

Plateau de la Horaine (48°54'N., 2°54'W.), the outermost NE danger, is marked on its SW side by La Horaine Lighted Beacon, which is formed by an octagonal tower, 20m high, standing on a black hut.

Basses du Nord, lying about 1 mile N of the lighted beacon, is the northernmost danger of this ledge and is marked by a buoy.

Basses du Sud-Est, with a depth of 2.6m, lies about 1.5 miles E of the lighted beacon. Plateau de Men Marc'h, a dangerous rocky area, lies close S of Basses du Sud-Est and is marked at its NE end by a buoy. Bancs de Sable, with depths of 4 to 16m, extends about 5 miles SE from the NE end of Plateau de Men Marc'h.

In fog, Plateau de la Horaine is dangerous as the flood current flows toward the reefs with great force.

Ile de Brehat (48°51'N., 3°00'W.) is the center of a group of islands and rocks to which it is connected by drying mudflats at LW. It appears at HW as two islands joined by a short bridge. The island is low and the sea breaks heavily around it during bad weather.

Le Paon Light (48°52'N., 2°59'W.) is shown from a prominent tower, 12m high, standing close off the NE extremity of the island. The seaward side of the tower is painted white.

Rosedo Light (48°52'N., 3°00'W.) is shown from a prominent white tower with a green gallery, 13m high, standing adjacent to a building in the NW part of the island.



Ile de Brehat Signal Station



Rosedo Light



Ile de Brehat Chapel



Le Paon Light

A conspicuous signal station, formed by a white dwelling with a square tower, and a conspicuous chapel, with a red roof and belfry, stand near the center of the island.

Men Joliguet Lighted Beacon, 8m high, stands on the edge of the shoals fronting the S part of the island.

3.19 Le Trieux (Riviere de Pontrieux) (48°50'N., 3°04'W.) provides access to the drying ports of Lezardrieux and Pontrieux.

Grand-Chenal, NW of Ile de Brehat, is the principal approach and is available for vessels with local knowledge, day or night. The secondary channels can be taken only with the aid of local knowledge.

Grand-Chenal has a least depth of 6m as far as Pointe Coatmer, 1 mile below Lezardrieux. It then has a least depth of 3.2m as far as Lezardrieux. Pontrieux is situated 6 miles above Lezardrieux. The river dries about 1 mile above the latter port. A suspension bridge, with a least vertical clearance of 17m, spans the river 0.5 mile above Lezardrieux.

Tides in the river in the vicinity of Lezardrieux rise about 9.1m at springs and 4.1m at neaps.

La Croix Light (48°50'N., 3°03'W.) is shown from two connected towers, 18m high, standing 2.2 miles SW of Rosedo Light.



La Croix Light

Bodic Light (48°49'N., 3°05'W.) is shown from a house, 23m high, standing on the N shore of the river, about 1.8 miles SW of La Croix Light. These two lights, which are intensified on their alignments, form the initial entrance range, bearing 224°45', of Grand Chenal.



Bodic Light

Pilotage.—The pilot station of Paimpol-Pontrieux has no regular pilots but relies on part-time pilots who are fishermen. Vessels should send an ETA off Paimpol or Ile de Brehat 48 hours in advance to the agent (l'Agence Maritime de l'Ouest a Paimpol-AMO) through Brest-le-Conquet (FFU). The ports of Lezardrieux and Paimpol can be contacted by VHF.

The pilot for Paimpol boards in the anchorage during good weather or midway between L'ost Pic (48°46.8'N., 2°56.3'W.) and Grand Lejon Light (48°45.0'N., 2°39.7'W.).

The pilot for Le Trieux river boards between Ile de Brehat and La Croix Light.

Caution.—Winds from the NE create strong overfalls during the ebb current in the approaches.

Numerous fishing structures and oyster beds may, in certain places, reduce the width of the channel.

3.20 Lezardrieux (48°47'N., 3°06'W.) (World Port Index No. 36280), used by coasters, is accessible to vessels up to 80m in length and 20m beam with drafts up to 8m at HWS and 6m at HWN. There is a quay, 80m long, which dries 0.8 to 2m, and an extensive marina.

The tidal currents above the port flow in the direction of the channel and attain rates of 2.5 knots.

Pontrieux (48°42'N., 3°09'W.) (World Port Index No. 36290), which consists of a wet dock about 1 mile long, is accessible to vessels up to 60m in length and 11m beam with drafts up to 4.5m at HWS and 3m at HWN.

The water level in the wet dock, formed by the river, is maintained at 3.9m by a weir. The dock is used by small coasters and pleasure craft. It is entered via a lock, 65m long and 12m wide, when the height of the tide is less than 10m. When the height of the tide exceeds 10m, entry is made directly through the lock. An overhead cable, with a vertical clearance of 25m, spans the port.

Anchorage.—The main anchorage in the approach is Mouillage de la Traverse (48°51.0'N., 3°02.5'W.), which lies W

of the Grand-Chenal entrance range. It has depths of 11 to 15m, sand, shells, and rocks. The anchorage has moderately good holding ground and is located out of the main tidal currents.

3.21 Anse de Paimpol (48°49'N., 3°00'W.), between **Pointe de l'Arcouest** (48°49'N., 3°00'W.) and Point de Plouezec, 3.8 miles SE, dries throughout nearly its whole extent. The small port of Paimpol lies at the head of the bay.

This wide bay is encumbered by numerous rocks and shoals. Chenal du Denou, leading from N, and Chenal da la Jument, leading from E, are the main approach channels. The other minor channels should not be attempted without local knowledge.

A white tower stands on Pointe de l'Arcouest and forms an excellent landmark, as are the belfries of Ploubazlanec and Plouezec on the surrounding heights, about 1.5 miles SW and 4 miles SSE, respectively, of the point. Pointe de la Trinite, S of the latter point, is bordered about 0.8 mile ESE by Ile Saint-Rion, which has two summits, and is the most conspicuous of numerous islands in the vicinity. A conspicuous mast stands 0.7 mile W of Ploubazlanec Church.

Ile Mez de Goelo, located 0.5 mile N of Pointe de Plouezec, is covered with green vegetation. It is the largest and most prominent island lying off the S entrance point of the bay.

L'Ost-Pic Light is shown from two connected towers, 15m high, standing close E of Ile Mez de Goelo. Pointe de Porz-Don Light (48°48'N., 3°01'W.) is shown from a house, 8m high, standing on the mainland, 1.8 miles SSW of Pointe de l'Arcouest. A sector of this light, which may best be seen on the chart, indicates the approach from E.

3.22 Paimpol (48°47'N., 3°03'W.) (World Port Index No. 36260) comprises Avant-port and two wet basins. The channel leading to the harbor is 30m wide and dries up to 4.9m. Tides rise about 9.5m at springs and 4.4m at neaps.

When both lock gates are open, the wet basins are accessible to vessels up to 1,000 dwt, 80m in length, and 11m beam with drafts up to 4.6m at HWS and 3m at HWN. When the lock is used, vessels are limited to a length of 58m. The harbor is used by coasters, fishing vessels, and pleasure craft. There are extensive facilities for yachts.

The lock gates are open for 2 hours either side of HW, when the height of tide at Les Heaux does not exceed 10m. If the tide exceeds this height, the gates remain open for 2 hours 30 minutes.

The water level in the wet basins is maintained at 3.4 to 4.6m, depending on the tides. The Avant-port dries 5m. The wet basins are entered from Avant-port through a lock, 60m long and 12m wide. The two wet basins are connected by a passage, 45m long and 11.9m wide. When both gates are open, a current, with a rate of up to 2 knots, sometimes runs through the lock during the flood.

See Le Trieux (paragraph 3.19) for pilotage information. Vessels can anchor in Mouillage de la Rade de Paimpol (48°47.5'N., 2°58.0'W.). This anchorage has depths of 6 to 8m, sand and gravel, and is sheltered from most winds.

Baie de Saint-Brieuc

3.23 Baie de Saint-Brieuc (48°40'N., 2°50'W.) is entered between Pointe de Minard (48°45'N., 2°56'W.) and Cap Frehel, about 25 miles ESE. The shores of the bay consist of cliffs broken by sandy beaches.

The bay is obstructed by large rocky flats, through the middle of which a channel, about 3 miles wide in a N to S direction, lies between Roches de Saint-Quay and **Plateau du Rohein** (48°39'N., 2°37'W.).

Le Rohein (Rocher Rohein) (48°39'N., 2°38'W.), about 9m high, is the largest rock lying at the SW end of a group of dangers, which extend up to about 2.5 miles E. A lighted beacon tower, 15m high, stands on this rock. Les Comtesses (48°39'N., 2°34'W.), consisting of several rocks, lies at the E end of this group.

Grand-Lejon (48°45'N., 2°40'W.), the outermost danger in this area, is a rocky ledge surrounded by rocks. It lies about 10.5 miles E of Pointe de Minard and in the middle of the entrance to Baie de Saint-Brieuc. Grand-Lejon Light is shown from a prominent tower, 24m high, standing on the ledge.



Grand-Lejon Light

Basses du Sud-Est, with a least depth of 4.8m, is a rocky shoal lying about 0.8 mile SSE of the light. Petit-Lejon, a drying shoal surrounded by dangers, lies about 3.7 miles SSE of the light and is marked close W by a buoy.

On the high land backing of the coast, the belfry (spire) of the church at Plouha and the helmet-shaped belfry of the church at Etables-sur-Mer are conspicuous standing 5 miles S and 8.5 miles SSE, respectively, of Pointe de Minard. Prominent church spires are also situated at Pordic, 12 miles SSE of Pointe de Minard, and Pleneuf-Val-Andre, 5.3 miles SSE of Le Rohein Lighted Beacon.

3.24 Bois de Bien-Assis (48°35'N., 2°30'W.), a conspicuous wooded hill, stands about 1 mile inland, 9 miles SW of Cap Frehel. It is sheer on the SW side.

Pilotage.—Pilotage is compulsory for vessels over 45m in length. Vessels should send an ETA at least 24 hours in advance, stating their draft and overall dimensions, through Brest-le-Conquet (FFU) or Boulogne (FFB).

Vessels obliged to use the mandatory access route should establish contact with “Legue Port” on VHF channel 16 and report their entry into the access channel.

All inbound vessels must maintain a continuous listening watch on VHF channel 16. All vessels anchoring in or transiting the bay should establish VHF contact with the signal station (Brehat).

Pilots usually board vessels in the vicinity of Le Legue Lighted Buoy (48°34.3'N., 2°41.2'W.). When certain conditions prevent this position from being used, vessels will be requested to proceed toward the entrance of the buoyed channel until the pilot is able to board.

Regulations.—A mandatory access channel, indicated on the chart, for tankers transporting hydrocarbons and vessels carrying dangerous substances over 1,600 grt has been established in the approaches to Baie de Saint Brieuc.

Anchorage.—Vessels waiting to enter Dahouet and Erquy should anchor about 2 miles S of Le Rohein. Vessels waiting to enter Saint Quay-Portrieux and Binic should anchor in the roads off these ports. Vessels waiting to enter Le Legue (Saint Brieuc) should anchor about 1.5 miles ENE of Pointe du Roselier, in a depth of 4m, sand, with good holding ground.

With strong NE winds, vessels should anchor S of Le Rohein. With strong NW winds, vessels should anchor in Mouillage de Binic, 4 miles NW of Pointe du Roselier.

Caution.—A temporary explosive dumping ground area, which may best be seen on the chart, lies 1.5 miles SSE of Grand-Lejon Light.

Magnetic anomalies were reported to exist in the area between Le Rohein and Grand-Lejon Light.

Numerous fishing structures and shell fish beds lie in the bay.

3.25 Anse de Brehac (48°44'N., 2°56'W.), a drying bay about 1.5 miles S of Pointe de Minard, is the best anchorage during W winds in Baie de Saint-Brieuc.

Pointe de Roselier (48°33'N., 2°43'W.), a bluff headland, is located 15 miles SE of Pointe de Minard. The coast between is cliffy and fronted by sandy beaches which dry up to about 0.8 mile offshore in places.

Roches de Saint-Quay (48°39'N., 2°46'W.), a rocky plateau, extends about 5 miles parallel to the coast, from which it is separated by a narrow channel. This channel, for which local knowledge is essential, provides access to the ports of Saint-Quay-Portrieux and Binic.

Ile Harbour (48°40'N., 2°48'W.), in the NW part of the plateau, is the largest rock. A light is shown from a prominent tower with a dwelling, 13m high, standing on this rock.

Plateau des Hors (48°39'N., 2°45'W.), a large rocky flat, extends E from Roches de Saint-Quay and is marked on its NE side by a buoy. Caffa, a rocky shoal, lies about 4 miles SE of Ile Harbour Light and is marked by a lighted buoy.

Anse d'Yffiniac (48°32'N., 2°42'W.), which completely dries, lies at the head of Baie de Saint-Brieuc and is entered SE of Pointe du Roselier.

The Riviere du Gouet flows into the W side of this inlet, 1 mile S of Pointe du Roselier, between Pointe de l'Aigle, marked by a light, and Pointe de Cesson, 0.3 mile S.

3.26 Saint-Quay-Portrieux (Portrieux) (48°39'N., 2°50'W.) (World Port Index No. 36240) and **Binic** (48°36'N., 2°49'W.) (World Port Index No. 36230), about 2.5 miles S, are small drying harbors.

Binic has an avant-port, protected by moles, and a wet dock. It is used by fishing vessels and pleasure craft. The avant-port dries 4 to 6m and has a quay, 105m long, used by fishing vessels. The wet dock is entered through a gate, 10m wide, and has facilities for pleasure craft in depths of 1.5 to 3m. A light is shown from a prominent structure, 12m high, standing on the head of the N mole.

Saint-Quay-Portrieux consists of a new harbor and marina, which are accessible at all stages of the tide, and an old drying harbor. It is used by small coasters, fishing vessels, and pleasure craft. The new harbor and marina, lying close NE of the old harbor, are protected by moles. A directional light shown from a tower, 12m high, standing on the elbow of the N mole indicates the entrance fairway. A quay, 120m long, and three pontoons with depths of 3m alongside are situated in the N part of the new harbor for the use of fishing vessels. There are extensive facilities for pleasure craft up to 18m in length in the S part.

There are depths of less than 2m lying in the S approaches to the harbor. Tides rise about 10m at HWS and 4.5m at HWN.

The old harbor is used by small craft and is accessible to vessels up to 700 grt and 47m in length with drafts up to 3.5m at springs and 2.5m at neaps.

3.27 Le Legue (48°32'N., 2°45'W.) (World Port Index No. 36220), the port for Saint-Brieuc, is situated on the riviere du Gouet, about 1.3 miles within the entrance. It is used by fishing vessels, coasters, and pleasure craft. The port includes an outer harbor and two wet basins.

Depths—Limitations.—The approach channel is buoyed and dries about 5m. It has depths of 5.8m at MHWS and 3m at MHWN.

The outer basin dries. The two wet basins are entered via a lock and connected by a passage. The lock has a usable length of 85m and a width of 14m. The first basin has 605m of berthage and depths of 5.5 to 6m. The second basin has 1,330m of berthage and depths of 2.1 to 4.6m. The passage is 80m long and is spanned by a swing bridge, which, when open, provides an access 11m wide. The level of the water in the wet basins is constantly maintained, except during periods of drought, by a weir on the N side.

Vessels up to 83m in length and 13m beam can be accommodated with drafts up to 5m at springs and 3.5m at neaps. For safety reasons, it is reported that coastal tankers are restricted to a maximum length of 80m and a maximum beam of 12.3m. Such vessels must be equipped with either twin screws or a bow thruster.

Pilotage.—Pilotage is compulsory for vessels over 45m in length. Pilots may be contacted by VHF. See Baie de Saint-Brieuc, paragraph 3.24, for further information.

Caution.—The height of the tide in the harbor is influenced by the wind and may vary by up to 0.7m.

3.28 Pointe de Pleneuf (48°36'N., 2°33'W.), 60m high, is bordered about 1.5 miles NW by drying Plateau des Jaunes. Ilot le Verdelet, a conical islet, fronts the point. The resort of

Val-Andre extends along a beach to the S of the point and is dominated by two water towers.

Dahouet (48°35'N., 2°34'W.), a small drying harbor, is located 1 mile SW of the point. It is used by fishing vessels and pleasure craft. The harbor is accessible to vessels up to 70m in length with drafts up to 4.5m at springs. Local knowledge is required. Petite Muette Lighted Beacon marks a cut in the cliff which is the entrance to the harbor.

Planeuf-Val-Andre, an extensive yachting marine, is located close S of Pointe de Pleneuf.

Cap d'Erquy is located 4 miles NE of Pointe de Pleneuf. The coast between is fronted by a prominent stretch of sand and bordered by rocky ledges which extend up to 1 mile offshore in places.

Erquy (48°38'N., 2°28'W.), a small harbor, is located 0.7 mile SE of Cap d'Erquy. It is accessible to small craft with drafts up to 2.5m.

Rade d'Erquy (48°38'N., 2°28'W.), the best anchorage on this coast in E winds, should be used only in good weather or with offshore winds.

Anchorage can be taken, in depths of 5 to 10m, mud and sand, good holding ground, S and SW of the N entrance point of Erquy.

Dangers extend up to about 3 miles offshore between Pointe de Pleneuf and Cap Frehel (48°41'N., 2°19'W.). Rohinet, 11m high, lies about 2 miles N of Cap d'Erquy and is the highest of the rocky ledges located N of Cap d'Erquy.

Pierre du Banc, a shoal patch with rocks awash, lies 8.7 miles W of Cap Frehel and is marked by a lighted buoy. Grande Liviere, a shoal with a depth of 4.6m, lie about 3 miles WNW and of Cap Frehel. These shoals form the outermost dangers in this vicinity.

Cap Frehel to Pointe du Decolle

3.29 Cap Frehel (48°41'N., 2°19'W.), the N extremity of a high promontory, is bordered by nearly perpendicular cliffs. Cap Frehal Light is shown from a conspicuous brown square tower with a green lantern, 33m high, standing 0.3 mile S of the cape. An old disused lighthouse is situated near the light and a fog signal hut stands on the extremity of the cape.



Cap Frehel

Amas du Cap, a large wedge-shaped rock, lies 0.5 mile W of the cape and is prominent.

Bank de l'Etendree, drying at its W end, extends about 1 mile ESE from the cape.

A dangerous wreck, position doubtful, lies about 1 mile NNE of Cap Frehel.

Tides—Currents.—Currents attain a velocity of 3.7 knots at springs about 1.5 miles N of Cap Frehel.



Cap Frehel Light

Pointe de la Latte (48°40'N., 2°17'W.), about 1.8 miles SE of Cap Frehel, has a conspicuous fort at its extremity. Pointe de Saint-Cast, located 2 miles SE of Pointe de la Latte, is surmounted by a signal station. Les Bourdinots, a small group of rocks which dries up to 2m, lies about 0.8 mile ENE of this point and is marked at the N end by a buoy.

Pointe du Decolle (48°38'N., 2°08'W.), located 8.5 miles ESE of Cap Frehel, is surmounted by a disused signal station and fronted by rocks.

Ile Argot (48°38'N., 2°10'W.), a grass-covered island, lies about 0.5 mile offshore, 1.3 miles W of Pointe du Decolle. It is 36m high, sheer on the SW side, and easily identified from seaward.

Between Cap Frehel and Pointe du Decolle the coast is deeply indented by several drying bays. The small harbors within these bays are only used by small craft and yachts. Many places within the bays are obstructed by shellfish beds. Local knowledge is required for entry into this area.

Le Vieux Banc (48°42'N., 2°10'W.) is a ledge lying about 4 miles NNW of Pointe du Decolle. It has a least depth of 1.2m and is marked by a lighted buoy at the SW extremity. Basse Nord-est du Vieux Banc, the NE part of the ledge, has a least depth of 5.6m and is marked close N by a lighted buoy.

Banchenou (48°40'N., 2°11'W.), with a least depth of 3.5m, lies about 3.5 miles WNW of Pointe du Decolle and is marked close N by a lighted buoy.

La Catis (48°43'N., 2°15'W.), a rock with a depth of 6.9m, lies about 3 miles ENE of Cap Frehel.

Basse des Sauvages (48°45'N., 2°12'W.), an isolated rock with a depth of 8.2m, lies about 6 miles NE of Cap Frehel.

Basse Trouvee (48°49'N., 2°05'W.), with a depth of 4.2m, lies about 5.5 miles NE of Basse des Sauvages.

Approaches to Saint-Malo

3.30 Between Pointe du Decolle and Dinard, about 2.5 miles E, the coast consists of several resorts fringed by sandy beaches separated by rocky points. A plateau formed by numerous rocks and dangers fronts the shore and extends up to about 1.5 miles seaward.

Baie de Saint-Malo (48°40'N., 2°02'W.) lies between Pointe du Decolle and **Pointe de Meinga** (48°42'N., 1°56'W.), 8 miles NE. The bay is encumbered with numerous islands, islets, rocks, and shoals through which several passages provide access to Saint-Malo.

Grand-Jardin (48°40'N., 2°05'W.), a reef which dries 11m, lies 1.9 miles NE of Pointe du Decolle. Grand-Jardin Light is shown from a prominent tower, 38m high, standing on the SW extremity of this reef.



Grande-Jardin Light

Ile de Cezembre (48°41'N., 2°04'W.), a conspicuous island, lies about 0.5 mile NE of Grand-Jardin Light and has two summits.

Grande-Conchee (48°41'N., 2°03'W.), a rock surmounted by the conspicuous ruins of a fort, lies about 1 mile ENE of Ile de Cezembre.

Grande-Hupee (48°41'N., 2°06'W.), a rock with a depth of 1.3m, lies on a shoal about 1 mile NW of Grand-Jardin Light. It is one of the outermost dangers in this area. Le Bunel, a drying rock, lies about 0.5 mile E of Grande-Hupee and is marked close W by a lighted buoy.

3.31 Les Bucharats (48°40'N., 2°07'W.), a shoal with a least depth of 3.5m, lies about 1.5 miles W of Grand-Jardin Light and is one of the outermost dangers in this area.

Basse NE des Portes, a shoal with a least depth of 2.2m, lies about 0.5 mile WNW of Grande-Jardin Light. Les Courtis Lighted Beacon, 21m high, stands close WSW of this shoal.

La Nouvelle Decouverte, a shoal with a least depth of 3.6m, lies about 0.3 mile WNW of this lighted beacon.

Les Cheminees (48°40'N., 2°07'W.), lying about 1 mile NNE of Pointe du Decolle, is the tallest and most conspicuous of the numerous above-water and drying rocks extending offshore in this vicinity.

Regulations.—A mandatory access channel for tankers transporting hydrocarbons and vessels transporting dangerous substances over 1,600 grt has been established in the approaches to Saint Malo. This access channel, which may best be seen on the chart, leads SE and may be entered about 7.8 miles WNW of Cap Frehel.

See Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea for rules pertaining to vessels in French waters.

Directions.—Vessels approaching from the E should pass at least 4 miles N of the coast before steering in a S direction for the pilot boarding place. Vessels approaching from the W should pass at least 2 miles N of Cap Frehel and N of La Catis. They should then steer in a SE direction and pass between Le Vieux Banc and Banchenou, about 2 miles SSW.

Chenal de la Grande-Porte and Chenal de la Petite-Porte, the main approach channels, can be used day or night; the three other approach channels, E of the main channels, are only practicable by day and with a rising tide.

Vessels using the mandatory access channel must then transit Chenal de la Petite-Porte.

Chenal de la Petite-Porte (48°41'N., 2°06'W.) leads close NE of the N part of Le Vieux Banc (Basse Nord-est du Vieux Banc) and then between Grande-Hupee and La Nouvelle Decouverte. The fairway is indicated by a lighted range formed by Grand-Jardin Light and La Balue Light, 4 miles SE. The tidal currents set obliquely across the fairway and attain rates up to 3 knots at springs.

Chenal de la Grande-Porte (48°40'N., 2°08'W.) leads close S of Les Bucharats. The fairway is indicated by a lighted range formed by Grand-Jardin Light and Rochebonne Light, 4.2 miles E. The tidal currents in the outer part of the fairway, as far as Le Grand Jardin (48°40'N., 2°05'W.), set in the direction of the channel. In the inner part the currents set across the channel. The currents attain rates up to 3.2 knots at springs.

Saint-Malo (48°39'N., 2°01'W.)

World Port Index No. 36130

3.32 The port of Saint-Malo, located on the E side of the mouth of La Rance, lies near the center of Baie de Saint-Malo and adjoins the town of the same name. The port consists of an avant-port and a wet dock comprising four interconnected basins. The harbor has extensive facilities for pleasure craft, fishing vessels, and ferries, which operate to the Channel Islands and the United Kingdom.



Saint-Malo (walled town)

Tides—Currents.—Tides rise about 12.2m at springs and 9.3m at neaps.

The flood tidal current sets toward Fort de la Cite (48°38'N., 2°02'W.) and then N toward the entrance channel and SW along Mole des Noires. The ebb tidal current sets WSW from the lock along the approach channel to join the outgoing current from La Rance. The currents attain rates of 2 to 2.5 knots.



Saint-Malo (harbor)

Depths—Limitations.—Chenal de la Grande-Porte has a least depth of 6.4m in the fairway. Chenal de la Petite-Porte has a least depth of 10.5m in the fairway.

The avant-port, the N portion of which dries in places, provides an extensive yacht harbor in its S part. A hydrofoil ferry terminal is situated close N of the lock entrance. A ro-ro ferry terminal is situated close S of the lock entrance. It has a dredged depth of 7m and can handle vessels up to 22m beam. The entrance channel leading to this terminal has a dredged depth of 4m.

The entrance channel leading to the wet dock lock has a dredged depth of 2m. The lock is 154m long, 24m wide, and has a depth of 1.7m over the sill.

Vauban Basin, at the inner end of the lock, provides facilities for passenger and tanker vessels. It has 840m of berthage and depths of 5 to 9.5m. A marina is situated at the N end of this basin.

Duguay-Trovin Basin is entered through a passage, 17.5m wide. Vessels are limited to a length of 120m and a beam of 16.5m. It has 1,868m of berthage and depths of 4.6 to 7.2m. This basin provides facilities for fishing vessels.

Bouvet Basin is entered through a passage, 16.5m wide. It has 1,180m of berthage and depths of 4.4 to 7.7m.

Jacques Cartier Basin is entered through a passage, 30m wide. It has 560m of berthage and depths of 8 to 9.5m.

The lock is worked normally for 2 hours either side of HW. However, the times of lock operation will vary according to the range of tide and the volume of expected traffic. The water level in the wet dock can be maintained at the desired level by a pumping station.

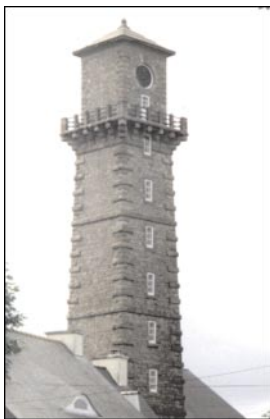
Vessels up to 16,000 dwt, 150m in length (147m in length for tankers), 22m beam, and 9m draft can be accommodated in the port.

Aspect.—An outer fairway lighted buoy (safe water) is moored about 2 miles NW of Grande-Jardin Light.

La Balue Rear Range Light is shown from a prominent tower, 37m high, standing 1.3 miles SE of the entrance lock.

Rochebonne Rear Range Light is shown from a prominent tower, 20m high, standing near the coast, 2.5 miles NE of the entrance lock. A conspicuous radio mast is situated 0.7 mile SE of this light.

Avant-port is protected by Mole des Noires, a breakwater, which extends about 0.3 mile SW from the SW corner of the



La Balue Rear Range Light



Rochebonne Rear Range Light

town. The town is surrounded by ramparts and dominated by a cathedral with a conspicuous spire.

The estuary of La Rance is crossed by a barrage dam about 1.5 miles S of Mole des Noires. A hydro-electric power station stands at the center of the dam and is operated by the tides. The sluices from which the station derives its power are situated between it and the E end of the dam. A lock, situated on the W side of the dam, provides access for small craft to the river and the inland canal system. It is 65m long, 13m wide, and has a depth of 2m on the sill.

See Approaches to Saint-Malo in paragraph 3.30 for additional information.

Pilotage.—Pilotage is compulsory for all vessels over 45m in length and all vessels carrying dangerous cargo.

Vessels should send a request for pilotage, with their ETA and draft, through Brest-le Conquet or Brouage at least 6 hours in advance. Vessels should then confirm the ETA 2 hours prior to arrival, reporting immediately any change over 1 hour.

Pilots can be contacted by VHF and board from a vessel, with a black hull and white upperworks, about 1 mile N of the outer fairway lighted buoy.

During bad weather, particularly in N gales, boarding may be impractical and the pilot will lead the vessel into port, communicating by VHF.

Saint Malo pilots may be contacted by e-mail, as follows:

pilotes.sm@wanadoo.fr

Regulations.—All vessels required to use the mandatory access channel should establish contact with the port captain on entering the channel and maintain a listening watch on VHF channel 12. All other vessels desiring to use this fairway should establish a listening watch on VHF channel 12.

Vessels carrying hydrocarbons or dangerous cargo are required to be assisted by tugs after passing Le Buron Lighted Beacon (48°39'N., 2°04'W.). Tugs are required for all other vessels over 100m in length. Vessels equipped with bow thrusters are exempt.

Signals.—International port traffic signals regulating the entry and departure of vessels from the lock are displayed by day and night from a signal mast near the lock entrance.

Whistle signals are used by vessels proceeding from one basin to another. The signals request that the bridges spanning the passages between the basins be opened. One long blast for Pertuis de Saint-Servan, the passage leading to Bouvet Basin; two long blasts for Pertuis de Saint Malo, the passage leading to Duguay-Trouin Basin; and three long blasts for Pertuis de Corsaires, the passage leading to Jacques Cartier Basin.

Anchorage.—Vessels awaiting the pilot should anchor in the vicinity of the outer fairway lighted buoy (48°41'N., 2°07'W.). The area has depths of 13 to 20m, of mud and gravel, bottom quality unknown.

Rade de Saint-Malo, in the mouth of La Rance, is used only by vessels waiting to enter port. The roadstead is open NW, and the tidal currents are strong. The anchorage has about 250m of swinging room and can be used by large vessels at neap tides only. There are depths of 7 to 8m and the holding ground is reported to be mediocre.

Caution.—The approach to Baie de Saint-Malo is encumbered by numerous islets, rocks, and shoals. The main channels are well marked; however, entry is still dangerous in low visibility. Shoaler depths than charted occasionally exist in Chenal de la Grande-Porte, Chenal de la Petite-Porte, and Rade de Saint-Malo. Therefore local knowledge is required.

A Prohibited Area extends up to 100m around Ile de Cezembre due to the existence of underwater explosives.

Baie de Saint-Malo to Pointe du Roc

3.33 Pointe du Nid (48°42'N., 1°53'W.), about 2 miles E of Pointe du Meinga, is bordered about 0.3 mile WSW by old Fort Duguesclin on an islet close offshore.

Between Pointe du Meinga and Pointe du Grouin, about 3.8 miles E, the coast is high, with beautiful beaches lying between rocky points.

Pointe du Grouin (48°43'N., 1°51'W.), high, rocky, steep, and sloping NE, is conspicuous. The white house of the signal station (disused) standing 0.2 mile S of the extremity of the point is prominent.

The Iles des Landes, a narrow and rocky islet, lies close E of the point. It is 38m high but does not stand out from the land.

Pierre de Herpin (48°44'N., 1°49'W.), a rock, lies 1.5 miles NE of the extremity of Pointe du Grouin. A light is shown from a prominent tower, 28m high, standing on this rock.



Pierre de Herpin Light

La Fille, a drying rock, lies about 0.5 mile NE of Pierre de Herpin Light and is marked close N by a buoy. This rock is the outermost of the dangers extending up to about 2 miles NE of Pointe du Grouin.

Grand-Ruet, a passage about 0.3 mile wide, leads between the dangers extending NE from Pointe du Grouin, 0.5 mile SW of Pierre de Herpin Light. The passage has a least depth of 11m in the fairway, but strong tidal currents often cause overfalls in its vicinity.

Currents in the vicinity of the buoy marking La Fille run SE and NW, attaining velocities of up to 5 knots.

Basse Rault (48°44'N., 1°56'W.), an isolated rock with a depth of 4.4m, lies about 1.5 miles N of Pointe de Meinga.

Basse du Nid (48°44'N., 1°54'W.), an isolated rock with a depth of 2.4m, lies about 2 miles NE of Pointe de Meinga.

Basse Grune (48°45'N., 1°54'W.), an isolated rock with a depth of 2m, lies about 3 miles NW of Pointe du Grouin.

3.34 Baie du Mont Saint-Michel (48°40'N., 1°40'W.), entered between Pointe du Grouin and Pointe de Champeaux, about 11 miles ENE, is encumbered with numerous sandbanks, which extend about 7 miles from its head.

Pointe de Champeaux is rocky when viewed from N or W, and terminates in a regular 45° slope.

Le Mont Saint-Michel (48°38'N., 1°31'W.), a precipitous rock, lies in the SE part of the bay, 7 miles SSE of Pointe de Champeaux. It is 128m high, surmounted by the spire of a conspicuous monastery, and connected to the shore by a causeway.

Tombelaine, a large isolated rock, lies 1.5 miles N of Le Mont Saint-Michel and is about 40m high.

Pointe de la Chaîne (48°40'N., 1°50'W.) is located 2 miles S of Pointe du Grouin. A prominent water tower stands about 1 mile WSW of this point.

Ile des Rimains (48°41'N., 1°50'W.), surmounted by an old fort, lies about 0.4 mile E of Pointe de la Chaîne.

Cancale (48°41'N., 1°36'W.), a small drying harbor, fronts a town about 1 mile SW of Pointe de la Chaîne and is used by fishing vessels.

Banc de Chatry, with depths of 0.4 to 3m, extends about 1.3 miles N from Pointe de la Chaîne and lies almost parallel to the coast.

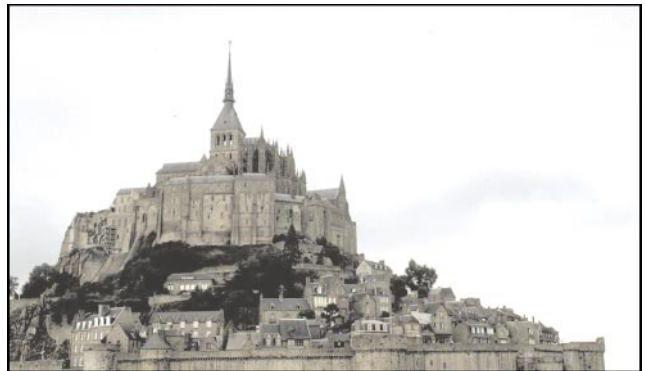
Banc des Corbieres lies with its S end located about 1 mile E of Pointe de la Chaîne. It has depths of 2.6 to 4m and extends about 1.2 miles N. Les Banchets, a group of gravel shoals with depths of 2 to 3.4m, lies centered about 1.2 miles E of Pointe du Grouin and about 0.5 mile N of the N end of Banc des Corbieres.

Grande Rade de Cancale (Rade de Cancale) (48°42'N., 1°49'W.) lies in the NW part of the bay with Banc de Chatry on its W side and Banc des Corbieres and Les Banchets on its E side.

Tidal currents in Grande Rade de Cancale attain velocities of 2 knots and flow in N and S directions.

Anchorage.—Anchorage can be taken in Grande Rade de Cancale between Banc de Chatry and Banc des Corbieres. There are depths of 11 to 13m, rock with a layer of clay mud less than 1m thick. The anchorage is sheltered from SW to NW winds, but the currents are strong.

Anchorage can also be taken between Banc de Chatry and the coast. There are depths of 7 to 9m, rock covered by a thin layer of mud with poor holding ground. This anchorage should be used only in neap tides, as the currents are strong.



Le Mont Saint-Michel

Caution.—An area used for oyster-breeding lies in the entrance of Baie du Saint-Michel, with its NW corner about 2.3 miles ESE of Pierre de Herpin Light. This area is marked by buoys and all seabed activities are prohibited within it.

Shellfish beds (mussels), marked by beacons, extend over a wide area in the S part of the bay. Vessels are prohibited from taking the ground or anchoring in the vicinity of these beds.

3.35 Pointe du Roc (48°50'N., 1°37'W.) terminates W in a steep cliff, 5.7 miles NNW of Pointe de Champeaux. It forms the W extremity of a small peninsula. A conspicuous signal station (wooden structure surmounting a blockhouse) is situated on the point. Point du Roc Light is shown from a prominent tower, 16m high, standing on the point.



Pointe du Roc (Granville) Light

The coast between Pointe de Champeaux and Pointe du Roc is fronted by a bank which extends up to 4.5 miles seaward in places. Several drying patches lie on this bank.

Le Videcoq (48°50'N., 1°42'W.), a rock which dries 0.8m, lies about 3 miles W of Pointe du Roc. It is the outermost danger at the edge of the coastal bank and is marked close SW by a lighted buoy.

Basse Parisienne, an isolated rock with a depth of 4.2m, and Banc Rondehaie, with a least depth of 3.5m over sand and shells, lie about 2.8 miles SW, and 2 miles S, respectively, of Le Videcoq.

3.36 Granville (48°50'N., 1°36'W.) (World Port Index No. 36110) is located about 1 mile E of Pointe du Roc and characterized by extreme ranges of tide. The commercial harbor consists of an avant-port, protected by two jetties, and a wet basin. There are facilities for cargo vessels, fishing boats, ferries, and pleasure craft.



Granville Harbor

Tides—Currents.—The tides rise about 11.7m at springs and 5.3m at neaps. At equinoctial springs the tide rises about 13m. The height of tide is affected by the prevailing winds.

Fresh W winds cause higher tides, and E winds lower the level of the water; differences may exceed 0.6m. The flood tidal current enters the avant-port with a rate of about 2 knots at the center of the channel and along the E jetty from about mid-tide until 30 minutes before HW; during this time a countercurrent flows out along the W jetty.

Depths—Limitations.—The avant-port dries 4.9 to 7m. It has a mud bottom, 1m thick, over rock. There are three ferry terminals in the SE part which can be used by vessels up to 50m in length and 6m beam. These ferries run to the Iles Chausey and, seasonally, to Jersey.

A channel, dredged to a drying height of 3.8m, leads from the port entrance to the wet basin gate. The passage is 19.8m wide and the sill of the gate has depths of 4.8 to 10.3m over it, depending on the tide. There are five berths, 94 to 255m long, in the wet basin, with depths alongside of 3.8 to 4.5m at HWN and 7.1 to 7.7m at HWS. Generally, vessels up to 120m in length and 19m beam can be accommodated, with drafts of 4 to 7m depending on the height of the tide.

The port can only be approached near HW and vessels with drafts over 4.6m should contact the local authorities prior to arrival.

An extensive marina, known as Port de Herel, is situated close E of the commercial harbor and is protected by breakwaters.

Aspect.—Le Loup Lighted Beacon (48°50'N., 1°36'W.), 24m high, stands 0.6 mile SE of Pointe du Roc and marks the approach channel giving access to the port. Banc de Tombelaine, parts of which dry, lies about 1 mile SW of this beacon.

A water tower, with a domed top, stands about 1.2 miles E of Pointe du Roc. It is the highest and only prominent landmark standing near the built up area of the town when viewed from seaward.

Pilotage.—Pilotage is compulsory for vessels over 45m in length and for all vessels carrying dangerous cargo.

Vessels should send an ETA and request for pilotage 18 hours in advance or on departure from a previous port if the time is less. The message should state the draft, vessel dimensions, and type and tonnage of dangerous substance carried.

The port may be contacted on VHF channel 12, or through a coastal radio station, for 1 hour 30 minutes before and after HW. The marina may be contacted on VHF channel 9.

Pilots may be contacted by VHF and usually board in the vicinity of Le Videcoq Lighted Buoy (48°50'N., 1°42'W.). In bad weather pilots will board within 0.5 mile of Le Loup Lighted Beacon.

Granville pilots may be contacted by e-mail, as follows:

pilotage.granville@wanadoo.fr

Regulations.—See Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea for rules pertaining to vessels in French waters.

When the passage gate is open, commercial traffic has the right-of-way over other vessels between the wet basin entrance and Le Loup Lighted Beacon.

Anchorage.—Vessels waiting to enter the port can anchor S of Le Videcoq Lighted Buoy in a depth of 7m. During W gales, vessels should anchor in Grande Rade de Cancale. During N gales, vessels should anchor in the lee of Ile Chausey (48°53'N., 1°49'W.).

Directions.—The best time for entering the port is 30 minutes before HW. After passing Le Loup Lighted Beacon, vessels should steer N and pass as close as possible to the E jetty. The countercurrent always runs out along the W jetty.

Once the bow is sheltered by the E jetty, the flood current, acting on the stern, assists the vessel in turning to starboard toward the entrance of the wet basin.

Caution.—A small explosives dumping area lies off the N side of Banc de Tombelain, 1.3 miles S of Pointe du Roc.

Entry to the port is difficult and local knowledge is required.

During strong W and NW winds, a choppy sea is formed in the entrance to the port. Vessels entering at this time should have a draft of at least 0.8m less than the depth in the channel.

Pointe du Roc to Nez de Jobourg

3.37 The W coast of the Cotentin Peninsula is one of the most inhospitable coasts of France. There are few prominent objects, and it is bordered by dangers which join with those of Jersey, the Iles Chausey, and Plateau des Minquiers. Fog is frequent and the tidal currents are strong.

This coast is exposed to W and N winds; there is no secure anchorage.

Passage de la Deroute and Deroute de Terre are the two main passages which lead from the Race of Alderney, and to the S of Plateau des Minquiers and the Iles Chausay. These channels are little used due to the currents, and the inadequacy of the navigation aids marking them. At night, Deroute de Terre is the only practical channel.

Vessels bound for Saint-Malo or Granville, from the Race of Alderney, normally proceed W of Jersey and Plateau des Minquiers. In clear weather, the reefs E of Jersey are not too difficult to negotiate.

Regulations.—The IMO has issued recommendations for navigation within the Race of Alderney. For further information, see paragraph 4.1.

An area encompassing most of the Channel Islands has been designated an Inshore Traffic Zone, and may best be seen on the chart. For further information, see paragraph 4.1.

See Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea for rules pertaining to vessels in French waters.

Caution.—Due to the very large range of tide in this area, islands, islets, and rocks have a marked difference in appearance at high and low water.

Local magnetic anomalies and abnormal variation can be expected within an area bounded by lines joining Cap de Carteret, Sark, and Cap de Flamanville.

Plateau des Minquiers

3.38 Plateau des Minquiers is a large mass of rocks and reef, some of which are always above water. The reefs are generally connected by extensive banks of shingle, gravel, and sand.

Near the center of the group parts of the banks dry, and the reefs are higher and closer together. The plateau encompasses about 130 square miles and its center lies about 12 miles S of Jersey. The principal dangers lying in the vicinity of the plateau are marked by lighted beacons and lighted buoys.

Maitresse Ile (48°58'N., 2°04'W.), 15m high, is the tallest rock of the group. Several stone cottages stand on this rock and a flagstaff is situated near the N end next to an emergency helicopter landing site. A beacon tower stands on a group of drying rocks close NE of this rock.

Les Maisons (48°59'N., 2°10'W.), lying about 4.5 miles W of Maitresse Ile, are three remarkable, steep, above-water rocks. A beacon tower stands on one of the rocks.

Brisants du Sud, with depths of less than 2m, lie about 6 miles SW of Les Maisons. Brisants du Nord-Ouest, with a least depth of 0.2m, lies 5 miles W of Les Maisons.

A wide berth should be given to the W side of the plateau as the sea breaks along the line between the lighted buoys marking this edge.

Le Four, a rock which dries 5.5m, lies about 5.5 miles SW of Maitresse Ile.

Les Sauvages (48°54'N., 2°01'W.), a detached rocky shoal, has a least depth of 1.8m. It lies close off the S side of the plateau and is marked by a lighted buoy moored close SE.

Basse Nord du Plomb (48°52'N., 2°02'W.), an isolated shoal with a depth of 9.7m, lies about 1.8 miles SSW of Les Sauvages and is the outermost danger in this vicinity.

Les Ardentes (48°58'N., 1°52'W.), forming the E extremity of Plateau des Minquiers, is a group of rocks, the highest of which dry 2.1m. A lighted buoy is moored close ESE of the easternmost rocks, about 7.5 miles E of Maitresse Ile.

Caux des Minquiers (49°00'N., 2°00'W.), a large group of drying and below-water rocks, forms the NE part of the plateau. Basse Nord-Est des Caux, with a depth of 1.2m, is the northeasternmost danger of this group. It is marked close NNE by NE Minquiers lighted buoy, moored about 6 miles ENE of Maitresse Ile. A shoal, with a depth of 5.9m, lies about 0.4 mile NE of the lighted buoy.

A rock, with a depth of 3m, the NW danger of Caux des Minquiers, lies about 3.5 miles NE of Maitresse Ile.

The Iles Chausey

3.39 The Iles Chausey, consisting of an extensive group of islets, rocks, and shoals, lies between Plateau des Minquiers and Pointe du Roc. The group extends about 7 miles E from Les Rondes de l'Ouest, its W extremity. The islets and rocks rise from a bank, much of which dries, that is steep-to on the N and W sides.

At LW, the E side is inaccessible to deep-draft vessels, as sandbanks close the channel between the Iles Chausey and the coast N of Pointe du Roc. Vessels should not approach closer than 0.5 mile to the islets and rocks on the S side of the Iles Chausey.

Vessels arriving from foreign ports are prohibited from visiting the Iles Chausey without first obtaining clearance at Granville, or some other French port.

The individual rocks and islets of the Iles Chausey should not be used to fix the vessel's position. Because of the great range of tide, the appearance of these islets and rocks is co-

ntinually changing. Only those in possession of local knowledge can positively identify the individual features at all states of the tide.

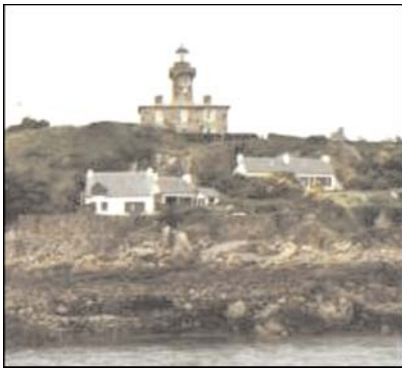
Grande Ile Chausey (48°52'N., 1°49'W.), on the S side of the group, is the principal and largest islet. Numerous pleasure craft may be encountered in the vicinity of the islet during the summer. Iles Chausey Light is shown from a square tower, 19m high, standing on the SE end of this islet.

A conspicuous former signal station (white building with a black flagstaff) is situated on an elevation near the NW end of the islet.

Le Pignon Lighted Beacon, 20m high, stands on a drying rock, about 4 miles ENE of Iles Chausey Light.

Two channels, marked by beacons, lead through the archipelago and are available to small vessels having pilots with local knowledge.

Anchorage, sheltered from NW to N winds, can be taken off the SE side of the Iles Chausey, between Grande Ile Chausey and Le Founet, about 5 miles ENE. The bottom is sand and shells, good holding ground.



Iles Chausey Light



Iles Chausey Light

3.40 La Catheue (49°07'N., 1°47'W.), a drying rock, lies near the middle of Banc de le Catheue and is marked on the SE side by a lighted buoy. The bank consists of a chain of sand

banks extending about 5 miles NNW with its S end located about 5.7 miles NNW of Pointe du Roc.

Roche d'Agon, an extensive group of above-water and drying rocks, extends up to about 3 miles seaward from the coast.

Le Ronquet (49°00'N., 1°37'W.), the highest rock in the group, is surmounted by a lighted beacon tower.

Basse Le Marie (49°02'N., 1°48'W.), about 9.5 miles N of Grand Ile Chausey, is a rocky ledge which dries 1.5m. A lighted buoy is moored close SW of the ledge and a buoy (special) is moored about 0.6 mile ENE of it.

Chaussee des Boeufs (49°07'N., 1°47'W.) is a group of rocky ledges, some drying, lying 4.5 miles N of Basse Le Marie. Le Boeuf, the highest rock, is marked by a beacon tower. Dangerous wrecks (positions doubtful) have been reported to lie about 2.5 miles SW and 0.8 mile S of this beacon.

Basse Jourdan, a rock with a least depth of 0.2m, lies about 1.6 miles ENE of Le Boeuf at the E end of Chaussee des Boeufs. A lighted buoy is moored about 0.5 mile E of this shoal.

Le Senequet (49°05'N., 1°40'W.), a drying rock, lies near the W edge of a rocky ledge which extends up to about 3.5 miles from the coast. Le Senequet Light is shown from a prominent tower, 26m high, standing on this rock.

Dangerous shoals extend up to about 1 mile W and NW of the light and are marked by a buoy.

Les Nattes, a group of drying rocks, lies 2.5 mile SW of Le Senequet Light and is marked by a buoy. The entire area between this group and the light is encumbered with rocks on which the sea breaks during strong W winds.



Le Senequet Light

3.41 Les Dirouilles (49°18'N., 2°02'W.) lies 4 miles N of the NE end of Jersey. This area of foul ground consists of numerous detached rocks and, with the exception of four small rocks in the SW part, covers at HW. Les Burons, two conical rocks about 3m high, are the tallest rocks in the group.

Les Ecrehou (49°17'N., 1°56'W.), lying close E of Les Dirouilles, is an area of reefs with its central part composed of many islets and numerous rocks connected by drying sand banks.

Maitre Ile (49°17'N., 1°56'W.), 7m high, is the largest islet of the group and a beacon stands on its summit. Marmotier, a craggy islet, lies 0.4 mile N of Maitre Ile and is surmounted by

a group of buildings. L’Ecreviere, a rock which dries 9m, lies about 0.8 mile E of Maitre Ile.

Ecreviere Bank extends about 2 miles SE from l’Ecreviere; the seas are very rough over this bank when the tidal current is against the wind. A lighted buoy is moored close SE of the SE end of the bank. Vessels can anchor, in a depth of 14m, gravel, about 1.5 miles SSE of Maitre Ile and W of the S end of the bank.

Basses de Taillepie and Bancs Feles lie about midway between Les Ecrehou and the French coast. Basses de Taillepie lies with its N end located 2.8 miles NE of Maitre Ile. This reef extends about 2.7 miles SE and in its N part has one rocky head which dries 0.7m.

Bancs Feles extends E from Basses de Taillepie and consists of ridges of sand and broken shells on which lie several rocks, one of which dries 0.9m.

Plateau des Trois-Grunes (49°22’N., 1°54’W.), a group of drying and below-water rocks, lies about 5 miles NNE of Maitre Ile and 3.5 miles W of Cap de Carteret. The group is marked on the W side by a lighted buoy. A small area lying close E of this lighted buoy is prohibited to navigation due to the deployment of measuring devices.

3.42 The coast between Pointe du Roc and Le Senequet, 15 miles N, is fringed by a bank, which dries up to 3.5 miles offshore in places, and is fronted by dangers extending up to about 6 miles seaward.

Pointe d’Agon (49°00’N., 1°35’W.) is located 10 miles N of Pointe du Roc. A light is shown from a tower on a dwelling, 12m high, standing on this point.

Havre de Regneville, a drying harbor, is entered close E of Pointe d’Argon and is used by small craft. Local knowledge is required for entry.

The spire of the belfry at Blainville, standing inland 4 miles N of Pointe d’Agon, is conspicuous.

Cap de Carteret (49°22’N., 1°48’W.) is a dark headland which terminates in a rocky cliff. Cap de Carteret Light is shown from a prominent tower, 18m high, standing on this cape.

A signal station is situated near the light and a conspicuous house stands 0.7 mile E of it. A large conspicuous white building with a gray roof stands near the beach, 1.4 miles ESE of the light.



Cap de Carteret Light

Havre de Carteret, a small harbor, lies 1 mile E of Cap de Carteret. It is used by local fishing vessels and pleasure craft.

Portbail, a small drying harbor, lies 4.7 miles SE of Cap de Carteret. It is used by small craft and yachts. A conspicuous water tower stands close N of the entrance.

3.43 Passage de la Deroute (49°15’N., 1°50’W.) and **Deroute de Terre** (48°54’N., 1°38’W.), two channels, lead from the Race of Alderney (Raz Blanchard) to S of Plateau des Minquiers and the Iles Chausey. At night, only Deroute de Terre is practicable. Passage de la Deroute is used, except for local traffic, only by vessels bound for or coming from, Saint-Malo and Granville.

Passage de la Deroute is frequently used by ferries. Other such vessels save little time by using these routes, and it is simpler to pass W of Plateau des Minquiers and Jersey, and E of Sark (49°26’N., 2°21’W.).

These channels are little used because they are situated outside the principal commercial routes, the tidal currents are strong, and landmarks are difficult to identify.

Because of the great range of tide, the passages between the reefs are not difficult to negotiate at HW. Local knowledge is essential for these channels.

Passage de la Deroute passes W of Plateau des Trois-Grunes, between Les Ecrehou and Basses de Taillepie, between Plateau de l’Arconie and Les Boeufs, and between Plateau des Minquiers and Les Ardentes to the NW and the Iles Chausey to the SE. There are depths of 4 to 10m between Les Ecrehou and Basses de Taillepie.

Deroute de Terre passes E of Plateau des Trois-Grunes, between Bancs Feles and Cap de Carteret, between Les Boeufs and Le Senequet, and between the Iles Chausey and Pointe du Roc. Deroute de Terre passes through depths of 2.5m between Plateau des Trois-Grunes and Basse le Marie, and 1m between Basse le Marie and Pointe du Roc.

Entree de la Deroute (48°54’N., 1°55’W.) separates the Iles Chausey from Plateau des Minquiers. The channel is 3.5 to 5 miles wide, but is not generally used due to the strong and erratic tidal currents. It leads into Passage de la Deroute.

Caution.—Several dangerous wrecks, which may best be seen on the chart, lie in the approaches to Entree de la Deroute, Passage de la Deroute, and Deroute de Terre.

3.44 The coast between Cap de Carteret and Cap de Flamanville, 9.5 miles NNW, consists of dunes and sandy beaches, separated by rocky points. Pointe du Rozel, located 6 miles NNW of Cap de Carteret, is the most notable.

Cap de Flamanville (49°31’N., 1°53’W.), surmounted by the ruins of a disused signal station, consists of a high, steep cliff.

The two towers of Flamanville Nuclear Power Station stand 1 mile N of the cape and are very conspicuous from seaward. A small basin lies close W of these towers. The narrow entrance, which faces NW, is located at the S end.

Bancs de Surtainville, with a least depth of 3.5m, and Le Caillou, a reef with a least depth of 3.9m, extend about 2 miles offshore between Cap de Carteret and Cap de Flamanville.

Basse Bihard, with a least depth of 2m, lies about 2.6 miles offshore, 4.8 miles S of Cap de Flamanville.

Anse de Vauville (49°37’N., 1°55’W.), lying between Cap de Flamanville and Nez de Jobourg, about 9 miles NNW, is bordered E by a drying bank extending about 0.3 to 0.5 mile offshore. The E shore of the bay consists of a sandy beach backed



Flamanville Nuclear Power Station

by rounded hills covered with vegetation, except near the center, where the sand dunes of Biville can be seen.

The bay provides shelter during winds from the N through E, to S. Anchorage can be taken in the SE part about 2.5 miles NNW of Dielette. The area has depths of 8 to 15m, sand and gravel, poor holding ground.

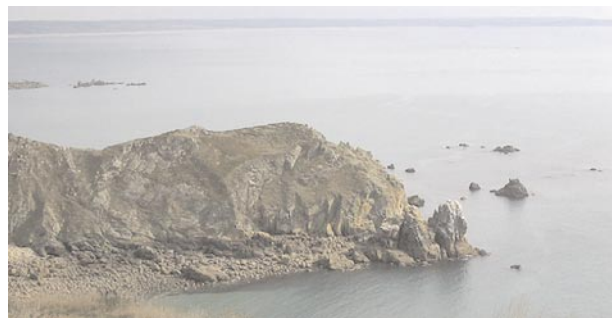
Dielette (49°33'N., 1°52'W.), a small drying harbor, lies in the S part of the bay, 2 miles NNE of Cap Flamanville. It is used by small craft and fishing vessels.

Caution.—A firing danger area lies within Anse de Vauville and extends up to 4 miles from the coast. The N limit lies 1.7 miles S of Nez de Jobourg and the S limit lies 3.4 miles N of Cap de Flamanville.

A prohibited anchorage area, in which navigation is restricted, lies adjacent to the entrance of the basin fronting the nuclear power station, N of Cap de Flamanville. This area extends up to 0.6 mile offshore and is marked by buoys.

Local magnetic anomalies may occur in the vicinity of Dielette.

3.45 Nez de Jobourg (49°41'N., 1°56'W.), a promontory 127m high, is located 3.2 miles S of Cap de la Hague (see paragraph 4.31). fronted by a steep cliff and surmounted by the ruins of an old signal station.



Nez de Jobourg

A prominent radar surveillance station is situated 1.5 miles NE of this promontory.

A conspicuous chimney, 100m high, and several buildings of a nuclear reprocessing plant stand on the summit of the high land, 2.5 miles E of Nez de Jobourg. It is reported that this chimney can be easily identified on radar when approaching from the W before the surrounding land appears above the horizon.

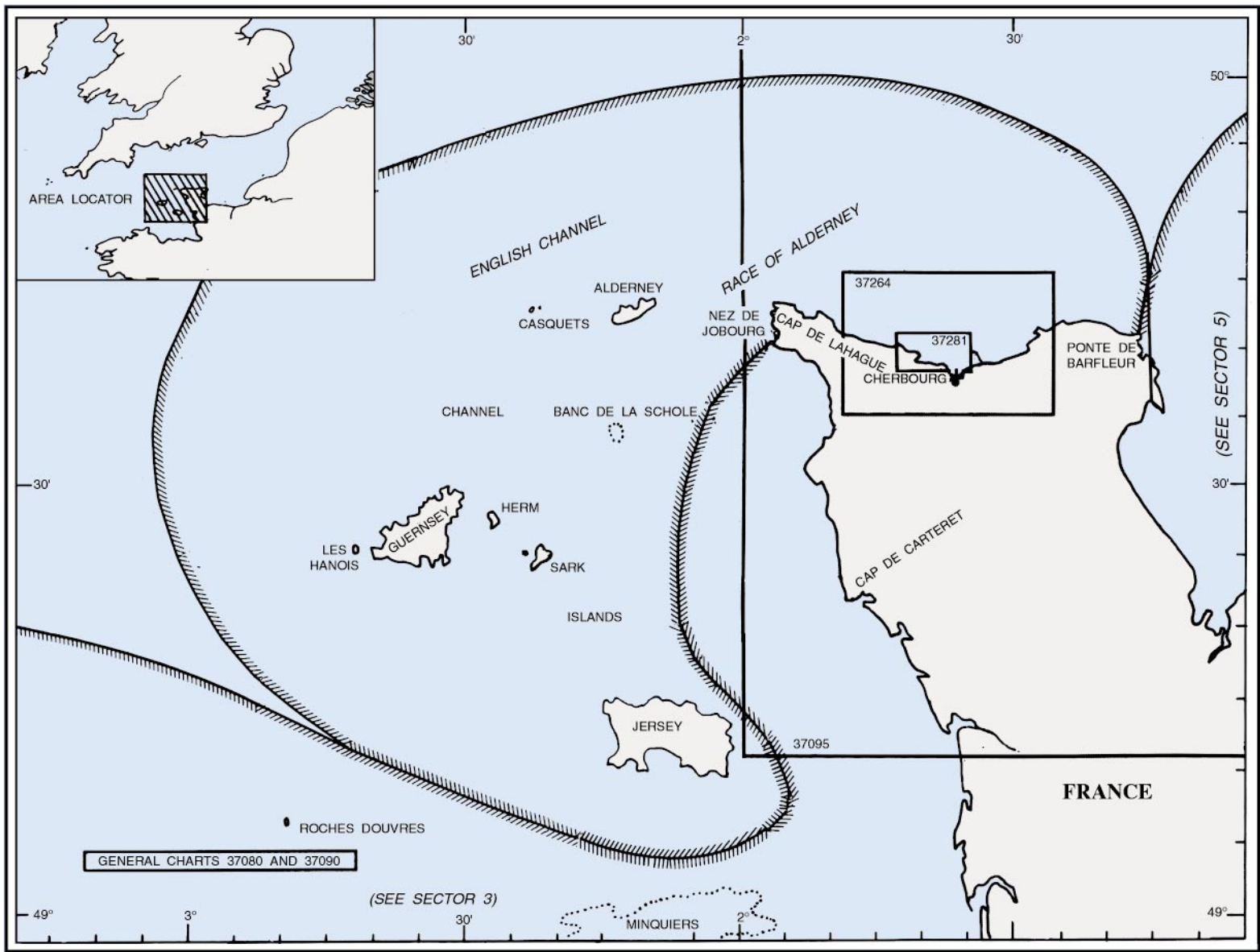
Basses de la Dossiere, a group of below-water and drying rocks, fronts Nez de Jobourg and extends up to about 1.2 miles NW. Basse du Rhin, the northwesternmost rock, has a depth of 2.2m.

Les Huquets de Jobourg (49°39'N., 1°57'W.), a reef with below-water and drying rocks, lies centered 1.5 miles S of Nez de Jobourg and is about 1 mile long. The highest rock of the group dries 5m and lies on the S side.

Basses Saint-Gilles, with a least depth of 2.3m, lies about 1.5 miles SSW of Nez de Jobourg and is separated from the W end of Les Huquets de Jobourg by a passage about 0.5 mile wide.

Huquets de Vauville, a small group of drying rocks, lies 2 miles SSE of Nez de Jobourg and about 0.3 mile E of the E end of Les Huquets de Jobourg. The highest rock dries 5.4m.

Caution.—An area within which diving, anchoring, or fishing are prohibited lies in the N part of Anse de Vauville and extends up to 2 miles S of Nez de Jobourg.



Additional chart coverage may be found in NGA/DLIS Catalog of Maps, Charts, and Related Products (Unlimited Distribution).

SECTOR 4 — CHART INFORMATION

SECTOR 4

THE CHANNEL ISLANDS AND FRANCE—NORTH COAST—COTENTIN PENINSULA TO POINTE DE BARFLEUR

Plan.—This sector describes the Channel Islands, then the N coast of the Cotentin Peninsula, including the port of Cherbourg. The descriptive sequence is the island of Jersey; then the islands of Guernsey, Herm, Sark, Casquets, and Alderney; followed by the coast of France N from Nez de Jobourg to Cap de la Hague; and then E to Pointe de Barfleur.

General Remarks

4.1 The Channel Islands lie to the S of the English Channel in the bight formed by the N coast of Brittany and the W coast of Normandy. They consist of the four main islands of Jersey, Guernsey, Alderney, and Sark, with innumerable islets and rocks, a few of which are sparsely populated. The Channel Islands are Dependencies of the Crown of the United Kingdom.

Tides—Currents.—The range of the tide in the bight formed by the N coast of Brittany and the W coast of Normandy is large, and as the water flows in and out of Baie du Mont Saint Michel, the tidal currents attain great rates around the islands and in the wider channels; the currents run particularly strong in the Race of Alderney.

Meteorological effects on sea level are probably greater in the Channel Islands than in localities on the N coast of France.

For example, at Saint Helier (49°17'N., 2°07'W.), the height of the sea level appears to be increased by as much as 0.6m during strong and long continued W winds, and to be correspondingly decreased during similar NE winds.

Regulations.—The IMO has issued the following recommendations concerning navigation in the immediate vicinity of the TSS off Casquets:

1. Subject to factors that may affect safe navigation, vessels proceeding from the W part of the English Channel to the Dover Strait or vice versa should use the TSS off Casquets.

2. The Race of Alderney should not be used by vessels other than those proceeding to and from ports in the Channel Islands, to and from ports situated on the French coast between Cherbourg and Ouessant, or to and from the inshore routes in the vicinity of Ouessant.

3. EC2 Lighted Buoy (50°12'N., 1°12'W.) is moored 40 miles NE of Cap de la Hague and centered in an area, with a radius of 2 miles, which is to be avoided. Vessels proceeding from the TSS off Casquets to the Dover Strait TSS, or vice versa, are recommended to leave this mid-channel area to be avoided to port.

4. Vessels crossing the E or W traffic flow between the TSS off Casquets and the Dover Strait TSS should do so as nearly as practical at right angles. Vessels joining or leaving these traffic flows should do so at as small an angle as practicable.

Special regulations and reporting procedures apply to tankers transporting hydrocarbons and to vessels transporting

dangerous substances navigating in the approaches to the French coasts of the North Sea, the English Channel, and the Atlantic Ocean between the Belgian border and Spanish border. Such vessels preparing to pass through or stop within French territorial waters are required to send a message to the appropriate CROSS station giving their intended movements. In addition, such vessels must use the designated Mandatory Access Routes and Channels when approaching a port or roadstead.

For further details of these special procedures, see Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea.

Regulations—Reporting Systems.—The Jobourg Vessel Traffic Service (VTS), known as MANCHEREP, is a mandatory reporting system under SOLAS which operates in an area covering the Traffic Separation Scheme (TSS) lying off Les Casquets.

The operational area is bound by the meridians of 2°58'W and 2°00'W, and the latitudes of 50°10'N and 49°20'N.

The following vessels are required to participate in the system:

1. All vessels over 300 grt.
2. All vessels 300 grt and under when either:
 - a. not under command or at anchor in the TSS or its Inshore Traffic Zone.
 - b. restricted in ability to maneuver.
 - c. having defective navigational aids.

Vessels should report 2 miles before entering the area to Jobourg Traffic on VHF channel 13.

Special reporting arrangements can be made on a ship-to-ship basis subject to approval by Jobourg VTS. If vessels cannot communicate by VHF, they should use any other means of communication available.

Reports for MANCHEREP must include the following:

Designator	Information Required
A	Name, call sign, and IMO identification number.
C or D	Position.
E	Course.
F	Speed.
G	Port of departure.
I	Destination.
O	Draft.
P	Hazardous cargo, class and quantity.
Q	Defects (if relevant).
R	Pollution or dangerous goods lost overboard (if relevant).

Jobourg Traffic broadcasts regular information bulletins at 20 minutes and 50 minutes past every hour. These bulletins contain details of marine traffic, warnings, and weather.

The information is broadcast in French and English on VHF channel 80, preceded by an announcement on VHF channel 16.

The VTS broadcasts regular weather reports in French at 0700, 1500, and 1900 (French local time). Special reports in French and English are broadcast at 3 minutes past every hour.

If required, the VTS can provide personalized information on a vessel, especially as a aid to positioning.

Jobourg Traffic Control Center may be contacted by e-mail, as follows:

jobourg.mrcc@equipement.gouv.fr

The Ship Movement Reporting System (MAREP) is a voluntary reporting system and its objectives are to assist the mariner, to improve safety of navigation in the English Channel and Dover Strait, and to reduce the risk of pollution off the coasts of the United Kingdom and France in this area.

All merchant vessels of 300 grt and over are requested to report to the appropriate shore station when approaching the following:

1. The TSS off Ile d'Ouessant.
2. The TSS off Casquets.
3. The TSS within the Dover Strait.

For further details of MAREP, see Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea.

Vessels in this area are also advised to listen to the appropriate VHF broadcasts by the Channel Navigation and Information Service (CNIS). This service, which is operated from Dover Strait Coast Guard and CROSSMA Griz Nez, provides information concerning traffic, navigation, and visibility.

Note.—Due to the MANCHEREP Vessel Traffic Service (VTS) being mandatory in this area, vessels are advised that this system takes preference over the Ship Movement Report System (MAREP), which is only voluntary.

Directions—Inshore routes.—A Traffic Separation Scheme (TSS) lies NW of Casquets. The Inshore Traffic Zone (ITZ) is designated as the area located between the S boundary of the TSS and the Channel Islands. It is bounded by lines drawn from the SW corner of the scheme to Les Hanois Light (SW Guernsey), from Saint Martin's Point Light (SE Guernsey) to the S extremity of Sark, from the E extremity of Sark to Quenard Point (NE extremity of Alderney), and from Quenard Point to the SE corner of the scheme.

The general route for vessels making for Guernsey, Jersey, and the N Brittany coast from the N is either to the W of Casquets or through the Race of Alderney, which lies between Cap de la Hague and Alderney.

The Swinge, between Alderney and the island of Burhou, can also be used in clear weather and favorable conditions. Ortac Channel, lying W of Burhou (49°44'N., 2°16'W.), is used less frequently.

Due to the unevenness of the sea bed and the varying rate of the tidal currents, heavy overfalls, which can be dangerous, occur in both the Race of Alderney and The Swinge.

Directions—Offshore routes.—An IMO-adopted Traffic Separation Scheme (TSS) lies NW of Les Casquets and may best be seen on the chart. Rule 10 of The International Regulations for Preventing Collisions at Sea (72 COLREGS) applies in this scheme.

Channel Lightfloat (49°54'N., 2°54'W.), equipped with a racon, is moored 23 miles WNW of Casquets at the W end of the TSS.

East Channel Lighted Buoy (49°52'N., 2°29'W.), equipped with a racon, is moored about 3 miles WSW of the E end of the TSS.

EC2 Lighted Buoy (50°12'N., 1°12'W.), equipped with a racon, is moored 40 miles NE of Cap de la Hague (see Regulations).

Caution.—Considerable variations in refraction caused by atmospheric conditions have been observed in the vicinity of the Channel Islands.

The practice of taking regular and careful soundings is very important when approaching the Channel Islands, or navigating among them in thick weather or at night. Soundings may give little or no warning on approach to the islands and reefs which, in general, are steep-to and due to the severe velocity of the tidal currents, it is possible for a vessel to be set inside of their boundaries.

Mariners having a thorough knowledge of the depths should be able to anchor in sufficient time to avoid endangering their vessels. They are also cautioned against relying on distant marks for off-lying dangers, as many of these marks can not be distinguished in clear weather only.

Due to the great range of tide, there is a great difference in the appearance of the islands and rocks at high and low water.

Between the islands there are extensive banks of sand and gravel, as well as other irregularities in the bottom, which may be useful in estimating the vessel's position.

The Channel Islands lie mainly across the direction of the strongest currents and both direction and rate are affected by their presence.

The currents are generally rotatory in a counterclockwise rotation, the E current being of shorter duration and greater strength than the W current; this is particularly noticeable in the S part of the area.

Overfalls and ripples form over submerged rocks and off-lying banks when the tidal current is running strongly; and during periods of poor visibility such indications can be used to an advantage.

Fishing activities in the vicinity of Jersey, Les Ecrehou, and Plateau des Minquiers consist mainly of lobster potting; approximately 40 pots, spread about 18m apart and marked by unlit spar buoys, are laid near the rocks.

Potting boats occasionally work on the edge of Hurd Deep, N of Alderney, and caution should be used while navigating in the vicinity.

A dumping ground area for explosives lies centered about 8 miles NW of Alderney with a disused dumping ground area situated close S of it. The limits of these areas may best be seen on the chart.

Another disused dumping ground area, the limits of which may best be seen on the chart, lies about 8 miles SW of Guernsey.

The Channel Islands

4.2 The Channel Islands, with off-lying islands and rocks, occupy a large portion of the bight between Ile de Brehat (48°51'N., 3°00'W.) and Cap de la Hague (49°44'N., 1°56'W.), about 70 miles NE.

The Casquets, Burhou, and Alderney lie to the N and form a chain of islands separated from the coast of France by the Race of Alderney. Guernsey, with the off-lying islands of Herm and Sark, lies to the NW; Jersey and Plateau des Minquiers an extensive reef, are located in the middle of the bight.

The S side of the island of Guernsey is higher than its N side; whereas, the N side of Jersey is higher than its S side. However, these distinguishing features are not noticeable when first sighting these islands from a distance from the W. As they are approached, the low N part of the land on Guernsey, as contrasted with the S slope of the land on Jersey, should prevent the possibility of either island being mistaken for the other.

The approaches to the Channel Islands present peculiar difficulties to vessels without local knowledge. Vessels approaching from the W in thick weather should stay in depths of 64m or more to keep outside of, or W of, Plateau des Roches-Douvres and Guernsey.

Depths of over 56m lie close W of Guernsey and Casquet Southwest Bank and, occasionally, small gravel knolls, with depths of about 38m, may be heaped up on Hurd Deep by the combined action of gales and tidal currents. In such cases, these knolls may be distinguished from the larger banks by their smaller size and the greater depths surrounding them.

Hurd Deep (49°40'N., 3°00'W.), with depths of over 92m, extends about 87 miles SW from a position located 12 miles N of Cap de la Hague. It indicates the approach to the Casquets from the N or NW. The S edge of this deep lies 4 miles N of the outermost dangers in the vicinity of the Casquets.

An increase in depth from 74m to a depth of 92m, or up to 119m, indicates a position lying NW of Guernsey and somewhere in the W part of Hurd Deep; depths of 128m to over 165m are found only N of the Casquets and in the E part of Hurd Deep.

The bottom of Hurd Deep is unusual for the large patches of black mud on it, although there is also considerable rocky ground and other substances. Between this deep and the islands the bottom has no distinctive character, but consists of rock, gravel, hard sand, and other coarse materials.

To the E of the Channel Islands the depths are a safe guide in approaching to within a reasonable distance of the French coast. A line drawn from the E end of Alderney to the E end of Jersey is nearly parallel to the mainland and about 9 miles distant from it. To the E of this line, the depths decrease gradually toward the French coast; S of Jersey the numerous reefs make approach to that coast very dangerous.

Directions.—When approaching from the SW and passing W of Guernsey and Casquets, the NW coast of Guernsey should not be approached within a distance of 3.5 miles, due to the numerous off-lying shoals. To ensure being clear of the heavy swell prevalent off this coast, vessels should keep at least 5 miles to seaward.

When approaching from S, vessels should pass well to the W of the buoys marking the W edge of Plateau des Minquiers (48°58'N., 2°08'W.), as the sea breaks on the edge of this plateau (see paragraph 3.38).

Passage de la Deroute and Deroute de Terre are two routes which lead from the Race of Alderney to the S of Plateau des Minquiers and the Iles Chausey (48°52'N., 1°52'W.), passing E of Les Ecrehou (49°18'N., 1°56'W.) and Jersey. These channels are little used because they do not serve any main commercial route (see paragraph 3.43).

When approaching from the N through the Race of Alderney (49°44'N., 2°05'W.) and bound for Saint Helier, Jersey, vessels should pass 5 miles E of Sark and close W of Banc Desormes (49°19'N., 2°17'W.). They should then pass W of Banc Desormes and proceed to a position located about 3.5 miles W of Grosnez Point (49°16'N., 2°12'W.), steering with La Corbiere Light bearing between 140° and 145°.

At night, vessels should remain within the white sector of the light, which leads between West Rock and Rigdon Bank. They should then alter course to pass W of Green Rock.

The E coast of Jersey can be approached by way of Le Ruau (49°16'N., 2°03'W.), but due to the strength and erratic direction of the tidal currents, vessels usually prefer to proceed via the W coast of the island.

When approaching from the N through the Race of Alderney and bound for Saint Peter Port, Guernsey, vessels should head for either Little Russel, the channel leading between Guernsey and Herm, or Big Russel, the channel leading between Herm and Sark. Care should be taken to avoid Banc du Milieu (49°39'N., 2°09'W.) and Banc de la Schole (49°35'N., 2°13'W.) when using Big Russel.

When approaching from the N or NW, vessels passing W of Casquets and bound for Saint Peter Port should shape a course for either Little Russel or Big Russel, taking care to avoid Casquet SW Bank.

The approach to Little Russel in poor visibility can be dangerous and vessels are advised in such a case to pass around the SW end of Guernsey and approach Saint Peter Port from the S.

Caution.—The Channel Islands, surrounded by dangers consisting of numerous rocks and shoals, become more formidable because of the great rise and fall of the tides and the tremendous rates attained by the tidal currents. Gales from the SW and NW send in the heaviest seas among the islands.

This is accentuated by the strength of the tidal currents, particularly between 3 hours before and 3 hours after HW by the shore.

The off-lying rocks fronting their coasts, the strength and varying direction of the tidal currents, and the rough seas caused by the wind and tidal currents during bad weather are all elements of danger. In the vicinity of and between the Channel Islands there are no special characteristics in the depths or in the nature of the bottom to assist the mariner when uncertain of his position.

Heavy gales cause considerable temporary changes in the off-lying sand banks and exposed beaches of the islands; however, SW gales pile up large quantities of sand and shingle, and NE gales wash them away.

Jersey

4.3 Jersey (49°14'N., 2°08'W.), the southernmost and largest island of the Channel Islands, rises to a height of 125m in its N part. The land slopes gradually from this height to the S coast. The interior of the island is cultivated in small fields. Trees are mostly sparsely scattered except in some valleys. The main town is Saint Helier, situated on the S coast. The best anchorages lie in Gorey Roads, on the E coast, and Saint Aubin Bay, on the S coast.

Regulations.—All vessels, including small craft, arriving at Jersey must first call and report at the ports of Saint Helier or Gorey prior to proceeding to any other harbors, marinas, or anchorages where it is intended to land.

4.4 Jersey—West coast .—Grosnez Point (49°16'N., 2°15'W.), the NW extremity of Jersey, is a precipitous bluff, 77m high. The ruins of a castle stand on its summit. Grosnez Point Light is shown from a white structure standing on the point. This light structure is difficult to identify, but a conspicuous lookout tower is situated 0.4 mile SW of it.

Banc Desormes (49°19'N., 2°17'W.), which is rocky, lies off the NW extremity of Jersey, about 3.8 miles NNW of Grosnez Point. Northwest Head, the NW extremity of this bank, has a least depth of 6.7m and is marked by a lighted buoy moored about 0.7 mile WNW of it.

Rigdon Bank, with a least depth of 3m near its center, lies about 2 miles SW of Grosnez Point. West Rock, with a depth of 10.7m, about 3.8 miles WSW of Grosnez Point, is the outermost danger off the W coast of Jersey.

Approaching from the W, the spire of Saint Ouen Church at an elevation of 72m, and the tall spire of Saint Peters Church at an elevation of 81m, about 2.5 and 3.5 miles, respectively, SE of Grosnez Point, will be the first landmarks to be sighted.

The Quennevais (Quenvais), also known as Blanchés Banques, about 1.5 miles SW of Saint Peters Church, is a considerable area of sand hills, and may easily be identified.

La Corbiere Light (49°11'N., 2°15'W.) is shown from a prominent stone tower, 19m high, standing on La Corbiere, a conspicuous rock located at the SW extremity of Jersey. This rock lies about 0.3 mile WSW of Corbiere Point, to which it is connected by a causeway over partly drying ledges. A red aircraft warning light is shown from a concrete structure standing on the high ground above the cliffs, about 0.5 mile ENE of La Corbiere.



Le Corbiere Light

On nearing La Corbiere, a safe distance off the off-lying dangers can be maintained by keeping the lantern of the lighthouse in line or below the top of the high land behind it.

At night, the red light situated 0.45 mile ENE of La Corbiere, and level with the top of the high land, can be used instead. During the NW gales, especially between HW and three-quarter ebb by the shore, vessels should keep at least 1.5 miles off La Corbiere to avoid breaking seas.

Great Bank, with a least depth of 7m, lies about 1.8 miles NW of La Corbiere Light, forming the S part of Saint Ouen Bay.

Green Rock, with a least depth of 3m, lies about 0.7 mile WNW of La Corbiere, and is the outermost danger located W of La Corbiere.

Saint Ouen Bay (49°13'N., 2°15'W.) lies between Corbiere Point and Petit Etaquerel, 3.5 miles N. It is low, sandy, and backed by a seawall from which the land rises to a plateau. The shore of the bay is fronted by drying rocky ledges and below-water rocks extending up to about 1 mile seaward. The bay provides good shelter in offshore winds but should not be used during strong W winds.

A prominent white hotel and a lookout tower, with a radio station, stand on Corbiere Point, at the S end of the bay. La Rocco Tower, 15m high, is situated on a rocky reef 0.4 mile offshore, 1.1 miles NNE of Corbiere Point.

4.5 Jersey—South coast.—Point la Moye (49°11'N., 2°15'W.), about 1 mile ESE of La Corbiere, is a high, cliffy bluff. Grosse Tete, a prominent square rock, about 24m high, lies about 0.5 mile farther E.

Saint Brelade Bay (49°11'N., 2°12'W.), is entered between Grosse Tete and Point le Fret, about 1 mile ESE.

Large vessels may anchor outside the bay, in depths of about 15m, gravel, with La Corbiere Light just open S of Point la Moye bearing 290°, and the summit of Grosse Tete bearing 336°.

At night, the colored lights of the airport runways, located 1.2 miles N of the head of Saint Brelade Bay, may be seen.

Jument Rock, 8m high with a conspicuous white patch, lies about 0.6 mile WNW of Pointe la Moye and 0.4 mile ESE of La Corbiere Light.

A conspicuous weather radar station stands 0.2 mile N of Pointe la More. The tower, 22m high, is surmounted by a large white spherical cover.

Noirmont Point (49°10'N., 2°10'W.) is located 0.8 mile ESE of Point le Fret. Noirmont Point Light is shown from a tower, 10m high, standing at the foot of the point. A prominent lookout tower stands on the higher ground above the light.

Caution.—During strong W gales, the entire area between the off-lying rocks located S of Noirmont Point is a confused mass of breakers and landmarks at sea level may be obscured by driving spray.

4.6 Saint Aubin Bay (49°11'N., 2°08'W.) is entered between Noirmont Point (49°10'N., 2°10'W.) and Point de Pas, about 2.5 miles ENE. A conspicuous chimney, 95m high and floodlit at night, stands at a power station, which is situated on Point de Pas, about 0.3 mile SE of the entrance to Saint Helier. Four prominent tanks are located close N of the power station.

Sector 4. The Channel Islands and France—North Coast—Cotentin Peninsula to Pointe de Barfleur

Point Le Croc, a low, sandy point, lies about 1.5 miles farther SE. La Motte, a rocky islet 8m high, lies close S of this point. It is reported that four conspicuous apartment buildings stand on Pointe Le Croc.

Saint Aubin Castle (Fort), located on a large rock lying about 1 mile NNE of Noirmont Point, is conspicuous.

Saint Aubin (49°11'N., 2°10'W.) (World Port Index No. 36050) lies on the W side of the bay. This small drying harbor is formed by two piers and its entrance, which faces NE, is 25m wide. It is used by small craft and yachts. Local knowledge is advised.

The W, S, and E approaches to the bay are encumbered by numerous steep-to dangers, making access to the bay through the various channels difficult without local knowledge.

The bay itself dries at the head and is encumbered with numerous drying and below-water dangers.

Passage Rock (49°10'N., 2°12'W.), with a least depth of 4m, lies about 1.5 miles WSW of Noirmont Point and is marked close W by a lighted buoy.

Frouquie des Vracheres, with a depth of 2.1m, lies about 1 mile S of Passage Rock. It is the shallowest of a group of rocky shoals which forms the southwesternmost dangers in the approach to the bay.

Les Grunes Vaudin is an extensive group of rocks, many of which dry. SW Rock, which dries 2.1m, lies in the middle of the S edge of the group, about 1 mile S of Noirmont Point. Danger Rock, with a least depth of 1.2m, lies about 1 mile SE of Noirmont Point.

4.7 Demie de Pas (49°09'N., 2°06'W.), which dries 6m, lies about 1.3 miles SW of Point Le Croc at the edge of a group of rocks fronting the coast. A lighted beacon, 13m high, stands on this rock. A racon is situated at the beacon.

Les Tetards is a group of rocks, some awash, lying about 0.8 mile W of Demie de Pas.

Icho Bank, with a least depth of 5.8m, is a detached rocky shoal lying about 2.3 miles SSE of Demie de Pas. This shoal forms the outermost SE danger in the approach.

Tides—Currents.—The tides in the bay rise about 9.7m at springs and 7m at neaps. The range of the tide may be increased by W winds and decreased by NE winds. The E tidal current along the S coast of Jersey forms a countercurrent in Saint Aubin Bay and the W current sets NW into the bay.

Tide rips, which may be very violent and dangerous, are formed off Noirmont Point with the current setting in either direction. The N tidal current sets across the entrance and into Saint Helier at a rate of about 3 knots during spring tides and the S current has a rate 1 knot less.

Anchorage.—Saint Aubin Bay offers good shelter from offshore winds. The best berths lie NW and W of Diamond Rock, a 2.1m patch located about 1 mile E of Noirmont Point. This anchorage area shows general depths of 5m and lies out of the strength of the tidal current.

Anchorage berths closer to Saint Helier are available near Ruaudiere Rock, a drying rock located 1 mile ESE of Noirmont Point. These berths are situated 0.3 mile N, 0.3 mile S, and 0.4 mile E of the rock, in general depths of 4 to 10m.

Care should be exercised if anchoring close to, or E of, the range marking Red and Green Passage, as several submarine cables are situated in this vicinity.

Directions.—There are several channels available to vessels approaching Saint Aubin Bay, all of which require local knowledge. The channels may best be seen on the chart.

Northwest Passage is the most frequently used channel and usual sea route for commercial vessels. It is the safest by both day and night and has a least controlling depth of 4.3m. The channel leads from the W and passes S of La Corbiere Light, SSW of Pointe le Fret, and S of Noirmont Pointe Light. The inner part of the fairway is indicated by range lights. The channel is 0.25 mile wide at its narrowest part, off Point le Fret.

Western Passage leads from WSW. It passes S of La Corbiere Light, close N of Passage Rock, and joins the inner part of Northwest Passage, S of Noirmont Pointe Light. This channel is narrow and the aids are difficult to identify in poor visibility.

Danger Rock Passage leads from SW and passes close SE of Les Grunes Vaudin. It is indicated by range marks.

Sillette Passage leads from S into the W part of the bay and passes E of Les Grunes Vaudin. It is indicated by range marks and joins Northwest Passage.

Red and Green Passage, a shallow channel, leads NNE into the E part of the bay. Middle Passage leads NNW into the W part of the bay. These channels are marked by range marks.

South Passage leads from SSE and passes close E of Les Tetards. It joins Red and Green Passage.

Eastern Passage leads from SE and passes close SW of Demie de Pas Lighted Beacon. It joins South Passage.

It is reported that there are depths of over 6m in all the channels at half tide.

Caution.—When approaching Saint Helier and Saint Aubin Bay on the rising tide, between half-flood and HW, vessels should proceed, according to their draft, as most rocks have a least depth of 4m. Exceptions include rocks lying about 0.8 mile S, 1.8 miles SE, and 0.3 mile E of Noirmont Point.

When navigating the passages mentioned above, particular attention should be paid to the height of the tide, the strong currents setting across the reefs, and the difficulty in identifying some of the range marks in poor visibility.

Saint Helier (49°11'N., 2°07'W.)

World Port Index No. 36040

4.8 Saint Helier, located at the E side of Saint Aubin Bay, is the capital and main port of the island. There are facilities for general cargo, petroleum products, and passengers.

The port consists of Saint Helier Harbour, which encloses Old Harbour, Elizabeth Harbour, and La Collette Harbour.

Tides—Currents.—The tides rise about 9.8m at springs and 4m at neaps.

Depths—Limitations.—Saint Helier Harbour is entered between Albert Pier and Victoria Pier. An extensive marina is situated in its NW part. Old Harbour, which is enclosed by Saint Helier Harbor, is situated in the NE part and used by fishing vessels and pleasure craft. North Quay, in the center, provides 153m of berthage with a depth of 5.2m alongside. It can accommodate vessels up to 80m in length and 5m draft.

Victoria Pier provides 347m of quayside, with depths of 2.2 to 3m alongside. Albert Pier provides 392m of quayside, with



Saint Helier

depths of 2.3 to 3.9m alongside. It is used by catamaran and other passenger vessels.

La Collette Harbour, with two basins, is located S of Victoria Pier. The N basin is used by yachts. The S basin provides an oil and LPG terminal. Tankers up to 95m in length and 6.1m draft can be accommodated.

Elizabeth Harbour is situated W of Saint Helier Harbour. A marina lies in the N part. The main commercial basin is entered between Albert Pier and West Breakwater. There is a ro-ro terminal with two linkspan berths, each 130m long with depths of 6m alongside. Ro-ro ferries up to 130m in length and 5.2m draft use these facilities on a regular basis.

The least and controlling depth in the entrance fairway is reported (1999) to be 2.4m.

Aspect.—Elizabeth Castle stands on the rocks fronting the harbor and is conspicuous. A causeway, which dries at half tide, extends 1.2 miles NNE from the castle to the shore of the bay. Hermitage Rock, 28m high, lies about 0.2mile SSE of the castle. Hermitage Breakwater extends between the castle and this rock. It then extends about 0.2 mile SSE from the rock and provides shelter on the N side of the harbor entrance.

The harbor entrance channel is indicated by lighted ranges. The chimney standing on Point de Pas has been previously described in paragraph 4.6. Fort Regent, with a white dome and a signal mast, is situated 0.4 mile N of the chimney and is prominent. A swimming pool stands in the vicinity of the fort. Its concave roof is conspicuous on the skyline.

Pilotage.—Pilotage is compulsory for vessels of 50 grt and over. Vessels should send an ETA and request for pilotage through Jersey coastal radio station. Pilots can be contacted by VHF and are available 24 hours. Pilots board vessels approaching from W about 1 mile W of Noirmont Point Light (49°10'N., 2°10'W.) and vessels approaching from E about 0.5 mile SSE of Demie de Pas Lighted Beacon (49°09'N., 2°06'W.).

Regulations.—Vessels over 25m in length should obtain permission from Port Control before entering, leaving, or berthing.

Inbound vessels must report to the Port Control on VHF channel 14 when passing the following Reporting Points:

1. South of Corbiere Light (49°11'N., 2°15'W.) (Inbound or transiting the area state position and confirm ETA at berth).

2. Abeam of Noirmont Point Light (49°10'N., 2°10'W.) (Inbound request clearance and berthing instructions).

3. Abeam Demie de Pas Lighted Beacon (49°09'N., 2°06'W.) (Inbound from S or E request clearance and berthing instructions).

4. Abeam Violet Lighted Buoy (49°08'N., 1°57'W.) (Inbound or transiting the area via Eastern Passage state position and confirm ETA at berth).

The port of Saint Helier may be contacted by e-mail, as follows:

harbourmaster@jersey-harbours.com

A speed limit of 5 knots is in effect within the port

Signals.—Traffic signals are displayed from port control, situated at the head of Victoria Pier, as follows:

1. A green occulting or flashing light indicates vessels may enter but not leave the harbor.

2. A red occulting or flashing light indicates vessels may leave but not enter the harbor.

3. Green and red occulting or flashing lights indicate no vessels may enter or leave the harbor unless instructed by radio to do so.

4. An amber quick flashing light indicates vessels under power and 25m or less in length may enter or leave the harbor contrary to the light signal shown at the time. Such vessels must keep to the starboard side while passing between the pier heads.

Anchorage.—Vessels are prohibited from anchoring in any place other than that indicated by the harbormaster.

Caution.—The most dangerous period for a vessel to enter the harbor is from 2 hours 30 minutes before HW until the time of HW, due to the N tidal current, which, at or near spring tides, runs strongly.

In strong winds large vessels are advised to wait until after HW before entering. Reclamation years ago caused a reverse to the normal direction of the tidal current across the entrance to the harbor.

It is reported that the port control (VHF channel 14) has a limited range of only about 8 miles.

4.9 Jersey—South coast (continued).—Violet Bank is the general name of the reefs lying SE of the low coast between Point de Pas, close S of Saint Helier, and **La Rocque Point** (49°10'N., 2°02'W.), the SE extremity of Jersey.

The bank dries as far as La Conchiere, a rock, 1.8m high and marked by a beacon, about 2 miles SE of La Rocque Point. Depths of less than 5.5m over foul ground extend nearly 1.8 miles E of La Conchiere.

Icho Tower, 16m high, stands 1.3 miles SW of La Rocque Point and is conspicuous. The upper half of this tower is white-washed and it is situated on a rock surrounded by other high rocks.

Seymour Tower, located about 1 mile ESE of La Rocque Point, is a stone tower, 16m high, with its E, S, and W sides painted white. At HW, this tower is completely isolated, differing in this respect from Icho Tower.

Plateau de la Frouquie consists of numerous submerged and drying rocks. Canger Rock, which dies 3.4m, and La Gou-

Sector 4. The Channel Islands and France—North Coast—Cotentin Peninsula to Pointe de Barfleur

biniere, which dries 5.3m, lie near the W end of the plateau, 3.2 miles SSE of La Rocque Point, and are marked on their NW side by a lighted buoy. Froquier Aubert lies on the SW side of the plateau. It dries 8.2m and is marked by a lighted buoy.

Monte Ube Light (49°00'N., 2°04'W.) (rear range) is shown from a framework tower, 14m high, standing 1.2 miles W of La Rocque Point.

Petite Anquette (49°09'N., 1°56'W.), a rock drying 6.4m, lies about 2.5 miles E of La Conchiere, and about 1 mile E of the E extremity of Violet Bank. A rocky patch, with a depth of 4.3m, lies about 0.3 mile W of Petite Anquette.

Seal Rocks, some drying up to 1.5m, extend to about 0.3 mile NW of Petite Anquette.

Grande Anquette, a rock drying 8.5m and marked by a beacon, lies about 0.8 mile E of Petite Anquette, and N of Plateau de l'Arconie.

Violet Channel, with general depths of 6.7 to 11.6m, passes S and E of Violet Bank, N of Plateau de la Frouquie, and W of Petite Anquette and Seal Rocks.

A buoy is moored about 1.5 miles WSW of Grande Anquette.

Caution.—When navigating in Violet Channel, vessels should pay close attention to the set of the tidal currents which change direction hour by hour.

4.10 North coast of Jersey.—The coast between Grosnez Point (49°16'N., 2°15'W.) and La Coupe Point, 9 miles ESE, is high and cliffy. Below-water and drying rocks extend up to 0.6 mile from the shore in places.

Grosnez Point and Banc Desorme were previously described with the W coast of Jersey in paragraph 4.4. Les Dirrouilles, 4 miles N of La Coupe Point, is described in paragraph 3.41.

Pierres de Lecq ou Paternosters (49°17'N., 2°12'W.), an extensive group of rocks, lies centered about 2.5 miles NE of Grosnez Point. Great Rock, 10m high, is located near the center of the group. It is the tallest and most prominent rock.

Flat Rock, which dries 10.4m, and Southwest Grune, with a depth of 0.3m, lie about 0.5 mile, respectively, WSW and SSW, of Great Rock. La Grun de Lecq, which dries 0.9m, lies about 0.5 mile SSE of Great Rock.

On the N side of the group, North Rock, which dries 9m, and East Reef, which dries 2.4m, lie about 0.5 mile, respectively, NNW and NNE of Great Rock. Northwest Reef, awash, lies about 0.9 mile WNW of Great Rock.

Plemont Deep separates Pierres de Lecq ou Paternosters from the N coast of the island.

Plemont Point (49°16'N., 2°14'W.) is located 0.8 mile E of Grosnez Point. It is surmounted by a conspicuous hotel. Another conspicuous hotel and a martello tower stand 1.3 miles SE of the point, at the head of a small bay.

Sorel Point (49°16'N., 2°09'W.) is located 2.7 miles E of Plemont Point. A light is shown from a round tower, 3m high, standing on this point.

A prominent television tower, the top of which has an elevation of 232m, stands 1.2 miles ESE of the light.

Belle Houge Point (49°15'N., 2°06'W.), fringed by rocks, is the highest headland on the N coast. A conspicuous hotel stands near the head of Bouley Bay, 1.3 miles SE of the point.

Tour de Rozel lies 2 miles ESE of Belle Houge Point and is detached from the shore at HW. This conical white-washed rock is 37m high and prominent.

A conspicuous house, with a red roof, stands 0.5 mile SW of Tour de Rozel, at the E side of Bouley Bay. A conspicuous building, with a turret surmounted by a green conical roof, is situated at the extremity of Nez du Guet, a bluff, 0.4 mile SE of Tour de Rozel.

Anchorage.—Anchorage can be taken, in a depth of about 15m, gravel, about 1 mile NW of Tour de Rozel.

Anchorage can also be taken closer inshore, in depths of 7 to 9m about 0.8 mile W of Tour de Rozel, in Bouley Bay.

Anchorage, sheltered from S and W winds, can be taken, in depths of 10 to 12m, sand and gravel, about 0.4 mile offshore, 0.6 mile W of Belle Houge Point.

Anchorage can be taken, in depths of 15m, about 0.4 mile offshore, 1.2 miles WSW of Sorel Point Light.

Caution.—Dangerous wrecks, positions doubtful, are reported to lie about 1 mile NW of Tour de Rozel and at the E side of Pierres de Lecq ou Paternosters, about 1.7 miles N of Sorel Point Light.

4.11 East coast of Jersey.—La Coupe Point (49°14'N., 2°01'W.), the NE extremity of Jersey, is a 33m high knoll connected to the mainland by a lower neck of land; a white stone turret stands on its summit.

It is reported (1995) that the turret is difficult to identify, but the hill on which it stands can be easily distinguished.

Coupe Rock, with a depth of 2.7m, lies about 0.5 mile E of La Coupe Point.

Saint Catherine Bay (49°13'N., 2°01'W.) lies between Verclut Point, located 0.6 mile SSE of La Coupe Point, and La Crete Point, 0.9 mile S. A breakwater extends about 0.4 mile ESE from Verclut Point. A light is shown from a framework structure, 9m high, standing on the head of this breakwater.

Saint Catherine Bank, consisting of mud and drying rocks, extends up to about 0.9 mile seaward from the middle part of the bay.

Archirondel Tower stands on the shore of the bay, 0.3 mile NNW of La Crete Point, and is prominent.

Mont Orgueil Castle stands 0.6 mile S of La Crete Point and is conspicuous. It is situated on a rocky promontory at an elevation of 64m.



Mont Orgueil Castle

Equerriere Rock, about 0.3 mile SE of the castle, dries 11.6m and is marked by a beacon.

Gorey (49°12'N., 2°01'W.), a small harbor, lies at the N end of Grouville Bay. It is formed by a pier extending SW from the foot of Mont Orgueil Castle. The harbor dries and is used by pleasure craft and, in summer, small ferries. The approach channel is indicated by a lighted range. Local knowledge is required.

Grouville Bay extends between Mont Orgueil Castle and La Rocque Point. Its shore consists of white sand backed by a seawall. A sandy bank, the S part of which has numerous rocks, encumbers the bay and extends up to about 1.3 miles seaward. The outer dangers are marked by beacons and buoys.

Banc du Chateau extends for about 2 miles in a NNW to SSE direction, seaward of Grouville Bay, and is awash in its middle part. The bank is formed of sand, gravel, and shells, and is much affected by the weather and tidal currents; the shallower part, within a limited space, is continually shifting and during W winds, the ridges of the sand banks are about 1.2m higher than with E winds.

Anchorage.—Outer Road, the roadstead for Gorey, lies between Banc du Chateau and the coastal bank W. The roadstead provides safe anchorage for vessels, in depths of 9 to 15m, gravel and shells, about 1 mile ESE of Mont Orgueil Castle.

Large vessels can anchor E of Banc du Chateau, in depths of 18m, about 2.5 miles E of Mont Orgueil Castle. Another berth, in a depth of 21m, lies about 0.9 mile ENE of the head of the breakwater extending from Verclut Point, but clear of the disused cables.

Caution.—A submarine power cable extends seaward from the S part of Saint Catherine Bay and several disused submarine cables extend seaward from the shore, 0.3 mile NE of Verclut Point.

Guernsey, Herm, and Sark

4.12 The islands of Guernsey, Herm, and Sark, with their adjacent dangers, form the westernmost of the three groups that comprise the Channel Islands. Little Russel, a narrow channel, separates the NE part of Guernsey from Herm, and is restricted by the reefs and dangers extending from, and lying off, both islands.

Guernsey and Herm, with their adjacent dangers, lie on a common bank; they are separated from Sark, which lies on a similar bank, by Big Russel, a deep passage.

All the islands in this group are fringed by extensive dangers, and numerous detached dangers are interspersed within the 30m curve. It has been reported that the island of Guernsey is radar conspicuous.

Pilotage.—Pilotage is compulsory except for those vessels exempted by law. The pilotage zone consists of an area bound by a line joining the following:

1. Saint Martin's Point (49°25'N., 2°32'W.).
2. Lower Heads Lighted Buoy (49°26'N., 2°28'W.).
3. Southeast coast of Herm.
4. Grande Amfroque (49°31'N., 2°25'W.).
5. Grandes Brayes (49°31'N., 2°30'W.).
6. Fort le Plomb (49°31'N., 2°31'W.).

Vessels should inform Saint Peter Port coast radio station on VHF channel 20 of their confirmed ETA at least 4 hours before

arrival. Vessels should report to Port Control or Pilots on VHF channel 12 when approaching the pilotage zone.

Pilot boats are stationed at Saint Peter Port and Saint Sampson. Pilot boarding positions are dependent on the weather and are made by arrangement with the pilots. Pilots normally board in position 49°25.0'N, 2°29.2'W or in position 49°30.8'N, 2°27.7'W. If the pilot is unable to board due to rough weather, the pilot boat will lead the vessel to the destination.

Vessels over 18m in length should contact Port Control prior to entering or leaving the harbor.

The output power of VHF channel 12 is restricted to only cover the pilotage zone. If difficulty is experienced in contacting Port Control, vessels may send messages through Saint Peter Port coast radio station on VHF or MF.

Caution.—In thick weather, vessels coming from the W should not approach Guernsey within a depth of 70m unless certain of their position. Allowance should be made for the strong tidal currents setting toward the island.

The dangers lying off the N coast of Guernsey are located close to the coastal shelf and soundings may give little warning of their locations.

Guernsey

4.13 Guernsey is highest along its S coast, with a ridge rising steeply to a height of nearly 75m at its W end above Pleinmont Point, then declining in the form of a wedge toward the N. The W coast of Guernsey has more verdure and appears of a deeper shade than Jersey.

Saint Peter Port, the only town and principal harbor, and Saint Sampson, which dries, lie on the E side of the island. The only anchorage for large vessels is E of Saint Peter Port.

4.14 Guernsey—West coast.—The W coast of the island extends between L'Eree Point (49°28'N., 2°39'W.), the NW extremity, and Pleinmont Point, 2 miles SSW. It is fronted by numerous detached rocks and dangers, which lie up to 2 miles offshore.

Lihou Island, fringed by reefs, is 23m high and lies 0.4 mile WNW of L'Eree Point. This island is conspicuous and its summit rises at the W end. A prominent rock stands near the middle of the island. Fort Saumarez, a prominent disused look-out tower, surmounts a hillock standing on L'Eree Point.

Les Hanois (49°26'N., 2°42'W.), a group of above and below-water rocks, extends up to about 1.8 miles W of Pleinmont Point, the SW extremity of the island. Les Hanois Light is shown from a conspicuous tower, 33m high with a helicopter platform, standing on a rock 1.2 miles W of Pleinmont Point. The light structure is reported to be radar conspicuous.



Les Hanois Light

Sector 4. The Channel Islands and France—North Coast—Cotentin Peninsula to Pointe de Barfleur

A prominent radio mast stands on the high ground, close within Pleinmont Point. Torteval church, with a prominent round tower and high spire, stands 1.2 miles E of the point.

Fort Grey, with a white prominent tower, stands close offshore, 0.9 mile NE of Pleinmont Point. It is 20m high and connected to the shore by a causeway.

4.15 Guernsey—North coast.—The N coast of the island extends between Pleinmont Point and **Fort Doyle** (49°30'N., 2°30'W.), the NE extremity. It is low and consists of numerous bays bordered by rocky points, which are marked by old forts or towers. These small bays afford shelter from offshore winds to small vessels with local knowledge.

The belfry of Saint Matthew (49°28'N., 2°36'W.) and the spire of Vale Church, about 2.5 miles NE, are conspicuous.

Fort Le Plomb stands on a headland, 0.5 mile WNW of Fort Doyle. L'Anresse Bay is entered close W of this point and provides shelter to small craft during winds between SE and WSW.

Caution.—The N side of the island should not be approached within a distance of 5 miles as the entire coast is encumbered by extensive foul ground and numerous off-lying dangers, which may best be seen on the chart.

The outermost dangers consist of several detached steep-to shoal patches and rocks, with depths of 9 to 20m, on which the sea breaks heavily.

A firing range extends about 1.3 miles N and 1.5 miles NE of Fort le Plomb. Vessels should keep clear of the danger area when red flags are displayed from the fort.

4.16 Guernsey—South coast.—The S coast of the island extends between Pleinmont Point and Saint Martin's Point, 6 miles E. It is high and cliffy. Hautnez, 103m high, the highest part of the island, lies about 4 miles E of Pleinmont Point. Conspicuous disused lookout towers stand near the S shore, 0.4 mile and 2.1 miles E of Pleinmont Point.

Several dangers front this stretch of coast and lie up to 0.8 mile offshore.

Saint Martins Point (49°25'N., 2°32'W.), the SE extremity of Guernsey, is backed by high land on which there are conspicuous barracks. Doyle's Column, a conspicuous, square, granite tower, stands at an elevation of 118m, about 0.5 mile NNW of the point.

Saint Martin's Point Light is shown from a concrete building, 5m high with a flat roof, standing on a rocky spur below Saint Martin's Point.

Caution.—An explosives dumping area, which may best be seen on the chart, lies centered 8 miles SSW of Pleinmont Point.

4.17 Guernsey—East coast.—The E side of the island includes Herm and the adjacent dangers. The E coast of Guernsey has a gradual downward slope from Saint Martins Point to close N of Saint Peter Port, 2.4 miles N. The land then continues low with a few small hills toward Fort Doyle. The entire stretch of coast is fringed by numerous dangers.

The Great Bank (49°26'N., 2°31'W.) lies with its S end located about 0.5 mile ENE of Saint Martin's Point. It has a least depth of 4m and consists of sand and shells. This bank

extends about 2 miles NNE and lies nearly parallel to the S part of the E coast. A passage, with general depths of 34 to 47m, separates The Great Bank from the dangers fronting the coast and has a minimum width of about 0.3 mile.

Little Russel, the N approach channel to Saint Peter Port, leads between the coastal dangers and those adjacent to Herm. This channel has depths of 2.1 to 13.4m. The recommended courses leading through the passage have a least depth of 5.2m but pass close to lesser depths.

Beaucette Yacht Marina, formed from a disused quarry, is situated 0.2 mile S of Fort Doyle. The entrance fairway is indicated by a lighted range.

Vale Mill, a conspicuous tower, stands 0.9 mile SSW of Fort Doyle and is the tallest object on NE part of the island. Belvedere House, a large conspicuous building, is situated 1.6 miles N of Saint Martin's Point.

Platte Fougere (49°31'N., 2°29'W.), a reef which dries 4m, lies 0.9 mile NE of Fort Doyle. It is located at the W side of Little Russel and is the outermost danger fronting the NE extremity of the island. Platte Fougere Light is shown from a prominent tower, 25m high, standing on this reef. A racon is situated at the light.

Petite Canupe, which dries 3.4m, is one of the principal rocks of a group of dangers fronting the E side of Fort Doyle. It lies about 0.6 mile S of Platte Fougere and is marked by a lighted beacon.

Platte, a drying rock, lies 0.6 mile offshore, about 1.3 miles SSE of Fort Doyle. A light is shown from a stone tower, 9m high, standing on this rock.

Roustel, a reef which dries, lies 0.5 mile ENE of Platte and is marked by a lighted beacon.

Tides—Currents.—The tidal currents off the E side of Guernsey are very strong. In the vicinity of Saint Martin's Point they set in the same direction at a rate of 3 knots during spring tides. Close E of Saint Martins Point the currents divide; one part sets N over The Great Bank through Little Russel, and the other part sets NE, past and between the rocks lying S of Jethou, and through Big Russel.

The S and SW currents passing through Little Russel and Big Russel also meet E of Saint Martins Point. In the narrowest part of Little Russel these currents attain a rate of 5 knots during spring tides.

4.18 Herm (49°28'N., 2°27'W.) lies 2 miles E of Guernsey. This island, along with the surrounding rocks, divides Little Russel from Big Russel. A conspicuous stone obelisk stands at the N end of the island. The smaller island of Jethou lies 0.5 mile SW of the S end of Herm.

Several small but high islets, numerous above and below-water rocks, and a number of areas of extensive foul ground surround both these islands.

The southernmost dangers are Lower Heads, which dry 1.2m, and Sardriere, a rock with a depth of 1.5m, lying 0.3 mile ESE. These dangers lie about 1.5 miles SSW of Jethou and are marked close S by a lighted buoy.

Fourquies of Big Russel, a drying rock, lies about 0.6 mile SE of the SW extremity of Herm. This rock forms the southeasternmost danger and is marked close N by a lighted buoy.

Noire Pute, 2m high, lies about 1 mile E of the E extremity of Herm. It forms the easternmost danger and is marked by a light.

Grande Amfroque (49°31'N., 2°25'W.), lying about 2 miles NE of the N extremity of Herm, is the outermost above-water rock in this vicinity. It has two peaks; the tallest is 17m high and is marked by two beacons.

Bonne Grune, a rock with a depth of 3.4m, lies 1 mile ENE of Grande Amfroque and is the northeasternmost danger off Herm. Platte Boue, a small group of shallow rocks, forms the northernmost danger off Herm and lie about 0.8 mile NNW of Grande Amfroque.

Tautenay, a drying reef, is located 1.1 miles N of the N extremity of Herm. It lies at the E side of Little Russel and is marked by a lighted beacon.

Brehon Tower (49°28'N., 2°29'W.), round and 17m high, stands in the middle of a partly drying reef, 1.3 miles WSW of the NE extremity of Herm. It is conspicuous and marked by a light.

Directions.—Saint Peter Port and Saint Sampson can be approached from the N through Little Russel, the entrance of which lies E of Platte Fougere. Vessels can pass either E or W of Roustel. This channel, however, can be very dangerous due to strong tidal currents and the numerous above and below-water rocks in its vicinity. During poor visibility, vessels are recommended to pass W of Guernsey and approach from the S.

From S of Saint Martin's Point, the route leads generally N, passing between The Great Bank and the E coast of the island. Alternatively, vessels may pass between The Great Bank and the dangers fronting the SW side of Jethou.

4.19 Saint Sampson (49°29'N., 2°31'W.) (World Port Index No. 35990), a small harbor protected by a breakwater, is used by coasters.

Depths—Limitation.—The harbor and the approach channel dry. The entrance channel, which has a width of 36m, has depths of 7.3m at MHWS and 4.9 to 5.2m at MHW. There is about 500m of total quoyage. There are facilities for general cargo, tanker, and LPG vessels. Generally, coasters up to 76m in length and 4.6m draft can be accommodated. It is reported (1999) that a vessel 76m in length with a draft of 6.1m entered at HW.

Aspect.—A lighted range indicates the entrance fairway. Vale Castle stands near the shore, 0.2 mile N of the harbor entrance.

Three conspicuous chimneys stand close N of the harbor and a group of prominent storage tanks are situated along the shore on the S side of the harbor.

Pilotage.—See paragraph 4.12 for further information. The harbor can be contacted on VHF channel 12; however, all marine communications should be routed via Saint Peter Port (Port Control).

Signals.—A red light is shown from the pier when vessels are prohibited from entering or leaving the harbor. A flashing orange light is shown when the commercial berths will be occupied during the next tide.

Caution.—Tidal currents set across the harbor entrance making the approach difficult.

An area being reclaimed lies close S of the harbor entrance.

Saint Peter Port (49°27'N., 2°32'W.)

World Port Index No. 36000

4.20 Saint Peter Port, an artificial harbor, is the only deep-water harbor on the island. The S side is formed by Castle Pier, which extends 0.3 mile ENE to Castle Cornet. Castle Breakwater then extends 0.1 mile NE from Castle Cornet. The N side is formed by Saint Julian's Pier, extending E from the shore, and White Rock Pier continuing SSE.

Tides—Currents.—Tides rise about 9.3 m at HWS and 7m at HW. The tidal currents in Great Road reach a rate of less than 1 knot. Tidal eddies may form at times, close inshore off the port.

Depths—Limitations.—Two small marinas lie in the SW part of the harbor. A large marina, protected by breakwaters, is situated on the N side of Saint Julian's Pier. Facilities for fishing craft are situated in the inner part of the harbor.

New Jetty extends from the N side of the harbor and provides the main commercial berths. There are facilities for general cargo, container, and ro-ro vessels; automobile ferries; wave-piercing catamarans; and hydrofoils. There is about 600m of total quoyage, with berths up to 140m long. Depths alongside range from drying to 7m. The harbor entrance has a controlling depth of 4.2m. Vessels up to 130m in length may enter the port, with up to 8.9m draft at HWS and 6.7m at HW.

Aspect.—Castle Cornet, a conspicuous castle with a flag-staff and its SE bastion painted white, stands on the S side of the harbor, about 0.3 mile offshore.

Victoria Tower stands on the high ground overlooking the town. It is conspicuous and is situated about 0.7 mile W of the harbor entrance. A television mast stands close SSW of the tower. Elizabeth College, a large building with four spires, stands close SSE of the tower and is prominent.

Saint Joseph's Church, with a conspicuous green copper spire, stands 0.2 mile SSW of Victoria Tower. Of the numerous churches in the town, this church has the highest elevation and is situated W of the range marking the harbor entrance fairway.

Castle Breakwater Light is shown from a prominent tower, 12m high, standing on the head of Castle Breakwater. Belvedere Light is shown from a structure, 4m high, standing close to the shore, about 0.5 mile SW of the head of Castle Breakwater.

Pilotage.—See paragraph 4.12 for further information.

Signals.—Traffic signals are displayed from a signal station situated on the head of White Rock Pier.

When a red light is displayed, vessels are prohibited from entering or leaving the harbor. A supplementary red light is exhibited towards the land from the SW corner of the building on New Jetty, for the benefit of vessels berthed W of this jetty. This light is exhibited when vessels may not leave their berths or moorings.

The local authorities may permit a particular vessel to enter the harbor or leave a berth or mooring while the above signal lights are exhibited. Vessels may not enter or leave the harbor or shift berth without obtaining permission from Port Control through Saint Peter Port radio station. Vessels under 13m in length, except those under sail, are exempt.

Sector 4. The Channel Islands and France—North Coast—Cotentin Peninsula to Pointe de Barfleur

Anchorage.—Great Road fronts the harbor entrance.

Anchorage is prohibited in a circular area, with about a 0.25 mile radius, centered about 0.3 mile E of the head of White Rock Pier; this area is kept clear for vessels entering or leaving the port. The best anchorage for large vessels is about 0.5 mile E of the light structure standing on the head of White Rock Pier. Small vessels may anchor about 0.4 mile NE or 0.8 mile NNE of the same light structure.

The holding ground is good, and Great Road affords shelter from SSW, through W, to N winds, but strong winds from NNE to SE cause much sea, and at such times vessels should seek shelter under the lee of Herm, anchoring with Brehon Tower in line bearing 018° with Roustel Light, distant 0.4 to 0.7 mile. Winds between SE and SSW send in considerable swell and sea, especially with a falling tide, and smoother and better conditions will be found NE of Herm.

Caution.—A range indicating the channel in Little Russel is formed by the structures of Belvedere Light and Castle Breakwater Light. It is reported that this range is difficult to distinguish in the afternoon light or in hazy conditions.

High speed craft (catamarans and hydrofoils) may be encountered in the approaches to the port.

Sark

4.21 Sark (49°26'N., 2°22'W.) has a rocky coast line rising steeply to a plateau. The small island of Brecqhou lies close off the W extremity. Little Sark, the S part of the island, is almost separated from the main part by a narrow and high isthmus. The shores of the island are indented by numerous small bays and coves. Numerous rocks and small islets front the island and close approach is only possible on the NW side.

Bec du Nez (49°27'N., 2°22'W.) is the northernmost of a group of rocky islets lying on a reef, which extends about 0.2 mile NNW from the N extremity of Sark. A light is shown from a structure, 1m high, standing on Corbee du Nez, a rock lying close S of it.

A conspicuous tower stands on the N extremity of the island.

Point Robert (49°26'N., 2°21'W.), a rugged point, is located on the E coast of Sark, about 1.3 miles SE of Bec du Nez, and is fronted by rocks. Point Robert Light is shown from a prominent tower, 17m high, standing on this point.



Point Robert Light

L'Etac, a prominent islet, lies 0.4 mile SE of the S extremity of Little Sark. A conspicuous barracks block stands in the SE part of Little Sark. La Givaude, a prominent rock 11m high, lies about 0.2 mile W of the W extremity of Brecqhou.

Sark Mill, a disused mill, stands near the middle of the island, about 0.7 mile WSW of Point Robert. It surmounts the summit of Sark and is conspicuous. A prominent radio mast, 30m high, stands about 0.3 mile ENE of Sark Mill.

Pilcher Monument is situated on the W side of the island, about 0.5 mile WSW of Sark Mill. It stands on the N side of Longue Point and is conspicuous.

La Maseline Harbour, the main landing place of the island, lies 0.2 mile S of Point Robert. It is separated from Creux Harbour by a steep and rugged bluff. A jetty extends 45m from the shore at the S end of the harbor and has depths of 0.2 to 5.1m alongside its W side. Local knowledge is required.

Creux Harbour, which dries at MLWS, is located 0.4 mile S of Point Robert. It is protected by stone piers and used by local ferries and small craft. Local knowledge is required.

4.22 Blanchard (49°26'N., 2°18'W.), with a least depth of 1.4m, lies about 1.9 miles ESE of Point Robert. This rock forms the outermost danger in this vicinity is marked by a lighted buoy moored about 0.5 mile ESE of it.

Tides—Currents.—The tidal currents in the immediate vicinity of the Sark group are irregular and strong. Their set is largely governed by the configuration of the land. In the passages on either side of the group, the currents in general, are regular and set in the direction of the passage.

There is an eddy off the NE coast of Sark during the whole period of the NE current in Big Russel.

This eddy extends about 2 miles offshore but not right up to it, and decreases in width as the distance from the coast increases.

Information regarding the rates of the currents and eddies around Sark is limited, but they are probably strong and erratic in places, particularly off salient points and where the coast changes direction.

There are numerous overfalls off the S and E coasts of Sark, some of which can be dangerous to small craft, especially near spring tides.

Anchorage.—Sark affords good shelter from almost all winds, but a close approach to the island on all but the NW coast is difficult due to the many detached dangers and rocks, and also from the rapidity and irregularities of the tidal currents in its vicinity.

Anchorage, in depths of about 25m, fine sand and gravel, are found between Pavlaison and La Grande Boue, which dries 0.8m and is the outermost of the group of rocks lying to the E of Bec du Nez. These anchorages lie about 0.6 mile E of the N extremity of Sark and can only be used in good weather, with winds from between WSW and S.

The best deep-water anchorage, with a depth of 15m, is found about 0.7 mile SW of Bec du Nez and 0.4 mile N of the E end of Brecqhou.

Big Russel

4.23 Big Russel (49°27'N., 2°25'W.) leads between the outermost dangers lying E of Herm and Jethou and the outermost dangers lying NW of the Sark group. This channel is about 2 miles wide and easy to access. It has general depths of 37 to 44m, but several detached rocky patches, with depths of 10 to 16m, lie near the S entrance. Grode Bank, with a least

depth of 15m, lies near mid-channel, about 1.2 miles W of the W extremity of Brecqhou.

Banc de la Schole (49°35'N., 2°14'W.) lies about 9 miles NE of Sark. This shoal has a least depth of 2.7m at its W side and general depths of 4.9 to 19m, fine gravel, sand, and shells. The bank lies nearly in the direct line between Big Russel and the Race of Alderney. In bad weather, the sea breaks dangerously on all parts of the shoal.

Caution.—An area of sand waves, with a least depth of 9.4m, lies centered about 2 miles NW of Bec du Nez. The uneven bottom in this area and the tidal currents cause heavy ripples and dangerous seas in bad weather.

Casquets and Alderney

4.24 Casquets and Alderney, with the island of Burhou, and their adjacent islets and dangers, comprise the N group of the Channel Islands. The Race of Alderney separates Alderney, the easternmost island, from Cap de la Hague. Ortac Channel and The Swinge, two deep passages rendered somewhat hazardous by the strong tidal currents, lead through this group.

Ortac Channel, the W channel, leads between the detached dangers lying E of Casquets and the dangers lying W of Burhou, the middle island of the group. The Swinge leads between Alderney and Burhou.

Tides—Currents.—The tidal currents in the vicinity of the Casquets and Alderney, and in the Race of Alderney, are particularly strong. About 3 miles N of the Casquets the E and W currents attain a rate of about 4 knots during spring tides.

Alderney and the Casquets lie partly across the direction of the tidal currents when they set at their greatest rate.

At such times, countercurrents are formed on the opposite side of the islands. Within The Swinge the tidal currents are reported to attain a rate of 7 to 8 knots during spring tides. In Ortac Channel, a rate of 7 knots was observed during spring tides.

Casquets

4.25 **Casquets** (49°43'N., 2°23'W.), a prominent and extensive group of islets and rocks, lies 5.5 miles W of Alderney. Three towers are situated on the largest islet, which is 27m high. Casquets Light is shown from the northwesternmost and tallest of the three towers, which is 23m high. A racon is situated at the light.



Casquets Light

L'Auquiere, 13m high, and Noire Roque, 4m high and craggy, are two rocks lying about 0.2 mile W and 0.3 mile WSW, respectively, of the light.

Point Colotte, 10m high, lies about 0.3 mile E of the light. It is the easternmost of six detached rocks. The tidal currents run very strongly through the narrow gullies that separate these rocks. The S side of the group is steep-to.

Eight Fathom Ledge (49°43'N., 2°24'W.), a steep-to rocky ledge, lies about 0.9 mile WNW of Casquets Light and has a depth of 14.6m. This ledge causes violent eddies and during strong winds the sea breaks on it.

Pommier Banks consist of two groups of submerged rocks. The westernmost group has a least depth of 4m and lies about 1.5 miles NE of Casquets Light. The easternmost group has a least depth of 9m and lies about 0.7 mile farther NE.

Danger Rocks, formed by two rocky pinnacles, has a least depth of 6.4m. These rocks lie close together about 2.3 miles ENE of Casquets Light. They should be approached with care as depths less than charted may exist in this vicinity.

Casquet SW Bank is composed of fine gravel, sand, and shells. It has a least depth of 7.3m and lies centered about 4.5 miles SSW of Casquet Light. Casquet SSW Bank has a least depth of 20m and lies about 2 miles S of Casquet Light. There are strong overfalls on the former bank and in the middle of the latter bank.

Casquet SSE Bank has a least depth of 7.3m and lies centered about 3.6 miles SSE of Casquet Light.

Caution.—Approaching Casquets is hazardous during poor visibility due to the strong tidal currents in their vicinity. Vessels should never approach with the tidal current.

Burhou

4.26 **Burhou** (49°44'N., 2°15'W.), a grassy islet with rocky shores, has its summit, 21m high, located near the W end. This islet is the home of numerous seabirds during the breeding season. A refuge hut, with a prominent rock close W of it, stands on the S coast.

North Rock, with a depth of 3.4m, lies about 0.3 mile S of the E extremity of the island.

Little Burhou, an islet 13m high, lies close WSW of Burhou, to which it is connected at LW.

Ortac, a conspicuous rounded rock, 22m high, lies about 1.3 miles WSW of Burhou; a ledge, with a least depth of about 3.7m, lies about 0.2 mile W of Ortac.

Renonquet, an islet 8.8m high, with White Rock, 4.9m high and close ENE, lies about 0.8 mile WNW of Burhou.

Verte-Tete, a two-headed rock, is 8m high and lies about 0.3 mile WNW of Renonquet.

Great Nanne, 15m high, lies about 0.3 mile N of the E extremity of Burhou. It is the largest of several above-water rocks standing on Nannels Reef. L'Emprove, a reef, awash, lies about 0.3 mile N of this rock.

Directions.—The main route for vessels transiting from Jersey or Guernsey leads either W of Casquets or through the Race of Alderney. The Swinge leads between Alderney and Burhou. Ortac Channel, passing W of Burhou, is less frequently used. Local knowledge is advised for these two passages.

4.27 **Ortac Channel** (49°44'N., 2°18'W.) is bound on the W side by L'Equet, Danger Rocks, and Pommier Banks. It is

Sector 4. The Channel Islands and France—North Coast—Cotentin Peninsula to Pointe de Barfleur

bound on the E side by the Verte-Tete, Renonquet, Ortac, and the other reefs extending W from Burhou.

Dasher Rock, with a depth of 12.2m, lies in the middle of the channel, about 0.6 mile E of Danger Rocks. This rock may be passed on either side, although the fairway to the E is preferred.

Speedy Rock, with a depth of 10.4m, lies in the N part of the channel, about 0.5 mile NNW of Verte-Tete.

The Swinge (49°43'N., 2°15'W.) is the passage leading between the dangers fronting the E side of Burhou and those fronting the W side of Alderney. It should only be used in clear weather and in favorable conditions.

The swift tidal currents cause much broken water even in the calmest weather. When strong winds oppose the tidal currents, overfalls extend nearly across the passage.

South Rock, with a depth of 4.9m, lies on the SE side of The Swinge, and nearly 1 mile S of the E extremity of Burhou. A 9.4m rocky head, and Hope Rock, with a depth of 8.5m, lie about 0.3 mile SW and 0.2 mile S, respectively, of South Rock.

Pierre au Vraic, a drying rock, lies in the fairway of The Swinge, about 2 miles WSW of the SW extremity of Alderney.

Richards Rock, with a depth of 8.5m, lies about 0.8 mile ESE of Pierre au Vraic.

Alderney

4.28 Alderney (49°43'N., 2°12'W.) is about 3.2 miles long and 1.2 miles wide. Le Rond But, the highest part of the island, is located on a plateau near the S coast. The W and S shores of the island consist of high precipitous cliffs, broken by narrow valleys, and are fronted by rocks. Low hills on the N and E coasts slope down to bays of sand and gravel, separated by rocky points. The majority of these bays are inaccessible due to the off-lying dangers. There are few trees and these only grow in the valleys N of Saint Anne, the main town, which is situated near the middle of the island.

Alderney Harbour, with the village of Braye at its head, lies on the N side and is the only port.

Quenard Point (49°44'N., 2°10'W.), the NE extremity of the island, is surmounted by a fort. Alderney Light is shown from prominent round tower, 32m high, standing about 0.2 mile W of this point.



Alderney Light

Chateau a L'Etoc Point, marked by a light and surmounted by a fort, is located miles 0.7 mile WNW of Quenard Point. A prominent concrete blockhouse stands on a hill about 0.2 mile SW of Alderney Light.

Houmet Herbe lies close offshore, about 0.2 mile SSE of Quenard Point. This rocky islet is surmounted by a fort and joined to the shore by a group of drying rocks. A group of rocks, some of which dry, extend 0.4 mile SE from the fort.

Essex Castle stands at an elevation of 62m about 1 mile SW of Quenard Point. The castle is situated on the SW side of Longy Bay and its seaward wall is painted white. A prominent television tower stands at an elevation of 90m about 0.5 mile W of this castle.

A church, with a conspicuous spire, stands in the town of Saint Anne, about 1 mile W of Essex Castle. A water tower and a framework tower, both prominent, stand about 0.2 mile W and 0.2 mile SE, respectively, of the church spire.

Longy Bay, which dries, lies 0.7 mile SW of Quenard Point. Raz Island lies in the entrance of the bay and is connected to the shore by drying rocks and a causeway, which is covered at HW. A fort stands on this island.

Old Telegraph Tower, 6m high, stands at an elevation of 84m near the SW end of the island.

Roque Tourgis Fort surmounts a point located 1 mile NW of the W extremity of the island. Between this fort and the W extremity the coast is cliffy and fringed by a ledge. Fort Clonque stands on this rocky ledge and is connected to the shore by a causeway, which covers at HW. Clonque Rock, 10m high, lies close NW of the fort and is conspicuous.

Les Etacs, a group of rocks, lies about 0.5 mile WNW of the SW extremity of Alderney. The westernmost and tallest rock is 37m high.

Orbouee Rock, 0.3m high, lies about 0.6 mile SW of the SW extremity of the island. The Noires Putes, a group of rocks, lies centered about 0.8 mile S of the SW extremity. The southernmost rock is 14m high and the easternmost is 19m high.

Bonit, a rock which dries 0.6m, lies about 1.2 miles WSW of Essex Castle and about 0.5 mile offshore.

The Ledge, a shoal with a depth of 4m, lies about 0.5 mile N of Quenard Point.

Anchorage.—Vessels can anchor about 0.2 mile SE of La Tchue, a small rocky bay, lying about 1.2 miles SW of Quenard Point. This anchorage has depths of 14 to 18m and is sheltered from W to NNE winds.

Vessels can also anchor off Longy Bay, about 0.3 mile S of Raz Island. This anchorage has a depth of 21m, gravel, and is sheltered from N and NW winds. However, it is more exposed to the tidal currents than the anchorage off La Tchue.

Caution.—Surveys of the SE coast of Alderney are reported to be incomplete and uncharted shoals may exist.

Inner Race Rock and Race Rock, both with depths of 5.5m, lie about 1.5 and 2 miles SE, respectively, of Alderney Light.

Blanchard Rock, with a least depth of 3.7m, lies at E end of a small bank, about 1 mile E of Alderney Light.

Alderney South Banks, with a least depth of 11m, is a group of several small sandbanks lying centered about 1.8 miles SE of the SW extremity of the island. Heavy overfalls occur in the vicinity of these banks during both E and W tidal currents.

4.29 Alderney Harbour (Braye) (49°43'N., 2°12'W.) (World Port Index No. 35980), a small commercial port, is situated about midway along the N coast of the island. There are extensive facilities in the harbor for local small craft and yachts. The village of Braye stands at the head of the harbor.

Tides—Currents.—Tides rise about 6.3m at MHWS and 4.7m at MHWN.

Depths—Limitations.—The harbor is formed by a breakwater, which extends 0.5 mile NE from the shore. The submerged ruins of the outer part of this breakwater extend about 0.3 mile farther NE.

The value of the harbor as a refuge is reduced by the partial destruction of the breakwater, and the harbor cannot be considered as affording a safe anchorage to vessels of even moderate size in all weather.

The present visible head of the breakwater ends so abruptly that it appears to be the actual end of the breakwater. Vessels rounding it without paying strict attention to the ranges and directions run the risk of grounding on the submerged extension. The W current, especially during spring tides, sets strongly across the harbor entrance and directly onto the submerged portion of the breakwater for about 9 hours. Great care, particularly at night, is required.

The harbor is approached from NE. A fairway leads from close inside the breakwater head to the two commercial berths at Brave Jetty, in the SW corner of the harbor. It is 55m wide and has a least depth of 4.3m.

No.1 Berth is 61m long and has depths alongside of 1.7 to 3.1m. No. 2 Berth is 56m long and has a depths alongside of 3.1 to 5.6m. Vessels up to 85m in length and 5m draft can be accommodated.

Vessels should note that the jetty wall is not vertical, and that some vessels should maintain separation from the wall, especially during periods of high winds, and accompanying seas.

Aspect.—The approach channel leading between the off-lying dangers is indicated by a lighted range.

Fort Albert stands on the summit of a hill at the E side of the harbor and is prominent.

Pilotage.—Pilotage is compulsory for all commercial vessels over 60 grt. The pilot boards small vessels about 1 mile NE of the breakwater; large vessels are boarded about 3 miles NE of the breakwater.

Vessels should send an ETA message at least 24 hours prior to arrival including their length and draft. The harbormaster may be contacted Monday through Friday on VHF channel 16 from 0800 to 1800 (April to September), from 0800 to 1700 (October), and from 0800 to 1700 (November to March). Saint Peter Port can relay message traffic outside of these hours.

Caution.—Vessels should not attempt to enter the harbor at night without local knowledge due to the strong tidal currents.

The Race of Alderney

4.30 The Race of Alderney (Raz Blanchard), the strait between Alderney and the coast of France in the vicinity of Cap de la Hague, derives its name from the great rates attained by the tidal currents through it. The bottom is rocky throughout the race.

A bank, with a depth of 16.5m, lies about 3 miles WSW of Cap de la Hague. This bank should be avoided because it causes strong overfalls and the sea occasionally breaks on it. Several shoal patches, with depths of less than 20m, lie within 2 miles W of the bank.

The fairway of the race is about 4 miles wide between Race Rock and the above-mentioned bank.

Basse du Milieu (49°39'N., 2°09'W.), a detached rock with a least depth of 14m, lies about 4.5 miles S of the E extremity of Alderney. During strong tidal currents, this rock is marked by overfalls or breakers and there is always a ripple over it.

Tides—Currents.—In the Race of Alderney, the tidal currents attain rates of up to 5.5 knots during spring tides in mid-channel; the rates in other parts are subject to considerable variation.

For instance, about 1 mile W of La Foraine Beacon (49°42.9'N., 1°58.7'W.), the maximum currents occur during spring tides when the flood and ebb attain velocities of 10 and 7 knots, respectively.

In heavy weather, when the wind is blowing against the current, the sea breaks in all parts of the race, and there are heavy overfalls above the submerged rocks and banks.

Directions.—Approaching from the N through the Race of Alderney and bound for Guernsey, proceed through the fairway and shape course for either Big Russel or Little Russel.

After passing through the Race, due allowance should be made for the tidal current which will then be running mainly across the course to be steered; care should be taken to avoid Basse du Milieu and Banc de la Schole.

The IMO has issued a recommendation stating that the Race of Alderney should not be used by vessels other than those proceeding to and from ports in the Channel Islands, to and from ports situated on the French coast between Cherbourg and Ouessant, or to and from the inshore routes in the vicinity of Ouessant. For further information, see General Remarks in paragraph 4.1.

North Coast of France—Nez de Jobourg to Cherbourg

4.31 Cap de la Hague (49°44'N., 1°56'W.), a low point fronted by drying rocks, is located 3.2 miles N of Nez de Jobourg (see paragraph 3.45). Dangers extend up to about 0.8 mile seaward on the N side and about 1.5 miles on the W side of the cape. A signal station, consisting of a white tower and a dwelling, stands on the N extremity.



Cap de la Hague

Sector 4. The Channel Islands and France—North Coast—Cotentin Peninsula to Pointe de Barfleur

Cap de la Hague Light is shown from a tower, 51m high, standing on Gros du Raz, a large rock lying about 0.5 mile WSW of Cap de la Hague.



Cap de la Hague Light

La Plate Lighted Beacon, 19m high, is formed by a prominent tower situated on a drying rock, about 0.5 mile NE of Cap de la Hague.

La Foraine, a drying rock, lies about 0.8 mile WSW of Cap de la Hague Light and is the outermost danger in this vicinity. This rock is marked close SW by a buoy, which may be occasionally submerged.

Anse Calgrain (Baie d'Ecalgrain), lying 2 miles S of the cape, provides temporary anchorage with offshore winds to vessels waiting for favorable conditions to cross the Race of Alderney. Anchorage can be taken, in depths of 5 to 9m, sand and gravel. Local knowledge is advised.

Goury, a small harbor, lies 0.8 mile SSW of the cape and is protected by a breakwater. This harbor dries and is only used by local small craft. Rocks front the entrance channel, which is indicated by a lighted range.

Aspect.—The approach to Cap de la Hague is very dangerous, especially at certain hours when the tidal currents flow towards the many dangers bordering the cape.

When approaching Cap de la Hague from the W, after having identified Casquets and Alderney, vessels will first sight the high land terminating SW in the promontory of Nez de Jobourg. A radar surveillance station is situated 1.5 miles NE of this promontory.

About 2.5 miles E of Nez de Jobourg, the hills are dominated by a conspicuous chimney, 100m high, standing at a nuclear reprocessing plant. It is reported that this chimney can be easily identified on radar, when approaching from the W, before the surrounding land appears above the horizon.

The structure of Cap de la Hague Light is prominent but not conspicuous against the background of the land.

For details of landmarks situated S of Nez de Jobourg, see paragraph 3.45.

In fog, Fosse de la Hague, with depths of 70 to 105m, gives an indication of the approach to the cape. This deep area lies centered about 2.5 miles N of Cap de la Hague and its S edge is located only about 1 mile N of the outermost dangers.

4.32 The coast between Cap de la Hague and Pointe de Querqueville 10.5 miles ESE, is high, sloping gradually to the

shore. The tidal currents are very strong, and when the wind is against the current a high steep sea occurs.

Basse du Houffet, with depths of 10m, lies about 1 mile E of La Plate Lighted Beacon. This shoal is dangerous because of the high seas caused by the tidal currents over it.

Pointe de Jardeheu is located 3.4 miles E of Cap de la Hague. A conspicuous disused signal station stands close within the point. Dangerous rocks extend up to 1 mile offshore between the cape and this point. Basse Brefort, with a depth of 0.9m, lies about 0.5 mile N of the point. This shoal, marked close N by a lighted buoy, is the northernmost danger in this vicinity.

Anse de Saint-Martin is entered close W of Pointe de Jardeheu. This bay affords anchorage, in depths of 6 to 9m, sand and mud, good holding ground, sheltered from SE to WSW winds, but is dangerous with strong winds from NW through E. A rock, awash, lies in the middle of the entrance to the bay. Local knowledge is advised.

Omonville-la-Rogue, a small harbor, is situated about 1 mile SE of Pointe de Jardeheu and protected by a breakwater. It partly dries and is used by local small craft awaiting favorable conditions for passing through the Race of Alderney.

Raz de Bannes, a group of drying and below-water rocks, extends up to about 0.7 mile offshore, 4.5 miles ESE of Pointe de Jardeheu. A beacon tower, 8m high, stands on the largest rock.

Pointe de Querqueville (49°40'N., 1°41'W.) is located close W of the port of Cherbourg. Fort de Querqueville stands 0.2 mile SE of the point. Plateau de Nacqueville, a sandy bank with a least depth of 9.4m, lies about 0.8 mile NNW of the point.



Fort de Querqueville

Tides—Currents.—Offshore tidal currents run with great strength, particularly off Cap de la Hague, where they attain a rate of about 7 knots, and off Pointe de Barfleur they attain a rate of about 5 knots in each direction. Midway between these points they attain a rate of about 3 knots. In general, the currents off the coast of the peninsula are rectilinear, and with the wind against the current, a heavy sea is raised.

About 1.5 miles N of Pointe de Jardeheu, the E current attains a velocity of 4 knots at springs, while the W current attains a velocity of 5 knots. Between Cap de la Hague and Cherbourg, an eddy runs W close inshore during the latter part of the E offshore current.

Cherbourg (49°39'N., 1°38'W.)

World Port Index No. 35950

4.33 The port of Cherbourg is both a naval and a commercial port. It is an important port of call for passenger vessels in the transatlantic service. The outer roadstead provides a deep and well-sheltered anchorage. There are also extensive facilities for fishing vessels and pleasure craft.

The port consists of Grande Rade, an outer roadstead, and Petite Rade, an inner anchorage area. Grande Rade is protected by three breakwaters. The W breakwater, Digue de Querqueville, extends 0.7 mile ENE from a point on the shore located close SE of Fort Querqueville. The N breakwater, Digue Centrale, is about 2 miles long and detached. The E breakwater, Digue de l'Est, is about 1 mile long and extends N and NW from the shore. Its S end covers at HW.

Petite Rade, enclosed by Grande Rade, is protected on the W side by a breakwater, Digue du Homet, and on the E side by a jetty, Jetee des Flamands. Port Militaire lies on the W side and Port de Commerce lies on the E side. Basins used by small craft, yachts, and fishing vessels lie on the SW side.



Cherbourg from SE

Tides—Currents.—Tides rise about 6.4m at springs and 5m at neaps.

About 3 miles N of Digue Centrale, the E current begins 3 hours 30 minutes before HW and the W current begins 2 hours 15 minutes after HW. Both currents attain a maximum velocity of about 3 knots at springs. Closer to the breakwater the currents start earlier and their rates decrease.

Slack water in the entrances generally coincides with HW. In Passe de l'Ouest, the flood tide current attains a velocity of about 2 knots at springs. It enters and tends to flow toward Digue Centrale. The ebb tide current flows out toward Digue de Querqueville.

In Passe de l'Est, the flood tide current attains a velocity of about 1 knot at springs. It enters and flows toward Ile Pelee. The ebb tide current flows more or less on the axis of the pass, with a tendency to run toward Digue Centrale.

In Grande Rade, when the current is running against the wind, a heavy chop may be formed, which effects the transit of small craft.

Depths—Limitations.—Passe de l'Ouest, the deepest and most frequently used entrance to Grande Rade, lies between the head of Digue de Querqueville and Fort de l'Ouest. It has depths of 9.1 to 12m. A fairway channel, dredged to a controlling depth of 11m, leads though the E side of the pass.

An obstruction, with a least depth of 10.1m, lies about 0.4 mile ENE of the head of Digue de Querqueville near the W limit of the entrance fairway. Below-water rocks front the W end of Digue Centrale, near the E limit of the entrance fairway, and are marked by a lighted buoy.

It should be noted that Passe de l'Ouest is a Mandatory Access Route for hydrocarbon carriers over 1,600 grt. (See Regulations.)

Passe de l'Est, the secondary entrance, lies between Fort de l'Est and Fort de l'Ile Pelee. It has a least depth of 4.3m and is not recommended for use at night.

La Truiye, a shoal with a least depth of 0.7m, and Roches du NW, a shoal with a least depth of 3.4m, lie about 0.2 mile NW and 0.4 mile NNW, respectively, of Fort de l'Ile Pelee. These two dangers lie on the E side of Passe de l'Est and are marked by lighted buoys.

Vessels up to 350,000 dwt, 350m in length, 50m beam, and 12m draft can enter the port at HW.

Berths.—Darse Transatlantique, a basin, lies on the S side of Petite Rade and can be entered by a channel dredged to a depth of 11m.

Quai de France, on the W side of the basin, is 620m long and has a depth of 13m alongside. It has an ocean cruise terminal.

Quai de Normandie, on the E side of the basin, is 500m long and has a depth of 11m alongside.

Darse des Mielles, another basin, is situated E of Darse Transatlantique. Quai de Mielles, at the E side of the basin, is 400m long and has a depth of 4m alongside.

Quai des Flamands, a container terminal, is situated N of Quai de Mielles. It is 360m long and has a depth of 13m alongside.

There are five ro-ro ferry berths, with depths of 6 to 11m alongside, situated in the vicinity of Darse des Mielles and Darse Transatlantique. Daily ro-ro ferry services run between the ports of Poole, Portsmouth, Dublin, Rossiare, and Cork.

A turning basin, dredged to a depth of 11m, lies close within Petite Rade. It is marked by two sets of lighted ranges, which may best be seen on the chart.

Port de Chantereyne, a yacht basin, lies in the SW corner of Petite Rade. Avant-Port du Commerce, a narrow basin lying S of Port de Chantereyne, has depths up to 2.5m. It is used by fishing vessels and small craft. Bassin du Commerce, a wet dock, is entered from Avant-Port du Commerce via a dock gate and provides 1,000m of berthage. Vessels up to 110m length, 15m beam, and 3.8m draft can enter.

A tanker berth is situated on the S side of Diego de Querqueville. It can be used by vessels up to 180m in length and 9.1m draft. Vessels are moored, heading W, with an anchor out and the stern made fast to a mooring buoy.

The naval port and dockyard, Port Militaire, is situated along the W side of Petite Rade. Five berths located along the S side of Digue de Homet are available to commercial vessels. Requests should be sent to the naval authorities at least 48 hours in advance.

Three main drydocks, for commercial vessels, are situated within the port. The largest is 206.4m long and 25.7m wide.

Aspect.—Cherbourg is dominated to the S by a high cliff, which is steep on its W side. A number of white quarries lie on its E side. Fort du Roule stands on the summit of this cliff, about 1.5 miles S of the entrance to Petite Rade.



Fort du Roule

Prominent water towers stand about 0.5 mile SW and 1 mile SE of Fort du Roule. A conspicuous television mast is situated about 2.5 miles ESE of Fort du Roule. This mast is reported to be usually the first landmark sighted on the skyline when approaching from N.

Cherbourg Approach CH1 Lighted Buoy is moored about 3.3 miles NNW of the head of Digue de Querqueville.

Fort de Querqueville (see paragraph 4.32) stands near the root of Digue de Querqueville; Fort de Chavagnac stands close within the head of this breakwater, on the W side of the harbor. A light is shown from a column, 7m high, standing on the head of Digue de Querqueville.



Fort de l'Ouest



Fort Central



Fort de Chavagnac

Fort de l'Ouest stands at the W end of Digue Centrale. A light is shown from a structure, 9m high, standing on this fort. Fort Central, marked by a light, stands at the center of this breakwater; Fort de l'Est is situated at the E end. A light is shown from a pylon, 9m high, standing on Fort de l'Est.

Fort de l'Ile Pelee stands at the NW end of Digue de l'Est. Ile Pelee, a drying flat of bare rock, extends about 0.5 mile NE from this breakwater. It is marked by two beacon towers and is bordered by a shallow bank. A light is shown from a pedestal, 8m high, standing on Fort de l'Ile Pelee.

Fort du Homet stands near the root of Digue du Homet and Fort des Flamands stands near the root of Jetee des Flamands.

The town and harbor are reported to be radar prominent.

Pilotage.—Pilotage is compulsory for all vessels over 50m in length and for all commercial vessels carrying dangerous



Fort de l'Est



Fort de l'Ile Pelee

cargo or not fitted with VHF. The compulsory pilotage area extends 5 miles seaward of Fort de l'Ouest.

Vessels should send an ETA and a request for pilotage 48 hours and 4 hours in advance. The message must include their name, type, characteristics, ETA, draft, and the number of tugs required.

Vessels should then contact Vigie de Homet (Homet Coast Guard) 2 hours before arrival on VHF channel 16 or 12 and then confirm their ETA 1 hour prior to arrival.

Pilots can be contacted by VHF and generally board in the South Waiting Area, about 2.5 miles N of Fort de l'Ouest.

Cherbourg pilots may be contacted by e-mail, as follows:

cherbourg.pilot@wanadoo.fr

Deep-sea pilots.—Vessels should send a request for deep-sea pilotage 48 hours in advance to Cherbourg (Pilotage Hauturier Cherbourg) through a French coastal radio station. The message should include name, draft, destination, pilot boarding position, and ETA.

Vessels should then confirm their ETA, as follows:

1. By telex to Pilotage Hauturier Cherbourg 24 hours prior to arrival.
2. On VHF channel 13 to Jobourg Traffic (VTS Casquets TSS) 4 hours prior to arrival.
3. On VHF channel 16 to Vigie de Homet (Homet Coast Guard) 2 hours prior to arrival.

Vessels should maintain a continuous listening watch on VHF channel 16 after giving the last confirmation. All amendments to ETA of more than 2 hours should be reported at least 6 hours before arrival.

Pilots may be provided by launch or helicopter.

Vessels must embark deep-sea pilots from launches in the North Waiting Area, about 3.5 miles N of Fort de l'Ouest.

Vessels carrying hydrocarbons or dangerous cargo must embark deep-sea pilots from launches in a position 7 miles N of Fort de l'Ouest, and, in all cases, not less than 7 miles off the coast.

Vessels embarking pilots by helicopter must send a request for pilotage 48 hours in advance to Cherbourg (Pilotage Hauturier Cherbourg) through a French coastal radio station. The message should include name; nature of service (deep-sea pilot to board by helicopter); ETA at pilot boarding position; confirmation that VHF equipment is in working order; and confirmation that full landing, restricted, or winching area is available.

Vessels should confirm their ETA to Pilot Hauturier Cherbourg 24 hours prior to arrival and to Jobourg Traffic 4 hours prior to arrival on VHF channel 16.

Jobourg Traffic (VTS Casquets TSS) will confirm the pilot transfer authorization for embarkation or disembarkation.

When Jobourg Traffic announces the take-off of the helicopter, vessels should transmit a locked key homing signal on 410 kHz. The helicopter pilot will establish contact on VHF channel 16 or 11 in order to receive relative wind details.

Pilots board by helicopter in the following positions:

- a. 13 miles N of Cap de la Hague (pilots boarding eastbound vessels).
- b. 10 miles N of Cap Levi (pilots boarding eastbound vessels).

c. 5 miles N of Cap Levi (pilots boarding eastbound vessels except those carrying hydrocarbons or dangerous cargo).

d. 32 miles N of Cap Levi (pilots disembarking from westbound vessels).

Regulations.—A Vessel Traffic Service (VTS) reporting system has been established in the approaches to Cherbourg and is compulsory for vessels over 1,600 grt carrying hydrocarbons or dangerous cargo.

Such vessels must report to the Centre Operations de Marine (COM), Cherbourg giving an ETA at least 24 hours prior to arrival at CH1 Lighted Buoy and sending a confirmation 6 hours before arrival. They must also maintain VHF contact with the VTS Center until berthed.

Before entering French territorial waters, such vessels must report any damage to their propulsion equipment to Vigie du Homet (Homet Coast Guard) at Cherbourg.

Vigie du Homet (Homet Coast Guard) broadcasts priority vessels movements and traffic restrictions on VHF channel 16.

The North Waiting Area (anchorage) is reserved for vessels, except those carrying hydrocarbons or dangerous cargo, which have requested a deep-sea pilot for passage in the English Channel.

The South Waiting Area (anchorage) is reserved for vessels waiting to embark a pilot for entry into Cherbourg.

The following regulations apply to vessels carrying hydrocarbons or dangerous cargo bound for Cherbourg:

1. Vessels must approach and leave the port within the sector 325° and 037° from Fort de l'Ouest to reach the South Waiting Area.
2. Vessels must have a pilot embarked when S of the South Waiting Area.
3. Vessels must use Passe de l'Ouest (Mandatory Access Channel).
4. Vessels reporting any defects in their propulsion equipment, steering machinery, anchoring gear, or radar must remain outside 7 miles from the French coast unless expressly exempted by the Administrator of Marine Affairs, Cherbourg.

Speed limits of 14 knots within Grande Rade and 8 knots within Petite Rade are in force.

Naval vessels have priority in selecting anchorage berths.

Entry into Port Militaire, without authorization, is prohibited by all vessels and boats.

Vessels and boats, other than French government craft, are prohibited from stopping or anchoring within 100m of naval vessels moored in the roadstead.

Signals.—When international signals are shown from the Homet Coast Guard station prohibiting entry or departure by Passe de l'Ouest, vessels should keep a listening watch on VHF channel 12.

Anchorage.—The only areas outside the breakwater in which vessels are permitted to anchor are the two Waiting Areas. The North Waiting Area lies centered about 3.5 miles N of Fort de l'Ouest. It has depths of 47 to 51m and may best be seen on the chart. The South Waiting Area lies centered about 2.5 miles N of Fort de l'Ouest. It has depths of 25 to 45m and may best be seen on the chart. (See Pilotage and Regulations.)

The principal anchorage in Grande Rade for large vessels has depths of 10 to 12m. The berth lies about 0.5 mile SE of Fort de l'Ouest and is indicated by ranges, which may best be

Sector 4. The Channel Islands and France—North Coast—Cotentin Peninsula to Pointe de Barfleur

seen on the chart. Small vessels may anchor farther E in depths of 5 to 8m, sand and mud.

Anchorage is prohibited within areas, which may best be seen on the chart, lying close S of the breakwaters, in the approaches to the entrances, in both Passe de l'Ouest and Passe de l'Est, and in the turning area of Petite Rade.

Directions.—Large vessels approaching from E should stay N of a line extending 060° from the CH1 Lighted Buoy (49°43'N., 1°42'W.) until E of the meridian of Cape Levi (49°42'N., 1°28'W.).

The general approach route leads in a SE direction to the Waiting Areas from NW of Cherbourg Approach CH1 Lighted Buoy.

Vessels carrying hydrocarbons or dangerous cargo must use the Cherbourg Approach Channel, which leads within the sector between 325° and 037° from Fort de l'Ouest (49°41'N., 1°39'W.) (See Regulations.).

A recommended route, formed by a 1,000m wide zone, leads in a S direction from the W side of the Waiting Areas. Its central axis, course 177°, is indicated on the chart.

An entrance channel leads in a SE direction from the S end of the recommended route, about 1 mile NW of Fort de l'Ouest, through the E part of Passe de l'Ouest. The fairway, which is marked by lighted ranges and a directional light, may best be seen on the chart.

A channel, marked by a lighted range, leads in a S direction through Passe de l'Est and may best be seen on the chart.

Caution.—High speed craft may be encountered in the approaches to the port.

An area, within which diving is prohibited, lies centered 2.3 miles N of CH1 Lighted Buoy. It has a radius of 0.5 mile and may best be seen on the chart.

Diving without prior permission is prohibited within an area, with a radius of 0.5 mile, centered on a wreck, with a depth of 31m, lying about 4.9 miles NNE of the W end of Digue Centrale, the N breakwater.

Explosives dumping grounds, with a radius of 0.1 mile, lie centered 1.2 miles NNE of Fort de l'Ouest and 0.4 mile S of Fort Central on Digue Centrale. They may best be seen on the chart.

Prohibited Areas, which may best be seen on the chart, lie along the N side of Digue de Homet, along the S side of Digue de Querqueville, along the S side of Digue de l'Est, along the SE part of Digue Centrale, and in the vicinity of Fort de Querueville.

Cherbourg to Pointe de Barfleur

4.34 Le Becquet (49°39'N., 1°33'W.), situated 1 mile E of Cherbourg, is a small drying harbor. It is used by local fishing vessels and pleasure craft. A lighted range indicates the approach. Buoys (special) are moored about 0.4 mile and 2.3 miles N of this harbor.

Le Grunes de Bretteville, a group of rocky shoals with depths of less than 5m, extend up to about 0.8 mile N from the coast, 1.3 miles E of the harbor.

Cap Levi (Cap Levy) (49°42'N., 1°28'W.), fronted by shoals, is low. Cap Levi Light is shown from a prominent tower, 28m high, standing on the cape. A conspicuous signal station, with a white mast, is situated on a hill about 0.2 mile SSE of the light.



Cap Levi Light

Port du Cap Levi, a small drying harbor, lies 0.5 mile S of the light. It is used by local fishing boats and yachts.

An area of rocky shoals extends up to about 2 miles N of Cap Levi and is marked by a lighted buoy. This area is steep-to and the sea breaks on it in rough weather. Tete Septentrionale, with a depth of 9.2m, and another shoal patch, with a depth of 9.3m lying 0.3 mile ENE, form the outermost dangers of this area. La Pierre Noire, with a least depth of 2.2m, lies about 0.3 mile S of Tete Septentrionale.

A prominent square belfry stands at Maupertus-sur-Mer, 2.5 miles S of Cap Levi, and may be seen on the skyline. An airport is situated close S of the belfry.

The coast between Cap Levi and Pointe de Barfleur, 8 miles E, is bordered by rocks and shoals, the outermost lying nearly 2.5 miles from the shore. The shore is rocky and interspersed with sandy beaches.

Basses du Renier, with a least depth of 4.5m, lies about 2 miles N of the coast, 4.5 miles ENE of Cap Levi, and is marked by a lighted buoy.

Haut-Fond des Equets, with a depth of 7m, lies about 2.5 mile ESE of Basses du Renier and about 2.3 miles NW of Pointe de Barfleur. It is located about 2 miles offshore and marked by a lighted buoy.

Banc de Saint Pierre, extending SE of Haut-Fond des Equets, consists of shifting sand and broken shells. The sea breaks heavily in bad weather on this bank, especially with the wind against the tidal currents.

Tides—Currents.—Tidal currents close N of La Pierre Noire attain velocities (E and W) of about 4.8 knots at springs. Close N of Basses du Renier, the ESE tidal current attains velocities of about 4.8 knots while the W tidal current attains velocities of about 3.8 knots at springs.

Directions.—The offshore Traffic Separation Scheme, leading from Casquets to the Greenwich Lanby, passes about 20 miles N of Cap Levi.

Chenal des Trois Pierres and Chenal Hedouin, which are marked by ranges, lead inside the dangers fronting the coast between Cap Levi and Pointe de Barfleur. Due to the strength and uncertainty of the tidal currents, these channels should only be used by small vessels with local knowledge.

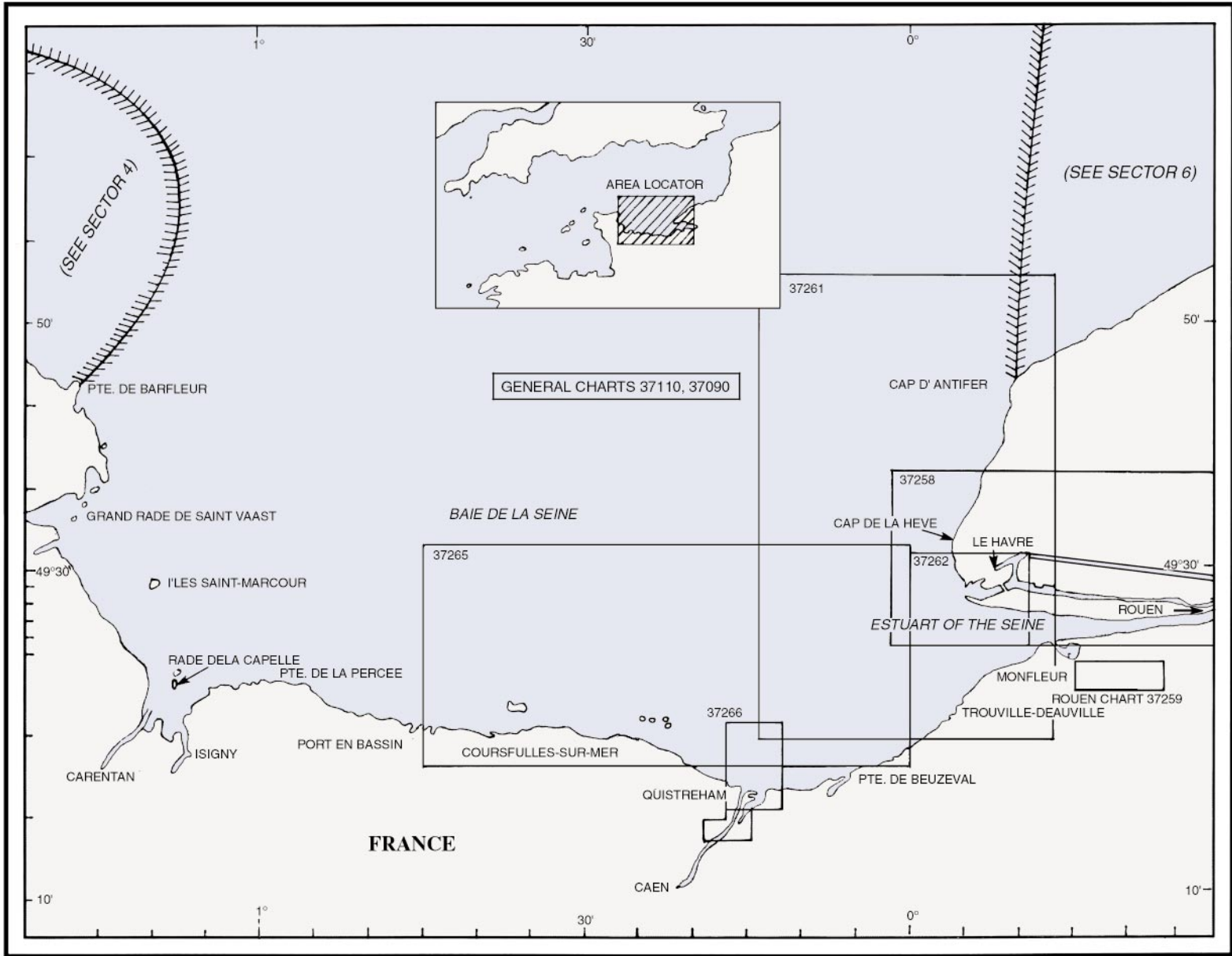
Caution.—Raz du Cap Levi, a dangerous race, occurs in the area of shoals extending up to 2.5 miles N of Cap Levi, especially when the wind is against the tidal current.

100Sector 4. The Channel Islands and France—North Coast—Cotentin Peninsula to Pointe de Barfleur

Anchoring, trawling, and dredging are prohibited within an area, which may best be seen on the chart, lying centered 2 miles W of Cap Levi.

An Explosives Dumping Area, the limits of which are shown on the chart, lies centered 7 miles NE of Cap Levi. A circular

Prohibited Area, with a radius of 1.5 miles, lies in the vicinity of this Explosives Dumping Area and may best be seen on the chart.



Additional chart coverage may be found in NGA/DLIS Catalog of Maps, Charts, and Related Products (Unlimited Distribution).

SECTOR 5 — CHART INFORMATION

SECTOR 5

FRANCE—NORTH COAST—BAIE DE LA SEINE—POINTE DE BARFLEUR TO CAP D'ANTIFER

Plan.—This sector describes the Baie de la Seine, including the major port of Le Havre. The descriptive sequence is from W to E.

General Remarks

5.1 Baie de la Seine, a wide bay, is entered between Pointe de Barfleur, on the W side, and Cap d'Antifer, 55 miles E. The W side of the bay is formed by the E side of the Cotentin Peninsula and includes only a few small harbors. Caen is situated in the S part of the bay. This port is connected to the sea at Ouistreham by a canal running parallel to the Riviere Orne. The port of Le Havre is situated at the E side of the bay. The estuary of the River Seine lies close S of this port and provides access to Rouen. The small ports of Trouville-Deauville and Honfleur lie on the S side of La Seine close to the mouth. Port du Havre-Antifer, used by deep-draft tankers, is situated 10 miles N of Le Havre.

Tides—Currents.—The tides in Baie de la Seine, especially those at Le Havre and in La Seine Maritime, are remarkable for their stand at HW. From outside a line joining Pointe de Barfleur and Cap d'Antifer, the E and W currents of the English Channel bend slightly inwards towards Baie de la Seine.

Off the W side of the bay the E current runs more S, and off the E side of the bay more N than in mid-channel, and similarly the W current tends to run in the opposite direction.

In the bay and near the coast along the S shore the currents are more or less rectilinear; within 2 or 3 miles of the S shore they do not exceed 1.5 knots in each direction. Notably in the middle of the bay, they can attain or even exceed 2 knots.

Off the E side of the Cotentin Peninsula, the S current is weaker and of shorter duration than the current in the opposite direction.

Pilotage.—Pilotage for Port du Havre-Antifer and Le Havre is provided by the Le Havre-Fecamp Pilotage Service. For further information, see Pilotage under Le Havre (paragraph 5.12).

Pilotage for ports situated along the Seine (La Seine Maritime) is provided by the Rouen Pilotage Service. This service also provides pilots for Honfleur and Trouville-Deauville. For further information, see Pilotage under La Seine Maritime (paragraph 5.13).

Regulations.—Two separate Vessel Traffic Service (VTS) systems operate in the vicinity of La Seine.

The Baie de Seine VTS Identification Zone system operates in the approaches to the Estuary of the Seine and facilitates recognition of vessels bound to or from the ports of Port du Havre-Antifer, Le Havre, Rouen, and Caen-Ouistreham. The Identification Zone is bounded by an arc with a radius of 22 miles centered on Cap de Le Heve Light. This VTS system is managed by the Baie de Seine Traffic Control Center, which is

located at Le Havre. For further information, see Regulations under the Estuary of the Seine (paragraph 5.10).

Rouen Port (La Seine) VTS system operates in the river area extending between the Estuary of the Seine and Rouen. This system is mandatory for all commercial vessels. For further information, see Regulations under La Seine Maritime (paragraph 5.13).

For regulations concerning tankers laden with hydrocarbons and vessels carrying dangerous cargo bound to or sailing from Port du Havre-Antifer, Le Havre, Rouen, and other La Seine ports, see Regulations under the Estuary of the Seine (paragraph 5.10).

Special regulations and reporting procedures apply to tankers transporting hydrocarbons and to vessels transporting dangerous substances navigating in the approaches to the French coasts of the North Sea, English Channel, and the Atlantic between the Belgian border and Spanish border. Such vessels preparing to pass through or stop within French Territorial Waters are required to send a message to the appropriate CROSS station giving their intended movements. In addition, such vessels must use the designated Mandatory Access Routes and Channels when approaching a port or roadstead.

For further details of these special procedures, see Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea.

Cargo transfer operations take place within a Transshipment Area (Val de Saire) lying in the W part of Baie de la Seine. This area, which is under the control of the French Maritime Authority, is centered 10 miles ESE of Pointe de Barfleur and may best be seen on the chart.

The following is a summary of the relevant regulations:

1. The approach to the area should be made from the E on a course between 200° and 270°.
2. Should circumstances require, the authority may prohibit or, if in progress, terminate the operation.
3. At least 12 hours notice of transshipment must be given by the owner or master of the vessel to the Regional Operational Centre for Surveillance and Rescue (CROSS-MA) at Jobourg (see paragraph 4.1), giving:
 - a. Name, flag, last port of call, and destination of vessel to be lightened.
 - b. Name, flag, and destination of vessel to be loaded.
 - c. Day, hour, and position of transshipment and quantity to be transshipped.
4. Throughout the operation, and while in the area, vessels concerned should maintain a listening watch on VHF channel 16. They should also advise CROSS JOBURG of the following times:
 - a. Arrival in the area.
 - b. Commencement of operations.
 - c. Completion of operation.
 - d. Getting underway.
 - e. Any accident or incident.

f. If visibility falls below 3 miles.

5. During the transshipment, vessels must display the shapes or exhibit the lights prescribed in the International Regulations for Preventing Collisions at Sea (72-COLREGS) and by the International Code of Signals for vessels engaged in special operations but not underway.

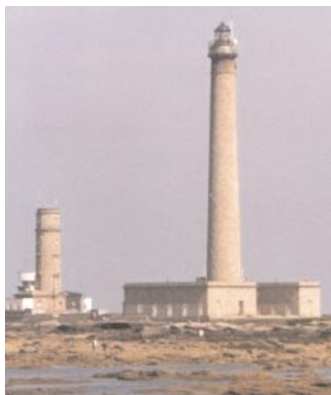
Caution.—A firing danger area lies in the S part of Baie de la Seine and is situated within the parallels of 49°45'N and 49°25'N, and the meridians of 0°30'W and 1°00'W.

Numerous wrecks, some marked by buoys, lie within 10 miles of the shores of the bay. Small undetected wrecks and obstructions may also lie close offshore.

Pointe de Barfleur to Pointe de la Percee

5.2 Pointe de Barfleur (49°42'N., 1°16'W.), the W entrance point of Baie de la Seine, is a low point fronted by foul ground which extends up to about 1.5 miles seaward.

Barfleur-Gatteville Light is shown from a conspicuous tower, 75m high, standing on an islet close off the point. A signal station stands close N of the light. When first sighting the light tower, it appears to be rising from the sea.



Barfleur-Gatteville Light

Val de Saire Lighted Buoy is moored about 7.5 miles ENE of the light.

La Pernelle, a prominent wooded hill, stands about 5 miles SSW of Pointe de Barfleur. Vessels approaching the point from E will first sight the high summit of this hill, which slopes gently N. The square belfry of the church standing on the E slope of this hill is conspicuous from seaward.

The high land of La Butte de Montaigu, with a prominent summit rising about 6 miles SW of La Pernelle, can also be identified from seaward.

Caution.—Raz de Barfleur is a race caused by the tidal currents rushing over the rocks in the vicinity of the point, and during spring tides the sea breaks as far as 3 to 4 miles E and NE of the charted light structure, especially when the wind is against the tidal current.

Vessels approaching the point from the E or SE should keep well offshore until clear of the race, remaining seaward of the 30m curve.

5.3 Barfleur (49°40'N., 1°16'W.) is a small, drying harbor lying 1.5 miles S of Pointe de Barfleur. It is used by fishing vessels, small coasters, and pleasure craft. Tides rise about 6.5m at springs and 5.3m at neaps. The harbor, enclosed by a jetty and a breakwater, can accommodate small vessels with drafts up to 4m. The N and W sides are quayed and dry 2 to 4m. Vessels lie alongside on a bottom of muddy sand and gravel. The approach channel is indicated by a lighted range and marked by buoys and beacons. The square belfry tower of the church situated in the town can be easily identified from the approaches. Another prominent church belfry stands at Montfarville, about 1 mile SW of the harbor. Local knowledge is required and local fishermen act as pilots.

Small vessels can anchor, in depths of 8 to 10m, sand and mud, indifferent holding ground, in the approach channel.

Pointe de Saire (49°36'N., 1°14'W.), marked by a light, is located 5.5 miles SSE of Pointe de Barfleur. The coast between is fronted by rocks and shoals extending up to 1.3 miles seaward.

Saint-Vaast-la-Hougue (49°35'N., 1°15'W.) is a small harbor lying 1.8 miles SW of Pointe de Saire. Ile de Tatihou, lying 1 mile E, fronts the harbor. A conspicuous tower, with a turret on one side, stands on the S extremity of the island. Fort de l'Ilet, a low fort, is situated close S of this tower.

Fort de la Hougue, high and surmounted by a turret, stands 1 mile SSW of the harbor and is conspicuous. It is joined on the N side to the mainland by a breakwater. This fort, which is marked by a light, is situated at the end of a drying rocky bank extending from the coast. The harbor is used by fishing vessels and pleasure craft. The approach is indicated by a lighted range. Local knowledge is required. The harbor consists of a drying outer basin and an inner wet basin. A gate, 16m wide, provides entry to the wet basin, which has a least depth of 2.3m.

A conspicuous water tower stands about 2 miles inland, 5.5 miles SSW of Sainte-Vaast-la-Hougue. A church, with a prominent pointed belfry, is situated at Quinville, 1.7 miles E of the water tower. Another church, with a prominent pointed belfry stands at Les Gougins near the shore, 5.2 miles S of Sainte-Vaast-la-Hougue.

Anchorage.—Rade de Saint-Vaast consists of two anchorages and provides shelter from W winds. The bottom is formed by sand, mud, and clay, and provides good holding ground. Onshore winds can cause heavy seas within this roadstead.

Grande Rade, with a depth of 14m, lies about 1.5 miles S of Ile de Tatihou and close NW of the N end of Banc de la Rade.

Petite Rade, with depths of 2 to 6m, lies about 0.7 mile S of Ile de Tatihou.

Vessels must request permission from CROSS JOBOURG prior to anchoring in this roadstead (see paragraph 5.1).

5.4 Iles Saint-Marcouf (49°30'N., 1°09'W.) consists of two low islands and lies about 4 miles offshore, 7 miles SE of Sainte-Vaast-la-Hougue. A light is shown from a square tower, 17m high, standing on Ile du Large, the northeasternmost island. Ile de Terre, lying 0.3 mile SW, is a bird sanctuary and landing is prohibited. In very clear weather, these islands can be easily distinguished. A submarine cable extends SW from the islands to the mainland and may best be seen on the chart.

An extensive area of shallow shoal banks, lying parallel to the coast and separated from the coastal dangers, extends about 5 miles NW and about 6 miles ESE of the Iles Saint-Marcouf. This shoal area is marked by lighted buoys.

A channel leads between this extensive area of shoal banks and the mainland shore. However, due to the numerous wrecks lying in this vicinity, local knowledge is advised.

Baie du Grand Vey (49°25'N., 1°07'W.) is entered between Pointe de la Madeleine and Pointe de Maisy, 4 miles ESE. It is encumbered by drying sandbanks through which two channels lead. The seaward entrances of these channels are marked by a lighted buoy moored about 2 miles E of Pointe de la Madeleine.

The coast between Sainte-Vaast-la-Hongue and Pointe de la Madeleine is low and fringed with wooded dunes. A coastal bank extends up to 1.5 miles offshore in places. A prominent church spire stands about 1 mile inland at Brucheville, at the W side of the bay.

Pointe de la Madeleine is marked by a monument commemorating the Allied invasion landings of WWII on Utah Beach, which extends NW.

High seas are formed in the bay with onshore winds; vessels should not attempt to reach Carentan or Isigny, at the head of the bay, except in fair weather and at HW.

5.5 Carentan (49°18'N., 1°14'W.), a small harbor with a wet basin, lies 4.5 miles inland from the head of the bay. It is used by fishing vessels and pleasure craft. Passe de Carentan, the entrance channel, dries 3.2m. It is indicated by a lighted range and marked by buoys and beacons. The harbor may be contacted by VHF. The wet dock, with depths of 3 to 4m, is 0.8 mile long and 60m wide. The entrance lock is 30m long and 9m wide. Local knowledge is required.

Isigny (49°19'N., 1°06'W.), a small drying port, lies 1.5 miles inland on the Aure River. It is used by small coasters, fishing vessels, and pleasure craft. Passe d'Isigny, the entrance channel, is indicated by a lighted range and marked by buoys and beacons. The inner part of this channel leads between two dikes and is 85m wide. The alongside berths dry up to 3m. Vessels up to 55m in length and 12m beam can be accommodated with drafts up to 4.2m at springs and 2.2m at neaps. Local knowledge is required.

Anchorage.—Rade de la Capelle, a roadstead lying between Banc du Cardonnet and Baie du Grand Vey, provides anchorage sheltered from S and SW winds, in a depth of 12m, mud and sand, good holding ground. Care is necessary to avoid several dangerous wrecks lying in this vicinity.

Grandcamp-Maisy (49°23'N., 1°03'W.), a small harbor, lies 1.5 miles E of Pointe de Maisy and 4.5 miles W of Pointe de la Percee. It is used by fishing vessels and yachts. The approach channel is indicated by a lighted range. The entrance channel has a minimum width of 18m and dries 2m. The entrance is protected by breakwaters and submerged seawalls. The wet basin is entered through a gated passage, 14.3m wide, and has a depth of 2m.

A light is shown from a mast, 12m high, standing in the town close S of the wet basin. A conspicuous water tower stands on the higher land about 2 miles SSW of the harbor. A prominent bell tower, 67m high, is situated on the high land backing the town.

Pointe de la Percee to Ouistreham and Caen

5.6 Pointe de la Percee (49°24'N., 0°55'W.) is bordered by foul ground extending about 1 mile NE. A race is caused when the wind opposes the tidal currents in the vicinity of the point. At Pointe de la Percee the cliffs fall steeply to the shore and form a good landmark for vessels coming from the E.

Perhaps one of the most overwhelming sites along the coastline is the Normandy American Cemetery and Memorial, which is situated on a cliff overlooking Omaha Beach and the English Channel, 3 miles ESE of the point.

The coast gradually rises from Grandcamp-Maisy to Pointe de la Percee, 5 mile E. Between Grandcamp-Maisy and the Riviere L'Orne, 32 miles E, the coast is 30 to 60m high.

A prominent church stands at Vierville-sur-Mer, 1.3 miles SSE of Pointe de la Percee, and a conspicuous water tower is situated about 1 mile W of it. Another prominent church stands at Colleville-sur-Mer, 4 miles SE of Pointe de la Percee, and a conspicuous television mast is situated about 1 mile SE of it.

Between Pointe de la Percee and Port-en-Bessin, 7 miles ESE, the coast is fronted by a bank with rocky ledges extending up to 1 mile seaward in places.

A dangerous area extends between 1 mile and 3.5 miles ESE of Pointe de la Percee. It extends up to 1 mile offshore and is marked by buoys. Within this area are the remains of the blockships and other obstructions that formed the artificial harbor off Omaha Beach during the WWII Allied invasion landings of 1944.

5.7 Port-en-Bessin (49°21'N., 0°45'W.) (World Port Index No. 35900), a small harbor, is used by fishing vessels and pleasure craft. Tides rise about 7.2m at springs and 5.9m at neaps. The harbor consists of an outer and inner avant-port, and two narrow wet basins. The avant-port dries 2 to 4m and is protected by a breakwaters. Entry to the wet basins is provided by a passage, 10.5m wide, with a gate. These basins are accessible to small vessels with drafts up to 4.2m at springs and 2.6m at neaps. The harbor may be contacted by VHF. The approach channel is indicated by a lighted range. With strong onshore winds, entry is not advised as a dangerous swell occurs in the outer avant-port.

A prominent signal station is situated 0.5 mile W of the harbor. A conspicuous water tower stands about 1.8 miles ESE of the harbor. The prominent spires of Bayeux Cathedral, standing inland 5 miles SSE of Port-en-Bessin, may be seen from seaward.

Arromanches-les-Bains (49°20'N., 0°37'W.) is situated 5 miles E of Port-en-Bessin. A conspicuous statue of the Virgin Mary stands on the crest of a hill close E of this village.

The caissons and wrecks of Port Winston, a former artificial harbor used for the Allied landings during WWII, front the town and extend up to about 1 mile offshore.

Plateau du Calvados fronts the coast between the valley of Arromanches-les-Bains and Ouistreham, 15 miles ESE. This rocky bank has depths of less than 5m and extends up to about 2 miles offshore in places.

5.8 Pointe de Ver (49°20'N., 0°27'W.) is located 4 miles E of Arromanches-les-Bains. Ver-sur-Mer Light is shown from

conspicuous white tower, 16m high, standing among trees on a hill close S of the point.



Ver-sur-Mer Light

Courseulles-sur-Mer (49°20'N., 0°28'W.) (World Port Index No. 35890), situated 2.5 miles E of Pointe de Ver, is a small harbor lying at the mouth of the Riviere Seulles. It is used by small fishing vessels and pleasure craft. The harbor consists of an Avant-port leading to a wet dock and a tidal basin. The approach channel leading to the harbor is indicated by a lighted range and dries 3.5m. Local knowledge is advised. The entrance, with a least width of 27m, lies between a jetty and a breakwater. Training walls, which cover and are marked by beacons, extend seaward from the outer ends of the jetty and the breakwater. The tidal basin is used by yachts and its entrance is spanned by a swing bridge. The wet dock is entered through a passage, 9.6m wide, with a gate. It has depths of 3 to 4m and can handle small vessels with drafts up to 2.5m. Entry is reported to be difficult for small craft with low height of eye because the range marks are screened by large trees.

Les Essarts de Langrune and Roches de Lion, both of which dry, form part of the coastal bank bordering the shore between Courseulles-sur-Mer and Ouistreham, 9 miles ESE.

Ouistreham (49°17'N., 0°15'W.) and Caen (49°11'N., 0°21'W.)

World Port Index No. 35885 and World Port Index No. 35880

5.9 Ouistreham is the entrance port for vessels bound for Caen. The port, which is also referred to as Caen-Ouistreham, consists of an outer harbor and an avant-port. Locks providing entry to Canal de Caen are situated in the S part of Avant-port. The canal, which is 7.5 miles long, leads SSW to the port of Caen.

Tides—Currents.—At Ouistreham, the mean tidal rise is 7.6m at spring tides, and 6.2m at neap tides. In Rade de Caen, the tides have characteristics similar to those in the estuary of the Seine; the HW stand is 1 hour 30 minutes during spring tides, and 2 hours during neap tides.

Depths—Limitations.—An Approach Channel, within which navigation is controlled, leads S and SW to the beginning of the entrance channel. This channel, which may best be



Canal de Caen Locks (Ouistreham)



Entrance to Caen-Ouistreham

seen on the chart, is entered about 8.5 miles NNE of Ouistreham and has depths in excess of 20m decreasing to 9m.

A Waiting Area, which may best be seen on the chart, lies adjacent to the SE side of the SW leg of the Approach Channel. It has depths of 8.8 to 11m.

The entrance channel leads from the S end of the Approach Channel through the coastal bank into the outer harbor. It has a dredged depth of 7m (1993) over a width of 50m. The inner part of this channel is contained between two training walls, which cover at HW and extend about 1 mile seaward.

The channel leading from the outer harbor through Avant-port to the locks is dredged to a depth of 3m.

Canal de Caen.—Two entrance locks provide access to Canal de Caen. The W lock is open from 3 hours before to 4 hours after HW. It is 225m long and 28.8m wide with a depth of 3.25m on the sill.

The E lock is open from 2 hours before to 3 hours after HW. It is 181m long and 18m wide with a depth of 0.2m on the sill. This lock may be divided into two chambers, 70m and 90m long.

The canal runs parallel to the Riviere Orne and extends for 7.5 miles from the locks to Caen. A constant water level is

maintained in the canal and at Caen by means of a dam built across the Riviere Orne. The canal is dredged to a depth of 2m below chart datum, which provides a fresh water depth of 9.8m.

The four main docks at Caen are (from N to S) Bassin d'Herouville, Bassin de Calix, Nouveau Basin, and Bassin Saint Pierre.

Four bridges span the canal. Pont de Benouville (Pegasus Bridge), a swing bridge, is situated 2.4 miles S of the locks and has a clearance width of 40m.

Pont de Colombelles Bridge, a swing bridge, is situated about 0.5 mile N of Bassin d'Herouville and has a clearance width of 30m.

Calix Viaduct, a fixed bridge, is situated between Basin de Calix and Nouveau Basin. It has a vertical clearance of 33m.

Pont de la Fonderie, a swing bridge, is situated at the entrance to Bassin Saint Pierre and has clearance width of 12m.

Vessel dimensions, with fresh water (FW) drafts, permitted in the canal are, as follows:

1. Between the locks and Bassin d'Herouville:
 - a. By day—vessels up to 205m in length, 23.5m beam, and 8.4m draft. Vessels less than 172m in length and 22m beam may transit with drafts up to 8.95m. Vessels proceeding only to Blainville Wharf, inbound or outbound, may transit with drafts up to 9m depending upon the rise of tide in the entrance channel and the characteristics of the ship.
 - b. At night—vessels up to 20m beam and 8m draft. Vessels proceeding to Blainville Wharf may transit with beams up to 22m.
2. Between Bassin d'Herouville and Bassin de Calix:
 - a. By day—vessels up to 180m in length and 23.5m beam, with drafts of 8.2 to 8.6m.
 - b. At night—vessels up to 150m in length, 20m beam, and 8m draft.
3. Entering Nouveau Basin:
 - a. By day—vessels up to 145m in length and 20.5m beam, with drafts of 3.8 to 7m.
 - b. At night—vessels up to 145m in length and 20m beam, with drafts of 3.8 to 6m.

The maximum drafts for tankers depend upon the size of the vessel and the amount of cargo. Such vessels should contact the local authorities before arrival. Other vessels with drafts over 7.92m should contact the local authorities prior to their intended port call to ensure the entry conditions.

Berths.—Two ro-ro ferry berths are situated on the W side of the outer harbor at Ouistreham, about 0.5 mile N of the locks. No.1, the southernmost berth, can handle vessels up to 145m in length and 24m beam. A swinging area, lying adjacent to this berth, has a dredged depth of 6m.

No. 2, the northernmost berth, can handle vessels up to 165m in length and 26m beam. A swinging area, lying adjacent to this berth, has a dredged depth of 7m.

An extensive marina, with a depth of 3m, lies close S of the locks at the E side of the canal. A quay, used by dredgers, is situated about 0.4 mile S of the locks. It is 200m long and has a depth of 3.6m alongside. A berth, used by oil tankers, is situated at Maresquier, on the W side of the canal about 1.5 miles S of the locks. It can handle vessels up to 120m in length and 5.6m draft (FW).

A berth, 100m long, with a depth of 4.6m alongside and another berth, 200m long, with a depth of 6m alongside are situated at Ranville, at the E side of the canal close N of Pont de Benouville (Pegasus Bridge).

Blainville Wharf is situated on the E side of the canal about 1.3 miles above Pont de Benouville (Pegasus Bridge). It is 625m long and has a depth of 9m alongside.

Bassin d'Herouville contains President Delaunay Quay, which is 370m long, and Ponderex Mole, which is 215m long.

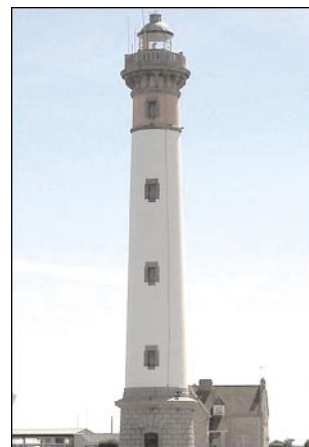
Bassin de Calix contains Quay de Calix, which is 140m long.

Nouveau Basin contains Quay President Gaston Lamy, which is 550m long, and President Hippolyte Quay, which is 150m long.

Bassin Saint Pierre is entered from Nouveau Basin through a passage 12.3m wide. It has a depth of 4m and is used by pleasure craft up to 50m in length.

The port of Caen has facilities for ro-ro, container, general cargo, bulk, timber, and tanker vessels.

Aspect.—Ouistreham Light is shown from a prominent tower, 38m high, standing at the E side of the locks.



Ouistreham Light

A lighted range, which may best be seen on the chart, indicates the entrance channel. Lights and beacons mark the submerged training walls on either side of the inner part of the harbor entrance channel.

A lighted fairway buoy (Ouistreham) is moored about 3 miles N of the entrance to the locks.

A conspicuous church belfry stands 0.5 mile SW of Ouistreham Light and a large prominent water tower is situated 0.5 mile SW of it. Another prominent water tower stands at Merville-Franceville, about 2 miles E of Ouistreham Light.

The buildings fronting the coast at the resort of Riva-Bella, about 1 mile W of the port entrance, are reported to be prominent from the seaward approaches.

Pilotage.—Pilotage in the port is compulsory for the following vessels:

1. All vessels carrying hydrocarbons or dangerous substances.
2. All vessels over 50m in length.
3. All vessels not equipped with VHF.

The compulsory pilotage area is bounded by the following:

1. The W limit formed by a meridian passing through Essarts de Langrune Buoy (0°21.3'W.).
2. The E limit formed by a meridian passing through Dives-sur-Mer Light (0°05.2'W.).
3. The N limit formed by a parallel passing through Essarts de Langrune Buoy (49°22.7'N.).

Pilots may be contacted by VHF. They board about 0.5 mile S of Ouistreham Lighted Buoy (49°20.4'N., 0°14.8'W.) or in the Waiting Area. Generally, pilots are available from 2 hours 30 minutes before to 3 hours after HW.

All vessels should send an ETA and a request for pilotage at least 24 hours in advance or on departure from a previous port if less. A message confirming the ETA must be sent at least 2 hours prior to arrival in the roadstead. The request should include the vessel's salt water draft and maximum overhead clearance above the water level (air draft).

The pilot station maintains a listening watch on VHF channel 74 from 1 hour 30 minutes to 9 hours after LW.

Vessels navigating in the approaches to Caen-Ouistreham are also within the Estuary of the Seine. For additional information concerning the mandatory Baie de Seine VTS Identification Zone system, see Regulations under Estuary of the Seine (paragraph 5.10).

The port may be contacted by e-mail, as follow:

info@caen.port.fr

Regulations.—Vessels over 1,600 grt and carrying hydrocarbons or dangerous cargo should consider the Navigation Controlled Approach Channel to be a Mandatory Access Channel. Such vessels must establish contact with the authorities on VHF channel 74 before entering the channel and maintain a listening watch on the same frequency. When in the channel these vessels are deemed to be restricted in their ability to maneuver and must show the appropriate lights and shapes.

All other vessels must contact the authorities on VHF channel 74 when entering the entrance channel.

Vessels waiting for the tide, navigating in the approach and entrance channels, or maneuvering in the locks must maintain a listening watch on VHF channel 74.

The Waiting Area lying adjacent to the SE side of the SW leg of the Approach Channel may only be used by vessels over 1,600 grt and carrying hydrocarbons or dangerous cargo. Such vessels anchored in the Waiting Area must maintain a watch on VHF channel 74 and be able to sail on 15 minutes notice. It is forbidden for these vessels to remain in the Waiting Area during periods of bad weather from NW to NE. Such vessels should then remain at sea at least 7 miles from the French coast, or seek shelter off Le Havre.

All navigation in the entrance channel leading to the locks is prohibited during the arrival or departure of automobile ro-ro ferry vessels.

The maximum speed allowed in Canal de Caen is 7 knots.

Vessels transiting the canal must keep a watch on VHF channel 74.

A distance of 400m must be maintained between vessels transiting the canal. All overtaking is prohibited except in an emergency.

Vessels navigating in the approaches to Caen-Ouistreham are also within the Estuary of the Seine. For additional information concerning the mandatory Baie de Seine VTS Identification Zone system, see Regulations under Estuary of the Seine (paragraph 5.10).

Signals.—The opening of bridges in Canal de Caen is indicated by green lights. If the lights are not exhibited, or are replaced by a red light, vessels should stop no less than 400m from the bridge, and wait for the green light signal.

The request for a bridge to open is one long blast. A long blast is also a request for small craft in the canal to keep close to the bank for the passage of a commercial vessel.

Anchorage.—Rade de Caen, off the mouth of the Riviere Orne, affords shelter from winds between SW and SE.

Vessels over 1,600 grt and carrying hydrocarbons or dangerous cargo must anchor in the Waiting Area.

Other vessels may anchor in an area, with depths of 5 to 8m, lying about 0.6 mile NW of No. 1 Channel Entrance Lighted Buoy. W-SRGO Buoy (white and blue) is moored in the vicinity of this anchorage, about 2.5 miles NNW of the locks.

Anchorage is prohibited within the Approach Channel and in the vicinity of the lighted entrance range.

Directions.—The principal route from the sea to the port approaches is through Le Parfond (49°26'N., 0°15'W.), a comparatively deep bight extending in an ESE direction toward the Estuary of the Seine.

In order to avoid the wrecks and obstructions in Rade de Caen, vessels, except those obliged to use the Approach Channel, should approach on the lighted range leading to the entrance when about 2 miles N of Ouistreham Fairway Lighted Buoy.

Caution.—Numerous wrecks and obstructions, some marked by buoys, lie in Rade de Caen and may best be seen on the chart.

A Spoil Ground (Dumping Ground) Area, the limits of which may best be seen on the chart, lies centered 3 miles NNE of the locks.

A restricted area, which may best be seen on the chart, lies in the vicinity of a wreck, 2 miles N of Ouistreham Fairway Lighted Buoy. Anchoring, fishing, and diving are prohibited within this area.

The Estuary of the Seine

5.10 The Estuary of the Seine, in the E part of Baie de la Seine, provides access to the port of Le Havre on its N shore.

The estuary also provides access to La Seine Maritime, the name given to that part of the Seine navigable by ocean-going vessels as far as the port of Rouen.

The channel from Rade de la Carosse (49°28'N., 0°02'E.) to Rouen is about 78 miles long. The small harbors of Trouville-Deauville and Honfleur lie on the S shore of the estuary.

On the N side, Port du Havre-Antifer, used by deep-draft tankers, is situated 10 miles N of Le Havre (see paragraph 5.19). On the SW side, the port of Caen-Ouistreham is situated 19 miles SW of Le Havre (see paragraph 5.9).

All of the above ports are considered to be within the Estuary of the Seine as far as the Baie de Seine VTS Identification Zone regulations are concerned.

Tides—Currents

The tides and tidal current systems within the estuary of the Seine are complex. For example, the port of Le Havre experiences a HW stand of about 2 to 3 hours duration, while on La Seine Maritime a double HW exists, with a tidal bore in the upper reaches of the river. The tides and currents will be described in greater detail later in the text.

In Rade de la Carosse the S current begins at LW at Le Havre and attains a rate of 1 knot during spring and neap tides.

The SSE current begins 2 hours after LW at Le Havre and attains a rate of 3 knots during spring and neap tides. The NNE current begins at HW at Le Havre and attains a rate of 1.5 knots during spring and neap tides. The NW current begins 2 hours after HW and attains a rate of 2 knots during spring and neap tides.

In Petite Rade, the S current begins 1 hour 15 minutes before LW at Le Havre and attains a rate of 0.5 knot during spring and neap tides.

The SSE current begins 1 hour 30 minutes after LW at Le Havre and attains a rate of 2 knots at spring and neap tides.

The NW current begins at HW at Le Havre and attains a rate of 2 knots during spring and neap tides. The WNW current begins 3 hours after HW at Le Havre and attains a rate of 1.5 knots during spring and neap tides.

The rate of the tidal currents in Petite Rade varies considerably, but in no part does the flood current during spring tides exceed 2.5 knots, or the ebb current exceed 2 knots.

Larger vessels operating with or near a minimum underkeel clearance may wish to contact the local authorities for additional information. From observations in the E part of Baie de la Seine, it was reported that the tidal currents never exceed a rate of 2.5 knots.

These observations conflict with French sources; consequently, prudence is necessary, particularly in thick weather. The flood current lasts longer and is stronger than the ebb current. In Grande Rade, which lies about 5.5 miles W of Cap de la Heve, the flood current begins about 4 hours 30 minutes before HW at Le Havre and sets SSW.

Then, increasing in force, it turns and sets S about 3 hours before HW, and then sets SSE 2 hours 30 minutes before HW and attains a rate of 2.5 knots during the greatest tides. At HW it sets NE and attains a rate of 3 knots; then it turns progressively to the N and diminishes gradually and expires about 2 hours after HW at Le Havre.

The ebb current begins 3 hours after HW at Le Havre and sets WNW. Then it turns through W to WSW and sets 6 hours after HW. When the current is setting in this direction it attains its greatest rate of 2.5 knots during the greatest tides. It then turns, sets SSW, and ceases at LW at Le Havre.

Depths—Limitations

Banc de Seine, with depths of less than 15m, lies on the parallel of Le Havre and extends to about 15 miles W of Cap de la Heve. The tidal currents, when they oppose the wind, cause a very rough sea on this bank.

Le Parfond (49°26'N., 0°15'W.), a comparatively deep bight, extends in an ESE direction toward the Estuary of the Seine.

Chenal de Rouen, providing access to La Seine Maritime, leads between Banc du Ratier and Banc d'Amfard. Banc d'Amfard, a drying bank, terminates W in Gambe d'Amfard, and consists of clay and shingle. Banc du Ratier is a mass of pebbles, prolonged W by Les Ratelets, and lying nearly in the middle of the estuary.

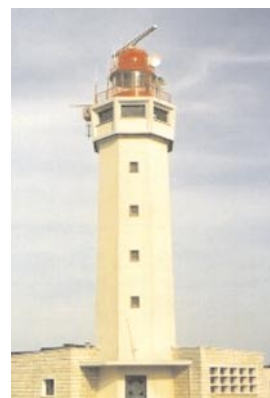
Les Digue du Ratier, on the N side of Banc du Ratier, is submerged when the tide rises; it is marked by beacons on raised platforms, about 0.5 mile apart, and by a light at its W extremity.

Since the construction of this dike, the banks in the vicinity of the river mouth have stabilized and any further changes have been relatively slight.

Two dredged channels lead across the banks that encumber the estuary. The northernmost channel leads into the port of Le Havre; the southernmost channel leads into La Seine Maritime.

Aspect

Cap de la Heve (49°31'N., 0°04'E.) is located on the N bank of the mouth of the Seine. Cap de la Heve Light is shown from a conspicuous tower, 32m high, standing on this cape. A prominent radar tower and two lattice masts stand close SSW and 0.2 mile SSE, respectively, of the light.



Cap de la Heve Light

White limestone cliffs, which are visible from a great distance to seaward when the sun shines on them, are located in the vicinity of the cape. These cliffs are in contrast to those extending from near the cape to the vicinity of Cap d'Antifer, 11 miles NNE, which are 100m high and reddish in color.

A conspicuous television mast, 189m high, stands at Gravelle, 4.2 miles E of Cap de la Heve.

Two conspicuous chimneys, 250m high, are situated near a power station in the port area of Le Havre, 3.7 miles SE of Cap de la Heve.

The **Riviere Dives** (49°18'N., 0°06'W.) flows into the S side of the bay about 5.5 miles E of Ouistreham. The banks at the mouth of this river dry up to 1 mile seaward. Cabourg is situated on the W side of the river and Dives-sur-Mer is situated on the E side. The river contains a large marina and a quay, which is used by small fishing vessels and pleasure craft. Local knowledge is required for entry. A conspicuous casino stands in Cabourg.

Mont-Dives, 132m high, rises 2 miles SE of the river mouth. This hill is conspicuous from seaward and dominates the built up area of Dives-sur-Mer.

The S side of the estuary from the riviere Dives to Honfleur, about 15 miles NE, is backed by dark, round hills, which contrast with the light-colored cliffs on the N side. Villers-sur-Mer, a prominent resort borders the coast, 4 miles ENE of the riviere Dives. Mont Canisy, 111m high, rises close behind the shore, 1.5 miles NE of Villers-sur-Mer. It has a flat summit and is conspicuous from seaward.

LHA Lanby (49°31.7'N., 0°09.9'W.), equipped with a racon, is moored in the NW approach to the estuary, about 9 miles W of Cap de la Heve.

Antifer A5 Lighted Buoy (49°46'N., 0°17'W.), equipped with a racon, is moored about 21 miles NW of Cap de la Heve.

For details of additional landmarks and aids, see the descriptions of the individual ports.

Pilotage

Pilotage for vessels approaching the Estuary of the Seine and specifically the ports of Port du Havre-Antifer and Le Havre is provided by the Le Havre-Fecamp Pilotage Service (Pilots Le Havre). For further information, see Pilotage under Le Havre (paragraph 5.12).

Pilotage for ports situated along the Seine (La Seine Maritime) is provided by the Rouen Pilotage Service. For further information, see Pilotage under La Seine Maritime (paragraph 5.13).

Regulations

Reporting System—The Baie de Seine VTS Identification Zone system operates in the approaches to the Estuary of the Seine and facilitates recognition of vessels bound to or from the ports of Port du Havre-Antifer, Le Havre, Rouen, and Caen-Ouistreham. It is managed by the Baie de Seine Traffic Control Center, which is located at Le Havre.

The Identification Zone is bounded by an arc with a radius of 22 miles centered on Cap de Le Heve Light. It is bound on the S side by the coastline and on the N side by the intersection with the meridian of Cap d'Antifer Light (0°10'E.).

The following procedures apply:

1. All vessels and tows over 50m in length entering or within the zone bound to or from any port, Waiting Area, or anchorage should report on VHF channel 22 to the Baie de Seine Traffic Control Center. This regulation is mandatory within French territorial waters. All vessels should also maintain a listening watch on VHF channel 16.

2. Inbound vessels should contact the Control Center through their Agent 48 hours in advance of their arrival at LHA Lanby (49°31.7'N., 0°09.9'W.) or Port du Havre-Antifer A5 Lighted Buoy (49°46'N., 0°17'W.). Vessels must state name, call sign, ETA, maximum draft, details of cargo, and any damage.

3. Inbound vessels should contact the Control Center by telex 24 hours prior to arrival. Vessels must state name, call sign, ETA, draft, and any damage.

4. Inbound vessels should contact the Control Center 3 hours prior to arrival on VHF channel 12 stating name, call

sign, whether a pilot is on board, and any changes to information previously submitted.

5. Inbound vessels within the Identification Zone should report at the following positions (direction and VHF channel):

- a. 49°28.9'N, 0°00.5'W.—NNW—VHF channel 12.
- b. 49°34.2'N, 0°01.7'W.—S—VHF channel 12.
- c. 49°45.3'N, 0°01.1'W.—SSW—VHF channel 22.
- d. 49°43.8'N, 0°03.5'E.—SSW—VHF channel 22.
- e. 49°41.8'N, 0°04.2'W.—NNE—VHF channel 22.
- f. 49°40.2'N, 0°00.6'E.—NNE—VHF channel 22.

6. Vessels bound for Le Havre or Port du Havre-Antifer may only enter the Approach Channels with permission from the Control Center.

7. Vessels mooring in the Waiting Areas must contact the Control Center stating their position and time of anchoring.

8. Vessels transiting the area and not entering the ports of Le Havre or Port du Havre-Antifer should not:

a. Cross Le Havre Approach Channel E of LH7 Lighted Buoy and LH8 Lighted Buoy (49°30'N., 0°01'W.).

Vessels may cross W of these buoys with permission from the Control Center.

b. Cross Port du Havre-Antifer Approach Channel E of A17 Lighted Buoy and A18 Lighted Buoy (49°42'N., 0°02'E.). Vessels may cross W of these buoys with permission from Port du Havre-Antifer Port Control.

9. Vessels bound for Le Havre should enter the Approach Channel W of the entrance buoys.

10. Exempted from the rules stated in 8a, 8b, and 9 above are fishing vessels and pleasure craft less than 19.8m in length, vessels with a pilot on board providing the authorities are notified, certain local craft, and vessels experiencing difficulty in embarking or disembarking a pilot in the approaches provided permission has been given by the authorities. In all these cases, it is conditional that no inconvenience is caused to shipping in the Approach Channels.

11. All vessels crossing the Approach Channels must not impede shipping in the channels.

12. Vessels constrained by their draft should display the appropriate international signals and lights.

13. Pleasure craft in the approaches to or within the ports, whether under sail or power, must give way to all other shipping.

Additional entry, departure, and reporting procedures are under the control of the individual ports within the zone.

Radar assistance, in poor visibility or on request, will be given by the Traffic Control Center. Coverage is within a circular area, with a 12.5 mile radius, centered on 49°39'N, 0°08'E.

Information concerning tides, meteorological conditions, and navigation will be provided by the Traffic Control Center on request.

Tankers.—Special regulations and reporting procedures apply to vessels carrying hydrocarbons or dangerous substances navigating in the approaches to the French coasts of the North Sea, the English Channel, and the Atlantic Ocean between the Belgian border and Spanish border. Such vessels preparing to pass through or stop within French Territorial Waters are required to send a message to the appropriate CROSS station giving their intended movements. In addition,

such vessels must use the designated Mandatory Access Routes and Channels when approaching a port or roadstead. For further details of these special procedures, see Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea.

Special regulations and reporting procedures also apply to vessels carrying hydrocarbons or dangerous substances bound for or sailing from Port du Havre-Antifer, Le Havre, Rouen, and other La Seine ports. The following is a summary of the regulations:

1. The above vessels prior to entering French territorial waters or getting underway from a French port must:

a. Establish radio contact with Havre Port Radio or Rouen Pilot Radio. Contact must then be maintained continuously until berthed or outside the territorial waters.

b. Report to Le Havre port or Rouen pilots, as appropriate, any defects to propulsion machinery, steering or anchor gear, mooring winches, or radar equipment. The port authority will require such a vessel to complete a questionnaire.

2. Vessels bound for Le Havre must comply with instructions given by Le Havre port radio. If vessels have to wait they must proceed to the area appropriate for their draft and dimensions as follows

a. Vessels less than 250m in length or with drafts less than 12m proceed to No. 1 Waiting Area, lying S of the Approach Channel, passing N of a line through LHA Lanby and HP Lighted Buoy, 4.5 miles ESE.

b. Vessels 250m or more in length or with drafts of 12m or more proceed to No. 2 Waiting Area if their tonnage is less than 100,000 dwt, or to No. 3 Waiting Area.

3. Vessels bound for Le Havre must have a Le Havre pilot on board while underway within 7 miles of the French coast except vessels less than 250m in length or with a draft of less than 12m, which may proceed without a pilot to No. 1 Waiting Area.

4. Vessels bound for La Seine ports:

a. Vessels 250m or more in length or with drafts of 12m or more must wait for a pilot at a distance of more than 7 miles from the coast and S of a line passing through LHA Lanby and HP Lighted Buoy.

b. Vessels less than 250m in length or with drafts less than 12m may proceed without a pilot to Rade de la Carosse (49°28'N., 0°02'W.) staying S of LHA Lanby and Le Havre No.1 Waiting Area.

c. Vessels may not leave Rade de la Carosse for La Seine without a Rouen pilot on board.

5. During movements between Le Havre and La Seine, a Le Havre pilot and a Rouen pilot must be on board.

Anchorage

The following designated anchorage areas, which may best be seen on the chart, are available in the Estuary of the Seine:

1. For Le Havre:

a. No. 1 Waiting Area, for vessels less than 250m in length and less than 12m draft, is centered about 5 miles WSW of Cap de la Heve, on the S side of Le Havre entrance channel. It has depths of 12m, sand and broken shells, with good holding ground. A wreck, with a depth

of 11.8m, lies near the middle of this anchorage area and is marked by HP Lighted Buoy. Several other wrecks, which may best be seen on the chart, lie in the vicinity of this anchorage.

b. No. 2 Waiting Area, reserved for vessels of less than 100,000 dwt, is centered 2.5 miles NNE of LHA Lanby and has depths of 17 to 22m, sand, mud, and broken shells.

c. No. 3 Waiting Area, centered about 5.5 miles NW of LHA Lanby, is authorized for use by any vessel. It has depths of 21 to 25m, fine sand and broken shells.

2. For Rouen:

a. No. 1 Waiting Area lies in Rade de la Carosse, about 4 miles SW of Cap de la Heve. It has depths of 12 to 13m, sand and shells. This anchorage has good holding ground but is exposed to W and N winds. The area can be used by vessels bound for Rouen or La Seine Maritime while waiting for a pilot or the tide.

b. No. 2 Waiting Area lies centered 3.5 miles SE of LHA Lanby. This area is for the use of vessels over 190m in length or with drafts over 9m, and vessels carrying dangerous cargo over 150m in length or with drafts over 9m.

For anchorages for deep-draft vessels bound for Port du Havre-Antifer, see paragraph 5.19.

Caution

Numerous wrecks, which may best be seen on the chart, lie in the approach to Le Havre and in the Estuary of the Seine.

Small vessels should avoid impeding the navigation of deep-draft vessels, which are frequently encountered in the estuary.

Vessels should not proceed into depths of less than 15m unless they have verified their position as this contour lies close to the coastal dangers.

Anchoring, fishing, and waiting are prohibited within a large area, which may best be seen on the chart, lying adjacent to the N side of the Le Havre Approach Channel.

A restricted area, which may best be seen on the chart, lies centered about 3 miles NW of Cap de la Heve. Anchoring, dredging, and trawling are prohibited within this area. A spoil ground is located within the restricted area and less water than charted is reported (2005) to lie in its vicinity.

Care is advised when using any of the anchorages in the approaches to the estuary as there is a slight risk of fouling disused cables, which may best be seen on the chart.

It is reported (2005) that extensive construction (Port 2000) is being carried out on the N side of the river entrance, at the S side of the port of Le Havre.

5.11 Trouville-Deauville (49°22'N., 0°05'E.) (World Port Index No. 35870) is situated on the S side of the estuary, on both sides of the mouth of the Riviere La Touques. It is used by fishing vessels and pleasure craft.

The harbor is entered between two rubble training walls, which cover at HW. The W wall extends NNW from the outer end of a curved breakwater. The harbor consists of Avant-port, a riverside quay, and two wet basins.

Tides—Currents.—The tides rise about 8.2 m at springs and 6.8m at neaps. Off the harbor, the tidal currents set ENE

and WSW with rates up to 3 knots at springs. Within the entrance channel, the flood current attains a rate of 2.8 knots and the ebb current a rate of 1.8 knots. An eddy forms off the entrance to the outer yacht basin about 1 hour before HW. The best time to enter is at slack water, about 15 minutes before to 15 minutes after HW.

Depths—Limitations.—An entrance channel, which dries 1.2m at its N end, leads through the coastal bank to the entrance. An extensive yacht basin, with a least depth of 2.8m, lies on the W side of the harbor entrance, at Deauville. It is protected by a breakwater and entered via a lock, which is 52m long and 12m wide. Basin des Yachts, a wet basin, is situated in the S part of the harbor and entered via a gate, 14.5m wide. Basin Mornay is entered from the S end of Basin des Yachts via a passage, 13.1m wide. Small vessels with drafts up to 3.5m at springs and 2.5m at neaps can enter the basins.

The E bank of the river provides a quay, which dries up to 3m, mud. Vessels up to 60m in length and 13m beam can enter the harbor with drafts up to 3.6m at springs and 2.5m at neaps.

Aspect.—A lighted range, which may best be seen on the chart, indicates the entrance channel. The training walls are marked by beacons and lights.

A conspicuous casino is reported to stand in Deauville at the W side of the harbor.

Pilotage.—Pilots are available from the La Seine Maritime (Rouen Port) Pilotage Service (see paragraph 5.13).

Pilotage in the port is compulsory for all vessels over 55m in length and all vessels carrying hydrocarbons or dangerous substances.

Vessels should send an ETA and a request for pilotage 48 hours in advance, with a confirmation 5 hours prior to arrival. The message should include the vessel's length and draft. Pilots can be contacted by VHF and board in the vicinity of the Rouen Waiting Area, about 4 miles SW of Cap de la Heve.

Vessels should also send an ETA to the port 24 hours in advance, with a confirmation 2 hours prior to arrival.

Anchorage.—Small vessels may anchor, in a depth of 4m, about 2.3 miles WNW of the harbor entrance.

Caution.—Dredges may be frequently encountered in the approaches to the harbor.

Le Havre (49°29'N., 0°06'E.)

World Port Index No. 35840

5.12 Le Havre owes its importance mainly to its geographic location and the long stand of HW. The port, with its extensive commercial docks, serves as a terminus for large passenger ships. It also provides comprehensive facilities for container, petroleum, and ro-ro traffic.

Bassin Theophile Ducrocq and Bassin Rene Coty extend along the S side of the port and form a large continuous tidal dock. A lock situated at the E end of this tidal dock leads into a number of constant level basins. In addition, a complex of wet docks, entered via locks at the W end, extends along the N side of the port.



Le Havre

Tides—Currents

The tidal rise at Le Havre is 7.7m at MHWS, and 6.4m at MHWN. Le Havre is subject to a particular type of HW stand known as “the duration of high water.” After a rapid rise, the tidal curve exhibits a leveling off period of about 3 hours.

During the leveling off period, the variation in water level remains slight (0.3m) in relation to the tidal range. The actual time of HW varies within the duration of the HW stand depending on the phase of the moon.

During spring tides, it will occur during the third quarter of the HW stand, while at neaps, HW will occur toward the middle of HW stand. The LW stand at Le Havre lasts for only a few moments.

Storms from the SW to NW may increase the tidal level by as much as 0.7m, while weather from E to NE will lower the tidal level by 0.3 to 0.5m.

The variations due to weather may shift the time of HW by up to 1 hour.

Vessels operating with, or near a minimum underkeel clearance should consult the local authorities for guidance.

Any rule governing the tidal currents in the approaches to Le Havre and at the entrance of the Seine is necessarily complex. It is often different, even for adjacent positions.

In general, the tidal currents may be said to be rotary in direction during the rise and fall of a tide.

This is best observed in the case of the currents in Grande Rade and in Rade de la Carosse.

In these roadsteads, from the time of LW for the duration of 2 to 3 hours, the flood current flowing NE turns clockwise to set ESE during the filling of the Seine.

At the end of this period the Verhaule current, a relatively rapid current of constant direction, springs up and flows NE and N towards Cap de la Heve. The Verhaule current runs until the time of HW, and the ebb current sets to the W and then to the SE for a period of 4 to 5 hours.

The exceptions to the generality occur in Petite Rade, N of the entrance of Le Havre, and in the Estuary of the Seine. In these areas the current has only two directions; that is, SE (flood) and NW (ebb). It should be noted that the tidal currents set across the entrance of Le Havre and not into the port.

At springs the flood current attains a maximum rate of 2 knots about 4 hours before HW; the ebb current attains a maximum rate of about 2 knots about 3 hours after HW. About 2 hours after LW the current entering Avant-Port and Bassin Theophile-Ducrocq can attain a velocity of about 1.6 knots.

Depths—Limitations

The Approach Channel, which is navigation controlled, leads in an ESE direction through the coastal bank to the harbor entrance, which is protected by two breakwaters. It is 300m wide, maintained at a dredged depth of 15.5m on the range line, and entered about 0.5 mile NE of the LHA Lanby.

Tankers up to 300,000 dwt and 392m in length, with drafts of 19.2 to 20.7m, may enter the port, subject to tidal restrictions. Such vessels enter by day only and should arrive at the LHA Lanby at least 3 hours prior to HW.

Vessels up to 150,000 dwt and 17m draft may enter Grand Canal du Havre. The recommended time for vessels of over 100,000 dwt to enter the port is 1 hour prior to HW.

Facilities.—Petite-Port, an extensive yacht marina with a depth of 3m, lies close inside the entrance, on the N side.

Bassin la Manche, lying 0.7 mile E of the entrance, is a tidal basin from which access to the wet dock complexes to the N and E is gained.

The small wet docks extending to the N of Bassin la Manche are entered through a gate, 8m wide, and are used by pleasure craft.

Bassin de la Citadelle, with a depth of 6.3m, is used by fishing vessels and port authority craft. It is entered through a lock situated at the NE end of Bassin la Manche. The lock is 75m long and 16m wide with a depth of 1.7m over the sill.

Quinette-de-Rochemont Lock, at the E side of Bassin la Manche, provides entry to a wet dock system, which includes Bassin Bellot and Bassin de l'Eure. It is 232m long and 30m wide with a depth of 4.5m over the sill. Vessels up to 180m in length and 26m beam can lock in. When the gates are open, vessels up to 210m in length can pass through.

Bassin Vauban and Bassin de la Barre are entered from the N end of Bassin de l'Eure through a passage 16m wide. Both of these basins are used by fishing vessels and port authority craft.

Sas Vetillart Lock, at the E end of Bassin Bellot, leads into Bassin Vetillart, Bassin Marcel Despujols, and then into Canal de Tancarville. It is 175m long and 27m wide with a depth of 2m over the sill. Vessels up to 165m in length, 23m beam, and 8.5m draft can use this lock.

Bassin Theophile Ducrocq, about 2 miles long, is entered 0.6 mile ESE of the port entrance. Bassin Rene Coty extends 1 mile ENE from its E end.

Ecluse Francois Premier Lock, situated at the E end Bassin Rene Coty, leads into Grand Canal du Havre and several constant level basins. It is 400m long and 67m wide with a depth of 14.5m over the sill. Vessels up to 320m in length, 55m beam, and 17m draft can use this lock.

Grande Canal du Havre, with depths up to 22m, extends E for about 6 miles from the lock. It is marked by buoys and provides berths for several large industrial complexes.

Darse de l'Ocean, a deep basin, extends about 1 mile SSE from Ecluse Francois Premier Lock.

Canal Bossiere leads NE from Ecluse Francois Premier Lock into Bassin de Lancement and Canal de Tancarville.

Several bridges, which may best be seen on the chart, span the passages leading between the basins. Generally, these bridges can be opened at any time during daylight and on request.

The port provides facilities for general cargo, tanker, chemical, bulk, ferry, ro-ro, reefer, passenger, container, LPG, and fishing vessels.

In addition, the port has several floating repair berths, which can handle vessels up to 300,000 dwt and 550m in length, and a number of dry docks. The largest dry dock is 313m long and 38m wide.

Berths.—The port provides about 15 miles of total quays with over 140 berths for commercial ships. The following is a list of the principal berths:

1. Bassin de la Manche—Terminal de Grande Bretagne, on the N side, has two ro-ro berths with depths of 5m, which can handle ferries up to 165m in length. Quay Roger Meunier, on the S side, is 500m long and has a depth of 8.5m alongside.
2. Bassin Bellot—Quai Hermann-du-Pasquier, on the S side, is 1,524m long and can handle vessels with bulk cargo up to 210m in length and 8.5m draft.
3. Bassin Theophile Ducrocq—Quay Pierre Callet, on the NW side, is 598m long. Quay Joannes Couvert, on the N side, is 720m long and has a depth of 10m alongside. Mole Central Ore Berth No. 6, on the NE side, is 240m in length and has a depth of 16m alongside. Oil Basin No. 1, on the SW side, is a methane berth for vessels up to 230m in length and 10m draft. Oil Port Berth No. 8, on the SE side, has a depth of 15m alongside.
4. Bassin Rene Coty—Terminal l'Atlantique for containers, on the NW side, includes Quai de l'Atlantique, which is 800m long and has a depth of 12m alongside. Terminal Europe Atlantique for containers, on the NE side, includes Quai des Ameriques, which is 500m long and has depths up to 13.4m alongside. Terminal de Normandie, for containers, on the S side, includes Quai de l'Asie, which is 620m long and has a depth of 13.1m alongside. Bassin du Pacific Terminal, a container terminal on the SE side, includes Quai d'Osaka, which is 450m long and has a depth of 14.5m alongside. Oil Port Berth No. 10, on the SW side, has a depth of 19m alongside and can handle vessels up to 280,000 dwt.
5. Canal Bossiere—Terminal de l'Europe, a terminal for containers on the SW side, includes Quai de l'Europe, which is 910m long.
6. Darse de l'Ocean—Quai de Bougainville, on the E side, is 1,625m long and can handle vessels up to 13m draft.
7. Grand Canal de Havre—Multivrac Bulk Center, situated on the S side about 3 miles E of the entrance, can handle vessels up to 150,000 dwt and 17m draft. Sogestrol Terminal Berths, on the N side about 0.8 mile E of the entrance, can handle chemical and LPG vessels up to 240m in length.

It is reported (2005) that a new container terminal, known as Port 2000, is under construction within the port. This terminal extends along the N side of the river, close S of Bassin Theophile Ducrocq, and is protected on its S side by a long breakwater.

Canal de Tancarville.—Canal de Tancarville leads E for about 12 miles to the locks at Tancarville where it connects with La Seine Maritime. At Gonfreville L'Orcher, about 2 miles E of Bassin de Lancement, there are berths for coastal cargo, tanker, and LPG vessels up to 100m in length and 5.3m draft. Between these berths and the locks at Tancarville the maximum permitted draft is 3.5m.

There are two locks leading into La Seine Maritime. The northernmost lock is 177m long and 28m wide with a depth of 0.4m over the sill. The southernmost lock is 200m long and 23.8m wide with a depth of 3m over the sill.

Aspect

A lighted range, which may best be seen on the chart, indicates the Approach Channel. The range lights are intensified within 1° on each side of the alignment. The channel is also marked by lighted buoys. A directional sector light indicates the entrance fairway.

A light is shown from a prominent tower, 15m high, standing on the N breakwater head.

Numerous prominent oil tanks stand on Digue Ouest, which extends along the S part of the port. The church of Saint Joseph, with a conspicuous tower, stands about 0.5 mile NE of the harbor entrance.

A prominent signal station (port control tower) stands on Quai des Abeilles, about 0.5 mile E of the harbor entrance.

A powerful white light is shown occasionally in dense fog from a structure, 3m high, standing on the NW end of Quai de Roger Meunier, about 0.2 mile SE of the signal station tower.

For additional principal landmarks and aids in the vicinity of Le Havre, see paragraph 5.10.

Pilotage

Pilotage for the ports of Le Havre and Port du Havre-Antifer are provided by the Le Havre-Fecamp Pilotage Service (Pilots Le Havre).

The limits of the Le Havre-Fecamp Compulsory Pilotage Area are, as follows:

1. The NE limit is a line joining Cap d'Antifer Light to position 49°46'N, 0°01'E.
2. The N limit is the parallel of 49°46'N.
3. The W limit is the meridian of LHA Lanby (0°10'W.).
4. The S limit is the parallel of 49°27'N.
5. The E limit is the easternmost extremity of Le Havre port.

Pilotage is compulsory for vessels of 70m or more in length, all vessels carrying dangerous cargo, and all vessels not equipped with VHF.

Vessels should send a request for pilotage 24 hours in advance or on departure from the last port of call. The message should include the vessel's name, call sign, draft, and any possible damage.

Le Havre-Fecamp pilots may be contacted by e-mail, as follows:

pilotes.havre@wanadoo.fr

Vessels should then contact Pilots Le Havre or PH (for helicopter) 3 hours prior to arrival on VHF channel 12 or 20. Vessels must state name, call sign, possible technical problems, possibility of boarding by helicopter (winch or landing stage), and route (N or W).

The method of embarking the pilot will be specified to the vessel. After the pilot has boarded, instructions will be given on VHF channel 12 or 20.

Pilots for Le Havre board in the following positions:

1. Vessels with a draft of 12m—49°30.7'N, 0°05.2'W.
2. Vessels with a draft of 16m—49°33.0'N, 0°09.8'W.
3. Vessels with a draft of 18m—49°34.4'N, 0°14.0'W.
4. Vessels with a draft between those specified in 1, 2, and 3 above—in a position between the specified boarding positions.

Pilots board vessels proceeding to Port du Havre-Antifer about 1 mile N of Antifer A5 Lighted Buoy (49°46'N., 0°17'W.).

Signals

Visual traffic and lock signals are displayed from various signal stations around the port area. The pilot should be consulted for the details and meaning of the various codes.

Vessels carrying dangerous cargo or hydrocarbons should display a red flag by day and a red light at night.

Regulations

The Baie de Seine VTS Identification Zone system operates in the approaches to the Estuary of the Seine and facilitates recognition of vessels bound to or from the ports of Port du Havre-Antifer, Le Havre, Rouen, and Caen-Ouistreham. It is managed by the Baie de Seine Traffic Control Center, which is located at Le Havre. The Identification Zone is bounded by an arc with a radius of 22 miles centered on Cap de Le Heve Light. For further information, see Regulations under Estuary of Le Seine (paragraph 5.10).

Special regulations and reporting procedures apply to vessels carrying hydrocarbons or dangerous substances bound for or sailing from Port du Havre-Antifer, Le Havre, Rouen, and other La Seine ports. For further information pertaining to these special regulations, see paragraph 5.10.

Vessels over 1,600 grt and carrying hydrocarbons or dangerous cargo should consider the Navigation Controlled Approach Channel to be a Mandatory Access Channel.

Anchorage

Designated Waiting Areas, within which vessels bound for the port may anchor, lie in the approaches to the Estuary of the Seine and may best be seen on the chart. For further details, see paragraph 5.10.

Caution

The alongside depths stated in the description of the port are approximate. The port authority of Le Havre does not provide exact figures for drafts permitted alongside the quays. The actual depths may be less due to siltation within the basins between the dredging schedules. The port authority publishes a quarterly timetable showing the maximum admissible drafts for large vessels for each tide.

Vessels are advised to consult the port authority for the latest depths within the constant level basins and the wet dock systems prior to arrival.

For additional cautions, see paragraph 5.10

La Seine Maritime

5.13 La Seine Maritime is that part of the river navigable by ocean-going ships from just below Berville-sur-Mer (49°26'N., 0°22'E.), situated 5 miles E of Honfleur, to the Jeanne d'Arc Bridge at Rouen, a distance of about 57 miles.

Above Rouen, La Seine is navigable to Paris, where there is an inland port at Gennevilliers, and where there is access to the inland waterways.

The river is marked at each kilometer, indicating the distance from Paris. Navigation in the river is governed closely by the tides. Vessels ascend with the flood as soon as there is sufficient water to enter the channel.

The passage up river to Rouen takes about 6 hours and can be done on a single tide.

Winds—Weather

Fog constitutes the main danger to shipping in the Seine. It usually sets in around dusk during the autumn and winter months, and at dawn during the spring and summer. It usually disperses 1 or 2 hours after sunrise.

Fog occurs on an average of 29 days a year, on four of which it lasts throughout the day. Fog detectors stationed at various positions along the river transmit visibility information to the port information center at Rouen. The port center will provide visibility information via VHF on request.

Tides—Currents

The rise of tide within the Seine is complex, characterized by a double HW at springs, below Duclair. At neap tides the HW merge, and are indefinable.

At springs, the first HW becomes less and less important as the river is ascended.

At Rouen there is only one HW, but the rise of tide is rapid in the first hour after LW. Above Caudebec, the LWN are lower than the LWS. In periods of drought or certain meteorological conditions, the water level in the river may be lowered by as much as 0.8m. Tide gauges, some of which are lit, are placed at several points along the river.

In addition, the radar station at Honfleur broadcasts tidal information at the Honfleur harbor entrance on request, from 2 hours before to 3 hours after HW at Le Havre. The tide gauges and broadcast information are based on the Le Havre chart datum.

The pilot should be consulted for further details concerning the height of tide in the channel.

The MHWS and MHWN are, respectively, 7.9m and 6.7m at Honfleur, 7.6m and 6.4m at Caudebec (Km 311), and 7.6m and 6.5m at Rouen. The MLWS and MLWN are, respectively, 1.5m and 2.9m at Honfleur, 3.5m and 3.7m at Caudebec (Km 311), and 4.8m and 4.4m at Rouen.

Current rates in the river vary with the tidal stage, meteorological conditions, and the distance upriver. For example, the flood current does not reach Rouen.

At Tancarville, the spring flood current reaches a rate of 6 knots, while the ebb reaches 4 knots. Upriver of La Maillerville, the flood and ebb reach rates of 2 to 3 knots.

A tidal bore, called Mascaret, is felt at the beginning of the flood current from Villequier, disappearing upstream from Rouen. Due to dredging and channel improvement projects, the bore is no longer considered to be a nuisance to navigation, but does oblige vessels alongside a pier, or anchored to take precautions.

The pilot should be consulted for appropriate actions to be taken if a tidal bore is forecast. Small vessels avoid trouble by riding out the bore in the middle of the river. The pilot should be consulted for further information.

Depths—Limitations

Depths within Chenal de Rouen are subject to variation from several causes. The largest depth variations occur in the fairway between Honfleur (Km 56) and Tancarville (Km 338). The variation in this stretch may be as much as 0.3m per week and soundings are taken daily. Dredging is carried out on a continuous basis.

The maximum permissible length for vessels sailing to Rouen (Km 245), Port-Jerome (Km 332), and Poste Miroline (Km 353) is 280m. However, further restrictions may be imposed at night or on certain tides.

The maximum draft authorized for Chenal de Rouen varies on a daily basis and is closely related to the height of tide available. The La Seine Pilotage Service publishes a forecast of maximum drafts for the channel monthly. The information refers to salt water drafts for the upriver passage and fresh water drafts for downriver. The maximum drafts given assume normal meteorological conditions.

The published drafts may be increased or decreased at the stage of a vessel's arrival or departure if the water level differs considerably from that predicted.

Draft restrictions may be imposed for certain areas. Further restrictions may also be imposed, particularly at night, depending on the vessel's handling and any deficiency of the radio or radar equipment.

It is reported (2000) that the maximum draft for vessels proceeding upriver is 9.7 to 11.7m, depending on the height of tide. Vessels with drafts up to 9.5m can enter on all tides. The maximum draft permitted for the downriver passage is 10m.

Deep-draft vessels, capable of speeds over 12 knots, can proceed downriver in two stages, either mooring at buoys at Villequier (Km 314), or dolphins at Vatteville-la-Rue (Km 318) with the aid of two tugs. Under these circumstances a greater draft than normal is permitted on certain tides. Vessels can also proceed in three stages, mooring at the buoys or dolphins and

at Radicatel Quay. This programmed descent of the river is not authorized for tankers which are not gas free.

It is reported (2000) that vessels proceeding downriver in the above stages may be permitted a maximum draft of 10.8m.

The Rouen Pilotage Service should be contacted well in advance of arrival for maximum draft information, which should be confirmed when the pilot boards.

Overhead power cables cross the channel at Km 336, Km 331, Km 298, Km 274, and Km 262. Bridges span the channel at Km 353, Km 338, and Km 309. The minimum vertical clearance of all these obstructions is 49m.

Aspect

(La Falais des Fonts Light, a sector light, is shown from a prominent white tower, 18m high, standing 0.7 mile W of the entrance to Honfleur (49°25'N., 0°01.4'E.).

Digue Basse du Nord and Digue du Ratir, which are two training walls, border the N and S sides of Chenal de Rouen. These walls, which cover, extend about 4 miles W of La Falais des Fonts Light and are marked by beacons. Digue Basse du Nord, on the N side, is 3 to 6m above chart datum and Digue de Ratir, on the S side, is 2 to 5m above chart datum. The outer head of Digue de Ratir is marked by Lighted Beacon A, which is 10m high.

The fairway within Chenal de Rouen is marked by lights and lighted buoys, which may best be seen on the chart.

The access channel leading from Rade de la Carosse to Chenal de Rouen is marked by lighted buoys.

The city and port installations of Le Havre stand along the N side of the entrance to Chenal de Rouen and are prominent.

It is reported (2006) that Lighted Buoy No. 2 (49°27.4'N., 0°01.4'E.), equipped with a racon, is moored 3.7 miles WNW of Lighted Beacon A and about 1 mile NW of the entrance to the access channel.

For further information concerning landmarks and navigational aids in the approaches to La Seine Maritime, see paragraph 5.10.

Pilotage

Pilotage for the river area (La Seine Maritime) is provided by the Rouen (La Seine) Pilotage Service. This service also provides pilots for the ports of Honfleur and Trouville-Deauville.

The pilotage area is divided into two sections, as follows:

1. Seine Aval (downstream).—This section is bound by a line extending from the W extremity of the S breakwater at Le Havre to LH11 Lighted Buoy (49°29.6'N., 0°02.2'E.), then SW toward RP Lighted Buoy (49°28.6'N., 0°01.2'W.) to latitude 49°29'N, then W to the meridian of the LHA Lanby (0°10'W.), then S to latitude 49°20'N, then E to the pilot boarding position at Caudebec-en-Caux (km 310.75).

2. Seine Amont (upstream).—This section lies between the pilot boarding position at Caudebec-en-Caux (km 310.75) and the Guillaume Le Conquerant Bridge at Rouen. Pilotage in the area is compulsory for vessels, as follows:

1. All vessels carrying dangerous substances, hydrocarbons, or liquefied gases, including non-gasfree vessels.
2. Passenger vessels.

3. Vessels in the Seine Aval section over 55m in length.
4. Vessels in the Seine Amont section over 45m in length and those which, although shorter in length, do not have VHF or radar suitable for river navigation.
5. Vessels under tow which are subject to compulsory pilotage.

Vessels less than 70m in length whose Master possesses a Pilotage Exemption Certificate are exempt.

All inbound vessels should send their ETA at Rade de la Carosse (49°28'N., 0°02'E.) and a request for pilotage to Rouen Pilot at least 48 hours in advance or on departure from another port if less than 48 hours. This message is usually passed via the agent.

Vessels should then send a confirmation message by telex or fax 5 hours prior to arrival, including details of their speed and draft. Delays over 1 hour or an ETA earlier than 1 hour must be reported at least 3 hours before arrival.

Pilots generally board vessels, as follows:

1. In the Seine Aval section in position 49°28.7'N, 0°02.4'W (4.8 miles WSW of Cap de la Heve Light).
2. In the Seine Amont section in an area lying between Norville Light (km 310.75) and Saint-Wandrille Light (km 306.8).

The Rouen Pilotage Service office at Rouen may be contacted by e-mail, as follows:

piloseine-majort@wanadoo.fr

The Rouen Pilotage Service office at Le Havre may be contacted by e-mail, as follows:

piloseine-majorl@wanadoo.fr

Regulations

The Baie de Seine VTS Identification Zone system operates in the approaches to the Estuary of the Seine and facilitates recognition of vessels bound to or from the ports of Port du Havre-Antifer, Le Havre, Rouen, and Caen-Ouistreham. It is managed by the Baie de Seine Traffic Control Center, which is located at Le Havre. The Identification Zone is bounded by an arc with a radius of 22 miles centered on Cap de Le Heve Light. For further information, see Regulations under the Estuary of the Seine (paragraph 5.10).

Special regulations and reporting procedures apply to vessels carrying hydrocarbons or dangerous substances bound for or sailing from Port du Havre-Antifer, Le Havre, Rouen, and other La Seine ports. For further information pertaining to these special regulations, see paragraph 5.10.

Rouen Port (La Seine) VTS system operates in the river area extending between the Estuary of the Seine and Rouen. It is mandatory for all commercial vessels.

This VTS system provides maritime and river traffic surveillance between Rade de la Carosse (49°28'N., 0°02'E.) and Rouen. Information and radar assistance are provided on request.

All vessels over 20m in length navigating in the area must be equipped with a VHF capable of communicating with Rouen Port Control on VHF channels 6, 13, 16, and 73.

All inbound vessels should send their ETA at Rade de la Carosse (49°28'N., 0°02'E.) to Rouen Port VTS Control at least 48 hours in advance or on departure from another port if less than 48 hours. This message, which is usually passed via the agent, must include the following:

1. Vessel name and call sign.
2. ETA.
3. Last port of call.
4. Destination and ETA.
5. Maximum salt water draft.
6. Cargo information.
7. Possible defects, damage, or deficiencies (vessel or cargo).

Vessels should send a confirmation message by telex or fax 5 hours prior to arrival, including details of their speed and maximum salt water draft, to Rouen Port Control.

Vessels must then contact Rouen Port Control 3 hours prior to arrival on VHF channel 73.

Vessels must request authorization from Rouen Port Control before entering the access channel of La Seine Maritime.

All vessels must maintain a listening watch on VHF channel 73, or on the prescribed channel, during passage between the estuary and Rouen.

Vessels must advise Rouen Port Control of the following:

1. Time of entry into the access channel.
2. Time of passing La Bouille (49°21'N, 0°56'E.), inbound and outbound.
3. Any incident affecting navigation in the river (fog, unforeseen anchoring, displaced buoy, vessel in difficulty etc).
4. After passing Caudebec-en-Caux (km 310.75), the number of tugs required on arrival at Rouen.

Rouen Port Control will provide on request details of visibility, navigational conditions, and weather on VHF channel 73.

Information concerning water levels between the estuary and Caudebec-en-Caux is broadcast every 5 minutes on VHF channel 82.

Rouen Port Control will provide on request details of water levels between Le Havre and Rouen on VHF channel 73.

The area of radar coverage extends 20 miles W of Honfleur Radar to Aizer (km 325). Honfleur Radar will provide navigational information on request on VHF channel 73.

Rouen Port Control may be contacted by e-mail, as follows:

harbourmaster@rouen.port.fr

Overtaking is permitted within La Seine Maritime providing the visibility is clear and no other ship can be seen approaching from the opposite direction.

Between Tancarville and Rouen, a speed limit of 15 knots is in force, but vessels must not cause excessive wash.

Vessels of less than 20m in length must not hinder ships in La Seine Maritime.

Anchorage

Two designated Waiting Areas for vessels bound for Rouen, which may best be seen on the chart, lie in the estuary of the Seine. For further information, see paragraph 5.10.

In the Seine, vessels anchor either to await the tide, or in case of dense fog. The pilot should be consulted as to the place of anchorage, as well as for the proper precautions to be taken on the arrival of the flood.

Directions

Vessels bound for ports in La Seine Maritime should head for LHA Lanby (49°31.7'N., 0°09.9'W.) and then RN Lighted Buoy (49°29'N., 0°01'W.), about 6.2 miles ESE, which is moored at the NW end of Rade de la Carosse. The outer entrance of the buoyed access channel lies about 3 miles SE of RN Lighted Buoy.

Caution

Ferries cross at various points along the channel, which may best be seen on the chart. The crossing points are marked by white boards with the word "BAC" or a violet light at night. In addition to their usual lights, ferries at night display three vertical lights. White, red, and green lights are shown when proceeding toward the right or N bank; and white, green, and red are shown when proceeding toward the left or S bank.

Dredges permanently operate within La Seine Maritime.

Instructions are frequently given by the authorities using the convention "left bank or right bank" referring to the position of the banks when headed downstream.

Honfleur (49°25'N., 0°15'E.)

World Port Index No. 35870

5.14 Honfleur is situated on the left bank of the estuary of La Seine. The port is approached from Chenal du Rouen and entered through an outer lock.

Winds—Weather.—See paragraph 5.13 for further information.

Tides—Currents.—See paragraph 5.13 for further information.

Depths—Limitations.—An entrance channel, 100m wide, leads between two tall jetties to the outer lock. This outer lock, which is 40m long and 23m wide, provides access to Avant-port. Vessels of less than 36m in length may use the lock. Vessels 36m and over in length must wait for HW slack to enter with both gates open.

Bassin de l'Ouest is entered from Avant-port through the W inner lock, which is 10.5m wide. This basin is 128m long and 77m wide, with depths of 2.2m. It is used by fishing vessels and yachts.

Bassin de l'Est is entered from Avant-port through the E inner lock, which is 16.5m wide. It is 295m long and 70m wide. Bassin Carnot is entered from Bassin de l'Est by a passage, 13m wide, which can be used by vessels with beams up to 12.5m. This basin is 788m long and 108m wide.

Bassin de l'Est and Bassin Carnot provide facilities for commercial vessels. Vessels up to 110m in length and 15.5m beam can be handled with drafts up to 6.2m at springs and 3.7m at neaps. These limitations are subject to change due to frequent siltation within the port.

Pilotage.—See paragraph 5.13 for further information.

Regulations.—See paragraph 5.10 and paragraph 5.13 for further information.

Anchorage.—See paragraph 5.13 for further information.

Caution.—Sluicing takes place at spring tides, during which time the entrance channel should not be used.

Honfleur to Rouen

5.15 Chenal de Rouen continues almost as far as the mouth of the riviere La Risle, about 5.5 miles E of Honfleur. Then as far as Rouen embankments confine the river to a permanent channel.

Quais Exterieurs de Honfleur are situated close E of Honfleur, on the S bank. These two quays are 122m long and can accommodate vessels up to 170m in length with drafts up to 7m at LWS.

Poste Miroline (Km 353) is a dolphin berth for tankers on the S bank. It is capable of handling vessels up to 60,000 tons. This berth is subject to rapid siltation and vessels must ascertain the depth alongside in advance.

Quai de Radicatel (Km 336), fronting a container terminal, is situated on the N bank. It is 411m long and has a depth of 10m alongside. Vessels up to 45,000 tons and 270m in length can be handled.

Port Jeromme (Km 332), which provides seven berths, is situated on the N bank. It can handle tankers up to 51,000 dwt, 220m in length, and 10m draft.

Quai de Saint-Wondrille (Km 307) is situated on the N bank. It is 645m long and can accommodate vessels up to 10m draft.

Quai de Trat (Km 300) is situated on the S bank. It is 210m long and can accommodate vessels up to 8m draft.

Several berths for coasters and river craft are situated at Caudebec (Km 310), Yainville (Km 299), and Duclair (Km 278).

Rouen (49°27'N., 1°06'E.)

World Port Index No. 35850

5.16 Rouen, a large port, lies about 62 miles above Honfleur. It is divided into two sections by Pont Jeanne-d'Arc. The Maritime Port Section, used by ocean-going traffic, extends from La Bouille (Km 260) to the bridge. The River Section lies above Pont Jeanne d'Arc. It is used by barges, pleasure craft, and small coasters, which can lower their masts.

Depths—Limitations.—The river banks provide a total of about 7 miles of quayage with depths of 5 to 11m alongside. In addition, there are five tidal basins lying nearly parallel to the river, with direct access. There are also several dolphin berths for vessels awaiting quay berths. The river has an average width of 200m and vessels always berth with their bows heading downstream.

The port provides facilities for general cargo, bulk, ro-ro, cruise, container, reefer, paper product, chemical, and tanker vessels. For information concerning the maximum dimensions of vessels for La Seine Maritime, see paragraph 5.13.

It is reported (2000) that the port is accessible by fully loaded vessels up to 40,000 dwt and partly loaded vessels up to 140,000 dwt, with inbound drafts up to 11.5m and outbound drafts up to 10.4m.

Below Bassin de Rouen-Quevilley (Km 246), there are many private specialist berths serving the industries situated on the left bank. The principal facilities are listed below.

Quai Grand Couronne Moulineaux (Km 256), on the left bank, fronts a container terminal. It provides 900m of berthage and has a depth of 11.5m alongside. Vessels up to 10.5m draft can be handled.

Grand Couronne Bulk Berth (Km 254), on the left bank, is 360m long and can handle vessels up to 10.7m draft.

Bassin au Hydrocarbures (Jupiter) (Km 253) provides two petroleum berths and one gas berth. Tankers up to 210m in length and 10.5m draft, and LPG carriers up to 160m in length and 8m draft, can be handled.

A riverside oil berth is situated close below Bassin au Hydrocarbures and can handle tankers up to 270m in length and 10.5m draft.

Quai de Petit-Couronne (Km 252), on the left bank, is a ro-ro berth. Vessels up to 10m draft can be handled. Another ro-ro berth is situated close below this quay.

Bassin de Rouen-Quevilley (Km 246), on the left bank, provides over 2,000m of berthage with depths of 10m alongside.

Bassin Saint-Gervais (Km 245), on the right bank, has an entrance 140m wide. Quai de l'Ouest, on its N side, is 700m long and has a depth of 8.8m alongside.

Pilotage.—See paragraph 5.13 for further information.

Regulations.—See paragraphs 5.10 and 5.13 for further information.

Anchorage.—See paragraph 5.13 for further information.

Caution.—The port is subject to siltation. Inbound draft limitations are also dependent on meteorological and hydrological conditions. Vessels should contact the harbor authorities in advance of arrival for the latest information.

La Seine above Rouen

5.17 Above Rouen, several ports and berths are available to vessels capable of meeting the restrictions. Connections are available, by canal and river navigation, to the Mediterranean, the North Sea, and the Baltic. Vessels wishing to navigate N of Rouen are advised to contact the local authorities for guidance.

Depths—Limitations.—The dimensions of vessels are limited by the dimensions of locks and bridges, and the depth of water. There are eight locks between Poses (Km 202) and Paris, with a usable length of 180m and a usable width of 15.5m. These locks operate from 0700 to 1800 (0630 to 1930 in summer months).

Gennevilliers, an island port situated about 5 miles NW of the center of the city of Paris, lies on the left bank of the river, and is used by vessels proceeding upriver from the sea with a draft of about 3.5m, avoiding the necessity of transshipment at Rouen. The maximum size of vessel reaching this port, with 3,000 tons of cargo, is 120m in length, 15.5m beam, 3.5m draft, and 7.7m air draft.

Grennevilliers port comprises a series of six basins, dredged to a depth of about 4.7m, the entrance to which is 65m wide with a depth of 3.2m and slants obliquely down current.

No. 1 Basin is about 564m long and 90m wide. No. 2 Basin is about 800m long and 70m wide.

The W part of the port handles general cargo, and the E part is equipped for handling oil, petroleum, and coal. There is a

con-tainer terminal equipped with a 35-ton gantry crane and a ro-ro terminal.

There are also port facilities at Limay, 50 km downstream from Paris; Conflans, at the junction of the Oise and Seine; Saint-Ouen-L'Aumone, 30 km NW of Paris; Bruyeres-sur-Oise, 40 km N of Paris; and Bonneuil, 10 km SE of Paris.

Aspect.—The port of Rouen is connected to the national rail system. There is connection by waterways to Paris. Between Rouen and Paris, a distance of approximately 133 nautical miles, the river is used by traffic consisting of pusher-barge convoys, totaling 3,000 to 4,000 tons, some of which are especially constructed for river navigation.

The quickest route from the English Channel to the Mediterranean Sea is up the River Seine from Le Havre to Paris and St. Mammes, then through Canal du Loing, Canal de Baire, Canal Lateral a le Loire, and Canal du Centre, and then down the River Saone and the River Rhone. The speed limit in the canals is 3.5 knots.

Inland waterways extend from Paris to the River Scheldt, the River Meuse, and the River Rhine, and to the River Rhone, and then to Marseille on the Mediterranean coast. They can be used by vessels not exceeding a length of 38.5m, a beam of 5m, a draft of about 1.8m, and a height of 3.5m.

Le Havre to Cap d'Antifer

5.18 Cap d'Antifer (49°41'N., 0°10'E.), a prominent cape, is fronted by a steep cliff, 122m high. Cap d'Antifer Light is shown from a conspicuous tower, 38m high, standing on top of the cliffs at the cape.



Cap d'Antifer Light

The coast between this cape and Cap de la Heve, about 11 miles SSW, is formed by reddish-colored cliffs, about 100m high, except at the N end. At the N end of this stretch the cliffs are white and can be easily seen from seaward when the sun shines on them.

A water tower stands 0.7 mile SSW of Cauville, about 5 miles NNE of Cap de la Heve, and is the most prominent landmark along this stretch of shore.

Port du Havre-Antifer (Antifer Oil Terminal) (49°39'N., 0°10'E.)

World Port Index No. 35835

5.19 Port du Havre-Antifer, a large VLCC oil terminal, is situated about 9 miles N of Cap de la Heve, close S of Cap d'Antifer. It is administered by the port authority of Le Havre.

Winds—Weather.—The port is exposed to winds and swell between S and W. Local regulations are in force to prevent incidents due to bad weather. Strong winds may reduce the water level in the port by up to 0.5m.

Tides—Currents.—The tides rise about 8m at MHWS and 6.6m at MHWN.

The tidal currents usually run parallel to the shore and attain a maximum rate of 3 knots at springs.

Depths—Limitations.—The Approach Channel, which may best be seen on the chart, is composed of an IMO-adopted Deep-Water Route, an Access Channel, and an inner Entrance Channel. The Entrance Channel is maintained by dredging at depths of 24 to 25m.

The Deep-Water Route, which is not buoyed, is entered 36 miles WNW of Cap d'Antifer and leads ESE for about 25 miles. The SE end of this Deep-Water Route, where it funnels into the Access Channel, is known as the Zone d'Engainement.

The Access Channel is entered about 11.5 miles WNW of Cap d'Antifer. It is 0.5 mile wide and leads ESE for 7.5 miles to the Entrance Channel. The Entrance Channel, 0.3 mile wide, leads ESE for about 4 miles from the SE end of the Access Channel to the terminal.

A Disengagement Area, which may best be seen on the chart, lies adjacent to the S side of the Approach Channel, about 4.5 miles WNW of the terminal. This area enables deep-draft vessels to abort their approach, turn, and return to the Waiting Areas.

A Safety Area (Holding Area), which may best be seen on the chart, lies adjacent to the S side of the Entrance Channel. This area, 0.4 mile wide, enables outbound vessels, in special circumstances, to stay clear of the Entrance Channel.

A turning area, with a diameter of 1,450m, lies close S of the berths. Vessels are usually swung to starboard and berthed stern first.

An arm extends S from the center of the breakwater and provides two berths with depths up to 28m. Tankers up to 550,000 dwt, 400m in length, 65m beam, and 28.5m draft can be accommodated alongside.

It is reported (1999) that a tanker of 555,031 dwt, 414m in length, 79m beam, and 28.5m draft has been handled at the terminal.

Lighted sign boards are placed at each berth to assist in docking or undocking operations. The signs indicate the distance from the berth to the stem or stern of the vessel, and the vessel's approach speed in centimeters per second.

Aspect.—Antifer A5 Lighted Buoy (49°46'N., 0°17'W.), equipped with a racon, is moored about 21 miles NW of Cap de la Heve.

The Access Channel and the Entrance Channel are marked by lighted buoys. A lighted range, which may best be seen on the chart, indicates the fairway of the Entrance Channel.

An angled breakwater projects from the shore and protects the terminal. It extends 1,550m NW, then 1,000m W, and then 950m SW. A light is shown from a prominent structure, 17m high, standing on the outer extremity of this breakwater.

For further information concerning landmarks and aids, see paragraph 5.10 and paragraph 5.17.

Pilotage.—Pilotage for vessels approaching the Estuary of the Seine and specifically the ports of Port du Havre-Antifer and Le Havre is provided by the Le Havre-Fecamp Pilotage Service (Pilots Le Havre). For further information, see Pilotage under Le Havre (paragraph 5.12).

Pilots board vessels proceeding to Port du Havre-Antifer about 1 mile N of Antifer A5 Lighted Buoy (49°46'N., 0°17'W.).

An electronic navigation system called Syledis is used in the approaches to the port. It provides information on the vessel's position and movement. The portable receiver unit is brought on board by the pilot.

Regulations.—The Baie de Seine VTS Identification Zone system operates in the approaches to the Estuary of the Seine and facilitates recognition of vessels bound to or from the ports of Port du Havre-Antifer, Le Havre, Rouen, and Caen-Ouistreham. The Identification Zone is bounded by an arc with a radius of 22 miles centered on Cap de Le Heve Light. This VTS system is managed by the Baie de Seine Traffic Control Center, which is located at Le Havre. For further information, see Regulations under the Estuary of the Seine (paragraph 5.10).

Special regulations and reporting procedures apply to vessels carrying hydrocarbons or dangerous substances bound for or sailing from Port du Havre-Antifer, Le Havre, Rouen, and other La Seine ports. For further information pertaining to these special regulations, see paragraph 5.10.

Vessels over 1,600 grt and carrying hydrocarbons or dangerous cargo should consider the entire Navigation Controlled Approach Channel to be a Mandatory Access Channel.

Vessels carrying hydrocarbons and vessels constrained by their draft must enter the port via the Approach Channel. Such vessels may enter or leave the Approach Channel only to the W of A7 Lighted Buoy and A8 Lighted Buoy (49°45'N., 0°07'W.).

Vessels constrained by their draft should display the appropriate international signals when entering the Deep-Water Route leading to the port.

Vessels carrying hydrocarbons and vessels constrained by their draft bound for the port must establish radio contact with Le Havre port radio station before entering French territorial waters. Such vessels must remain in continuous contact until berthed alongside.

Vessels carrying hydrocarbons and vessels constrained by their draft bound for the port must report any significant defects concerning propulsion machinery, steering or anchor gear, mooring winches, or radar equipment to the authorities prior to entering French territorial waters. Vessels with any defects will be required to complete a questionnaire.

Vessel carrying hydrocarbons and vessels constrained by their draft bound for the port must have a Le Havre pilot on board while within 7 miles of the French coast.

Inbound vessels constrained by their draft may not turn or leave the Approach Channel once they have entered it at A7 Lighted Buoy and A8 Lighted Buoy (49°45'N., 0°07'W.).

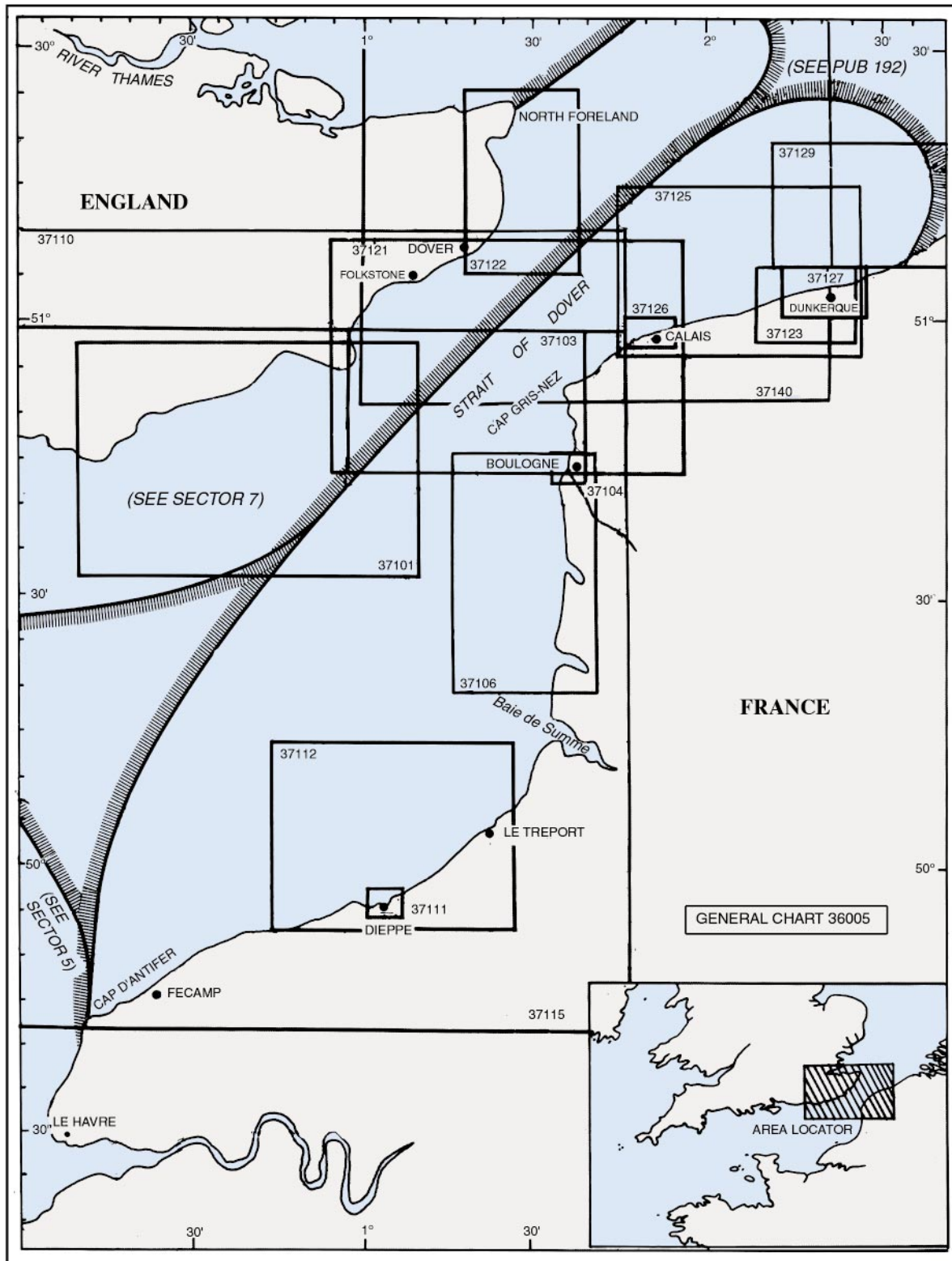
Vessels are prohibited from fishing, anchoring, or stopping, except in special circumstances, while within 200m of the Approach Channel or associated controlled areas.

Outbound vessels, except harbor craft, should stay in the Approach Channel or safety areas. Vessels not constrained by their draft, when W of A19 Lighted Buoy and A20 Lighted Buoy (49°41'N., 0°03'E.), may leave the Disengagement Area if navigation conditions allow provided that they have a pilot on board and they are in contact with the Traffic Control station.

Anchorage.—Two designated Waiting Areas, the limits of which may best be seen on the chart, lie adjacent to the S side of the Deep Water Route. These areas are exposed but good holding ground has been reported.

The area centered about 2 miles WNW of A5 Lighted Buoy is for vessels with drafts of 25m and over; the area centered about 1 mile E of A5 Lighted Buoy is for vessels with drafts of less than 25m.

Caution.—Numerous wrecks, some within the anchorage areas, lie in the approaches to the port and may best be seen on the chart.



Additional chart coverage may be found in NGA/DLIS Catalog of Maps, Charts, and Related Products (Unlimited Distribution).
SECTOR 6 — CHART INFORMATION

SECTOR 6

FRANCE—NORTH COAST—DOVER STRAIT—CAP D'ANTIFER TO THE BELGIAN FRONTIER

Plan.—This sector describes Dover Strait (Pas de Calais) and the N coast of France.

The descriptive sequence is NE in the Strait. The coast is followed from Cap d'Antifer to Baie de la Somme, then N to Cap Gris-Nez, and E to the boundary between France and Belgium.

General Remarks

6.1 Navigation within Dover Strait is a complex affair, affected by adverse hydrographic and meteorological conditions. Traffic patterns within the strait are equally complex, with cross-channel, locally-bound vessels, and fishing boats affecting the through passage. Due to the relatively shallow water, vessels constrained by their draft may also be encountered within the strait.

Vessels bound for ports in NW Europe, the British Isles, and the Baltic Sea may wish to employ a deep-sea pilot before approaching the strait. Such pilots may be ordered from and embarked off Brixham (Torbay) or Cherbourg (Pilot Hauturier). Vessels requesting deep-sea pilots should give as much advance notice as possible.

Shipping lanes in the area covered by this volume are among the busiest in the world and pose serious problems for the safe navigation of vessels transiting through Dover Strait.

For additional information concerning navigation in the English Channel and Dover Strait, see General Remarks in paragraph 1.1.

Dover Strait (Pas de Calais)

6.2 Dover Strait (51°00'N., 1°20'E.), 18 miles wide at its narrowest part, separates the SE coast of England from the N coast of France. This stretch of water contains a number of dangerous banks, which are composed of coarse sand and broken shells. These shoal banks, which are comparatively narrow, extend NE to SW in mid-channel and hinder navigation.

Greenwich Lightvessel (50°24.5'N., 0°00.0'), equipped with a racon, marks the W extremity of Dover Strait and the entrance point of the Traffic Separation Scheme (TSS) for northeastbound vessels is centered about 7 miles S of it.

Depths gradually increase to the N in the S part of North Sea, but do not exceed 50m in the area covered by this section.

Winds—Weather

Persistent strong winds produce the wind driven currents which may approach or exceed the rate of tidal currents.

Persistent W or SW gales can produce an observed overall movement as much as 1.5 knots through Dover Strait.

The resultant flow is the vector, which is the sum of the wind driven current, tidal current, the deflective force of the earth's rotation, and any other current which may be present.

Ice

Ice forms in shallow waters around the coastline in severe winters. Floes, 2m in diameter and 15cm thick, were reported many years ago over many parts of the area covered by this sector.

The coastal area NE of Calais is most likely to be affected. The ice risk is highest from mid January to early March. Details of ice reporting and icebreaker services in the waters of the Netherlands and Germany are given in Pub. 192, Sailing Directions (Enroute) North Sea.

Tides—Currents

In the area covered by Sector 6 and Sector 7, the greatest part of the water movement is tidal. The reports of observations taken from lightvessels in the area, reveals that the average speed of the residual currents does not exceed 6 miles a day.

Underlying the oscillatory and rotary tidal currents there is a weak and complex counterclockwise circulation within the North Sea. However, along the E coast of England the flow is to the S.

Strong currents occur during and after positive and negative surges that may greatly increase tidal currents or tend to cancel each other out. Accurate current observations are not possible during storm surges, but currents running at several knots may occur. Variations in tidal heights are mainly caused by strong or prolonged winds, and by unusually low or high barometric pressure, causing positive or negative surges, respectively, that raise or lower sea level.

Predictions of offshore tide heights are difficult to obtain, especially in the S part of the North Sea, because the range varies so much. The height at Dover is about 6m compared to almost zero at Brown Ridge (52°35'N., 3°20'E.), 115 miles NE.

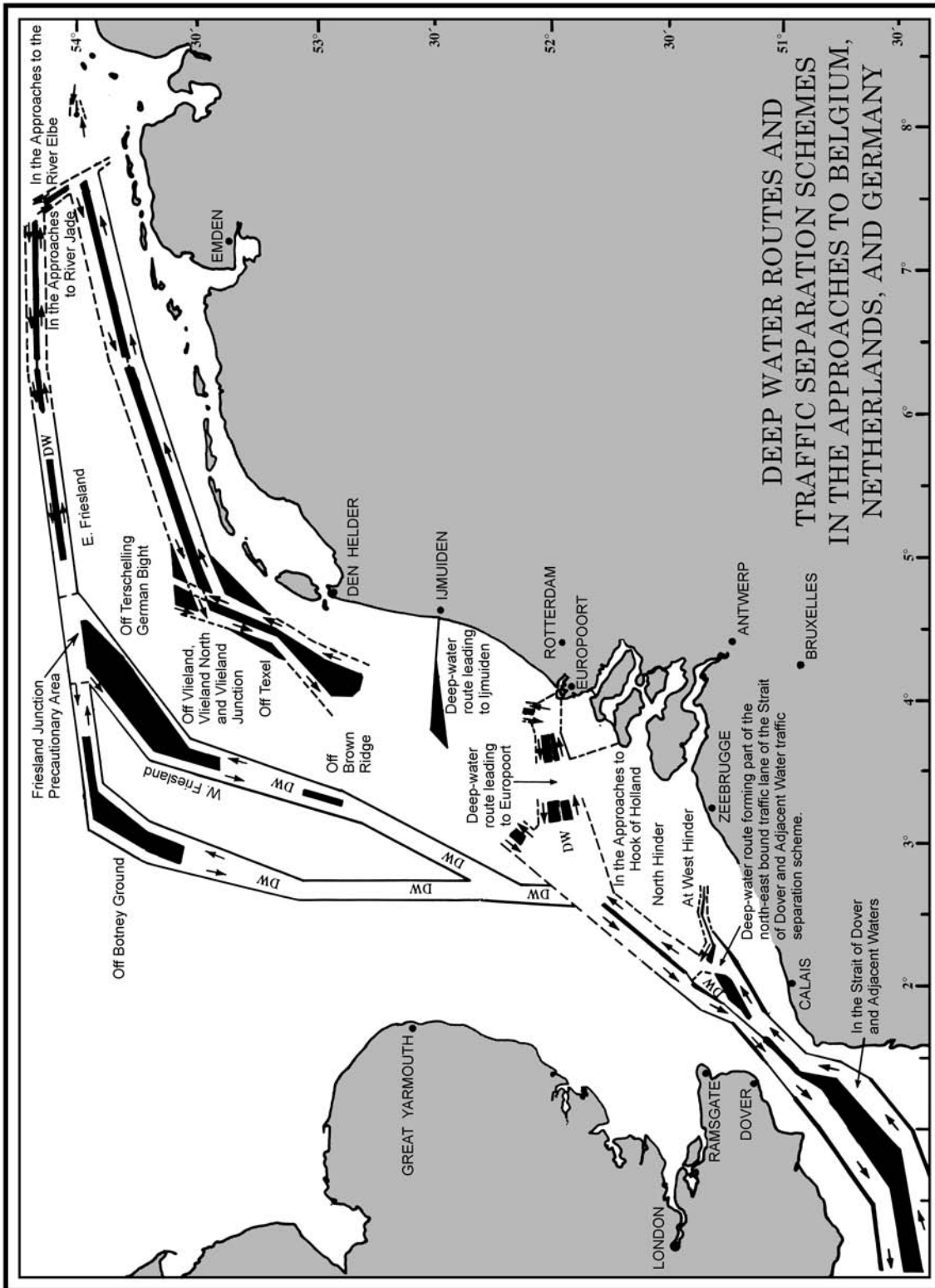
The rates of the tidal currents vary depending on the width of the English Channel. In Dover Strait, the narrowest part of the English Channel, currents may attain rates of 4 knots at springs. In the wider parts of the English Channel, a rate of 2.5 knots is rarely exceeded.

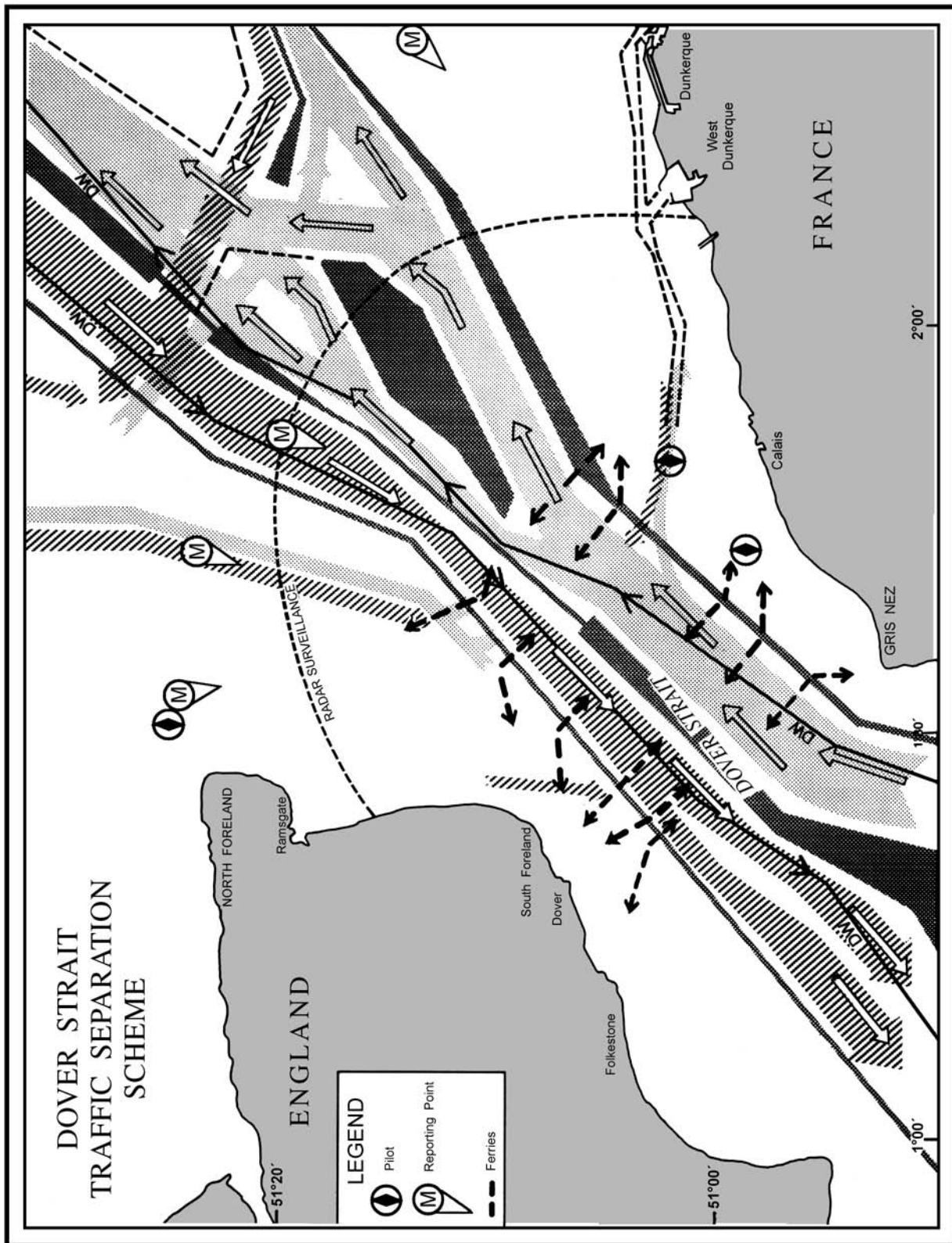
Data for predictions should be obtained from Tidal Current Tables produced by the National Ocean Service (NOS), tables on the charts, and other available references. The United Kingdom Hydrographic Office publishes a series of Tidal Current Atlases for the English Channel, Dover Strait, the Thames Estuary, and the North Sea.

A strong wind blowing with the main flood current will tend to increase the height of the tide and prolong the flood current.

Likewise a wind blowing with the ebb current may lower the height of the tide and prolong the ebb current. Winds blowing against the currents will have the opposite effect.

Seiches are short oscillations in sea level that may be caused by abrupt changes in meteorological conditions, such as the





passage of an intense depression. Small seiches are not uncommon around the coasts of the British Isles, especially in winter months.

Winds from the NW and N drive water into the North Sea and raise sea level in its S part.

If these winds are of storm force and are accompanied by an intense depression moving slowly across the N part of the North Sea, a wave known as a storm surge travels down the North Sea raising tidal heights in extreme cases as much as 3m.

If the peak of the surge coincides with HW, a severe flooding can result, as has happened in the Thames Estuary and along the Netherlands coast.

A system exists for giving advance warnings of storm surges to civil emergency services in low-lying areas along the E coast of England.

Negative tidal surges, a result of abnormal decrease in tidal heights, are less predictable than storm surges since they occur in this area as a result of storms, but also affected by abnormally high barometric pressure.

Negative tidal surges are more of a threat to deep-draft vessels than storm surges, since they may lower predicted tidal heights as much as 2m, and they are more frequented in tidal estuaries and shallow water.

Years ago, at Southend-on-Sea (51°31'N., 0°47'E.), the sea level was 2m below the predicted level. A deep and complex depression formed over Iceland that moved swiftly S until W of Ireland. This gave rise to persistent S winds over the entire North Sea, blowing to gale force in places.

As a result, sea level in the S part of North Sea dropped by 0.5m below normal in some areas, and in other parts the drop was 1.8m below prediction levels during a period of 24 hours.

Years ago, an experimental warning service was instituted from September through April, inclusive, annually, to give advance warnings of negative surges. Negative tidal surge warnings to shipping are broadcast by Niton Radio, Hastings Radio, North Foreland, and Thames Radio.

The mean sea density in the offshore area covered by this volume is slightly greater in the winter than in the summer.

Slightly lower densities than these figures occur off the coasts of France, Belgium, and the Netherlands.

The coldest period occurs at the end of February and the hottest period in August. Day to day variations are negligible, but a gradual rise of a few degrees occurs during a spell of warm weather and a similar drop of several degrees happens during a period of E winds in mid-winter. Coastal waters are warmer than the open sea in summer and usually a little colder in winter.

Aspect

6.3 The Varne (50°58'N., 1°20'E.), a dangerous steep-to and narrow shoal, lies 11 miles NW of Cap Gris-Nez and extends for about 8 miles. Strong tide rips occur in the vicinity of this shoal and a heavy sea breaks over it during bad weather. This shoal has a least depth of about 3m and is marked by lighted buoys.

Varne Lightvessel (51°01'N., 1°24'E.), with a red hull, is moored at the NE end of The Varne and is equipped with a racon.

The Ridge (Le Colbart) (50°53'N., 1°20'E.), a dangerous steep-to and narrow shoal, lies about 10 miles W of Cap Gris-Nez. It extends for about 10 miles and forms a natural separation between the traffic lanes of the TSS. This shoal, which is composed mostly of sand with mud and shells in places, has a least depth of 1.5m and is marked by lighted buoys. The sea breaks heavily on this shoal, especially with the wind against the tidal current.

Bullock Bank (50°45'N., 1°05'E.), a steep-to and narrow shoal, lies about 20 miles WSW of Cap Gris-Nez. It extends for about 7 miles and is marked by a lighted buoy. This bank has a least depth of 14m and is usually marked by strong tidal rips.

Les Ridens (50°45'N., 1°18'E.), lying about 13 miles SW of Cap Gris-Nez, is an area consisting of several shoals. These shoals are formed of sand, gravel, and shells disposed irregularly on a rocky bottom. The area has a least depth of 13m and is marked by a lighted buoy. The sea breaks heavily on this area and strong eddies occur in bad weather.

Bassurelle (50°38'N., 1°05'E.), a sandy shoal with a least depth of about 7m, lies 24 miles SW of Cap Gris-Nez. Strong eddies and a dangerous sea occur during bad weather, especially with the wind against the tidal current, in the vicinity of this shoal. The shoal extends for about 9 miles and the depths over it frequently change.

Bassurelle Lighted Buoy (50°33'N., 0°58'E.), equipped with a racon, is moored about 1.5 miles off the SW side of this shoal.

Vergoyer (50°33'N., 1°15'E.), a narrow sand bank, lies 23 miles SSW of Cap Gris-Nez. It extends for about 15 miles and is marked by lighted buoys. A shoal patch, with a least depth of 4.2m, lies near the NE extremity. The E side of this sand bank is steep-to, while the W side slopes gradually. In bad weather the sea breaks over this bank.

Vergoyer N Lighted Buoy (50°40'N., 1°22'E.), equipped with a racon, is moored about 2 miles N of the N end of this bank.

Bassure de Baas (50°27'N., 1°20'E.), a narrow bank of sand and shells, lies with its N end located about 4.5 miles SSW of Cap Gris-Nez. This bank has mostly depths of less than 7m and extends for about 35 miles. During bad weather the sea breaks heavily over the entire bank.

Numerous unmarked wrecks lie in the channel leading between the mainland coast and the N part of Bassure de Baas.

Battur, a shoal extending for about 9 miles, lies parallel with and SE of the SW extremity of Bassure de Baas. It has a least depth of 8.9m and is formed of sand, gravel, and shells. During strong W winds the sea breaks heavily on this shoal.

Sandettie (51°15'N., 2°00'E.), a shoal bank extending for about 15 miles, lies with its SW end located 11 miles NNW of Calais. It has a least depth of 5m and is marked by lighted buoys.

Sandettie Lightvessel (51°09'N., 1°47'E.), with a red hull, is moored off the SW end of the bank and equipped with a racon. This lightvessel may be replaced by a Lanby during the summer months.

Foxtrot 3 Lighted Buoy (51°24'N., 2°01'E.), equipped with a racon, is moored near the center of the TSS about 6 miles NNW of the N end of Sandettie. Vessels should avoid approaching within 500m of it.

Due to extensive crossing traffic, a Precautionary Area has been established (2006) near this lighted buoy and may best be seen on the chart. Vessels proceeding NW should pass N of the lighted buoy and vessels proceeding SE should pass S of it.

Inter Bank Lighted Buoy (51°17'N., 1°52'E.) (special) is moored 9 miles SW of Foxtrot 3 Lighted Buoy and is equipped with a racon. It is located 2 miles NW of the NW side of Sandettie and marks the center separation zone of the TSS.

MPC Lighted Buoy (51°06'N., 1°38'E.) is moored 13.5 miles SW of Inter Bank Lighted Buoy and marks the center separation zone of the TSS.

F2 Lighted Buoy (51°21'N., 1°56'E.) is moored 4.5 miles NE of Inter Bank Lighted Buoy and marks the center separation zone of the TSS.

F1 Lighted Buoy (50°11'N., 1°45'E.) is moored 7 miles SW of Inter Bank Lighted Buoy and marks the center separation zone of the TSS.

Dyck Lighted Buoy (51°03'N., 1°52'E.), equipped with a racon, is moored about 5 miles N of Calais.

Ruytingen SW Lighted Buoy (51°05'N., 1°47'E.) is moored about 3.7 miles WNW of Dyck Lighted Buoy, at the SE limit of the northeastbound traffic lane.

Out Ruytingen (51°08'N., 2°04'E.) extends ENE for about 16 miles from the vicinity of Ruytingen SW Lighted Buoy. It has depths of less than 5m in parts and is the outermost shoal fronting the coast in this area.

South Falls (51°23'N., 1°47'E.), a narrow shoal, lies with its S extremity located about 5 miles N of the SW end of Sandettie. It has a least depth of about 6m and is marked by lighted buoys. This shoal extends ENE for about 15 miles and forms the southeasternmost part of the Outer Banks fronting the Thames Estuary.

South Falls Lighted Buoy (51°14'N., 1°44'E.) is moored close S of the S end of South Falls at the NW limit of the southwestbound traffic lane.

East Goodwin Lightvessel (51°13'N., 1°36'E.), with a red hull, is moored 8 miles WNW of Sandettie Lightvessel and is equipped with a racon.

CS4 Lighted Buoy (51°09'N., 1°34'E.) is moored about 4.8 miles SSW of the East Goodwin Lightvessel at the NW limit of the southwestbound traffic lane.

Colbert N Lighted Buoy (50°07'N., 1°24'E.) is moored about 4 miles S of the Varne Lightvessel at the center separation zone of the TSS.

Regulations

6.4 Special regulations and reporting procedures apply to tankers transporting hydrocarbons and to vessels transporting dangerous substances navigating in the approaches to the French coasts of the North Sea, the English Channel, and the Atlantic Ocean between the Belgian border and Spanish border. Such vessels preparing to pass through or stop within French Territorial Waters are required to send a message to the appropriate CROSS station giving their intended movements. In addition, such vessels must use the designated Mandatory Access Routes and Channels when approaching a port or roadstead.

Generally, tankers and vessels carrying dangerous cargo over 1,600 grt must stay at least 7 miles from the French coast un-

less in the northeastbound lane of the Dover Strait TSS or using the Mandatory Access Routes leading to Fecamp, Dieppe, Boulogne, Calais, or Dunkerque.

For further details of these special procedures, see Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea.

Traffic Separation Schemes.—An IMO-adopted Traffic Separation Scheme (TSS), which may best be seen on the chart, is situated in the Dover Strait and Rule 10 of The International Regulations for Preventing Collisions at Sea (72 COLREGS) applies. Inshore Traffic Zones lie on both sides of the TSS; a Precautionary Area (see paragraph 6.3) is located near the Foxtrot 3 Lighted Buoy.

Routes.—The Mariners' Routeing Guide (Chart 5500) is published by the United Kingdom Hydrographic Office and depicts routes through the English Channel, Dover Strait, and the S part of the North Sea as far as the entrance to Europoort. The guide also provides details concerning regulations, pilotage, and radio services.

The IMO has adopted a recommendation that all vessels navigating in the English Channel and Dover Strait should carry the latest edition of this guide or other equivalent publications.

The Netherlands Hydrographic Service publishes, in English, a Deep Draft Planning Guide covering the Deep Draft Routes from the Greenwich Lightvessel to Europoort for vessels with drafts over 20.7m. However, the contents of the guide are not necessarily endorsed in every detail by the United Kingdom authorities.

Information Service.—Vessels in the vicinity of the Dover Strait TSS are advised to listen to the appropriate VHF broadcasts given by the Channel Navigation and Information Service (CNIS). This service, which is operated from Dover Strait Coast Guard and CROSSMA Griz-Nez, provides information concerning traffic, navigation, and visibility.

CNIS broadcasts are given on VHF channel 11 by Dover Coast Guard at 40 minutes past the hour (additional broadcasts at 55 minutes past the hour when visibility is less than 2 miles) and by Griz-Nez Traffic on VHF channel 79 at 10 minutes past the hour (additional broadcasts at 25 minutes past the hour when visibility is less than 2 miles).

The information broadcasts are preceded by an announcement on VHF channel 16 and followed by a reminder concerning the time and VHF frequency of the next broadcast.

Reporting Systems.—CALDOVREP, a mandatory reporting system under SOLAS regulations, has been established (1999) in a 65-mile stretch of the Dover TSS.

In order to enhance safe navigation, shore based facilities at Gris-Nez Traffic and Dover Coastguard will monitor shipping movements and provide advise and information pertaining to navigational hazards and weather conditions.

The following vessels are required to participate in the system:

1. All vessels over 300 grt.
2. All vessels 300 grt and under when either:
 - a. not under command or at anchor in the TSS or its Inshore Traffic Zone.
 - b. restricted in ability to maneuver.
 - c. having defective navigational aids.

The reporting system area is bound to the E by a line extending between North Foreland Light (51°23'N., 1°27'E.) and

the France/Belgium border (51°05'N., 2°33'E.); and to the W by a line extending from the Royal Sovereign Tower through Bassurelle Lighted Buoy (50°33'N., 0°58'E.) to the coast of France.

Vessels should report, as follows:

1. Northeastbound traffic—to Gris-Nez Traffic on VHF channel 13 when 2 miles prior to crossing the SW system limit line.
2. Southwestbound traffic—to Dover Coastguard on VHF channel 11 when within VHF range of North Foreland and not later than when crossing the NE system limit line.
3. When departing from a port within the ITZ.

Special reporting arrangements can be made on a ship-by-ship basis, subject to approval by both system traffic stations.

Reports should be made by VHF. However, when reporting to Dover Coastguard, vessels may fulfill the reporting requirement of CALDOVREP through the use of automatic ship identification (AIRS) transponders (see paragraph 1.1).

Reports to the traffic stations must include the following:

Designator	Information Required
A	Name, call sign, IMO identification or MMSI number for transponder reports.
C or D	Position.
E or F	Course and speed.
O	Draft.
L	Route information.
P	Hazardous cargo, class and quantity.
Q or R	Breakdown, damage and/or deficiencies affecting the structure, cargo, or equipment of the vessel or any circumstances affecting normal navigation in accordance with SOLAS and/or MARPOL conventions.

The Ship Movement Reporting System (MAREP) is a voluntary reporting system operating in the English Channel and Dover Strait.

All merchant vessels over 300 grt are requested to report to the appropriate shore station when approaching the following:

1. The TSS off Ile d'Ouessant.
2. The TSS off Casquets.
3. The TSS within Dover Strait.

For further details of MAREP, see Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea.

Note.—Due to the CALDOVREP reporting system being mandatory in the area of the Dover Strait TSS, vessels are advised that this system takes preference over the Ship Movement Report System (MAREP), which is voluntary.

Directions

6.5 The northeastbound traffic lane of the TSS runs along the SE side of Dover Strait to the Noord Hinder Junction Pre-

cautionary Area, a total distance of 145 miles. The West Hinder TSS branches off the Dover Strait TSS, about 4 miles NE of the N end of Sandettie, and leads E for 20 miles to the pilot station.

The southwestbound traffic lane of the TSS runs along the NW side of Dover Strait and lies more or less parallel to the northeastbound lane.

Deep Draft Routes for deep-draft vessels follow the northeastbound and southwestbound traffic lanes but pass through specific positions known as waypoints.

The northeastbound Deep Draft Route passes to the NW of Sandettie and is recommended by the Netherlands authorities. It leads through that part of the TSS which has been designated a Deep Water Route by the IMO.

The southwestbound Deep Draft Route passes SE of the The Varne and has no official standing.

Inshore Traffic Zones are situated between the coasts and the traffic lanes on both sides of the TSS.

The routes, described below, are divided, as follows:

1. Northeastbound lane—Greenwich Lightvessel to Les Ridens.
2. Northeastbound lane—Les Ridens to Sandettie.
3. Northeastbound lane—Sandettie to Noord Hinder Junction.
4. Southwestbound lane—Noord Hinder Junction to the Greenwich Lightvessel.
5. Southwestbound Deep Draft Route.
6. Northeastbound Deep Draft Route.

Depths in the routes are critical for deep-draft vessels. A number of shoals and wrecks, with depths of less than 20m, lie within the lanes of the TSS. However, these can be avoided by using the Deep Draft Routes.

Greenwich Lightvessel to Les Ridens.—From a position about 6 miles S of Greenwich Lightvessel, the NE route follows the northeastbound traffic lane, which is 4 miles wide, for 60 miles in a general ENE direction passing:

1. Southeast of Bassurelle.
2. Northwest of Vergoyer.
3. Southeast of Les Ridens.

Les Ridens to Sandettie.—From a position SE of Les Ridens, the NE route follows the northeastbound traffic lane for 27 miles in a general NNE direction passing:

1. Westnorthwest of ZC1 Lighted Buoy (50°45'N., 1°27'E.) marking the Boulogne Approach Channel.
2. Eastsoutheast of The Ridge (Le Colbart).
3. Westnorthwest and NW of ZC2 Lighted Buoy (50°54'N., 1°31'E.).
4. Southeast of MPC Lighted Buoy (51°06'N., 1°38'E.).
5. Westnorthwest of Ruytingen SW Lighted Buoy (51°05'N., 1°47'E.) moored 4.5 miles S of the Sandettie Lightvessel.

Sandettie to Noord Hinder Junction.—The main northeastbound route leads SE of Sandettie and should be used by all vessels that can safely navigate in the channel with respect to their draft. The Deep Draft Route leads NE of Sandettie. These two routes merge again NE of Sandettie. From a position WNW of the Ruytingen SW Lighted Buoy (51°05'N., 1°47'E.), the route leads 58 miles passing:

1. Southeast of Sandettie.

2. Northwest of Out Ruytingen.
3. West of the entrance to the astbound lane of the West Hinder TSS.
4. East of Sandettie N Lighted Buoy (51°18'N., 2°05'E.).
5. Eastsoutheast of Foxtrot 3 Lighted Buoy (51°24'N., 2°01'E.).
6. West of Hinder 1 Lighted Buoy (51°21'N., 2°11'E.).
7. Either side of Fairy W Lighted Buoy (51°24'N., 2°09'E.), then 30 miles NE through the North Hinder South TSS to the Noord Hinder Junction (51°55'N., 2°50'E.).

For additional information, including graphics, concerning the above routes and their continuation into the S part of the North Sea, see Pub. 192, Sailing Directions (Enroute) North Sea (Sector 6 and Sector 7).

Noord Hinder Junction to Greenwich Lightvessel.—From the Noord Hinder Junction the SW route follows the southwestbound lane of the Noord Hinder South TSS to Sandettie. It then follows the southwestbound lane of the Dover Strait TSS to a position about 6 miles NNW of Greenwich Lightvessel. The route is about 140 miles long and passes:

1. Northwest of Foxtrot 3 Lighted Buoy (51°24'N., 2°01'E.).
2. Westnorthwest of Inter Bank Lighted Buoy (51°17'N., 1°52'E.).
3. Eastsoutheast of South Falls Lighted Buoy (51°14'N., 1°44'E.).
4. Northwest of F1 Lighted Buoy (51°11'N., 1°45'E.).
5. Northwest of MPC Lighted Buoy (51°06'N., 1°38'E.).
6. Either side of Varne Lightvessel (51°01'N., 1°24'E.).
7. Either SE or NW of S Varne Lighted Buoy (50°55'N., 1°17'E.).
8. Southeast of CS3 Lighted Buoy (50°52'N., 1°02'E.).
9. Southeast of CS2 Lighted Buoy (50°39'N., 0°33'E.).
10. Northnorthwest of Greenwich Lightvessel.

Southwestbound Deep Draft Route.—The controlling depth in this route is considered to be 23m lying over a swept wreck close SE of The Varne. A maximum draft is not stipulated for this route but recommended underkeel clearances are stated below. The Deep Draft Route consists of a track joining a series of waypoints. Waypoints designated 19 to 27 follow the SW traffic lane of the Noord Hinder South TSS and the Dover Strait TSS. A section of this track, indicated by Waypoint No. 23 through Waypoint No. 26, leads SE of The Varne.

The waypoints of the route are designated, as follows:

1. Waypoint No. 19 51°57.7'N, 2°37.8'E.
2. Waypoint No. 20 51°50.6'N, 2°30.3'E.
3. Waypoint No. 21 51°34.5'N, 2°08.2'E.
4. Waypoint No. 21A 51°22.8'N, 1°52.5'E.
5. Waypoint No. 22 51°11.4'N, 1°44.3'E.
6. Waypoint No. 23 51°00.9'N, 1°25.0'E.
7. Waypoint No. 24 50°57.5'N, 1°22.4'E.
8. Waypoint No. 25 50°54.7'N, 1°18.7'E.
9. Waypoint No. 26 50°45.1'N, 0°57.0'E.
10. Waypoint No. 27 50°36.5'N, 0°33.9'E.
11. Waypoint No. 28 50°20.2'N, 0°49.7'W.

Northeastbound Deep Draft Route.—The Netherlands authorities have selected a route within the northeastbound traffic lanes of the Dover Strait TSS and Noord Hinder South

TSS as being the most favorable for vessels, with drafts over 20.7m, navigating from Greenwich Lightvessel to Europort. This route consists of a track joining a series of waypoints. The controlling depth in this route is considered to be 27.3m lying between Waypoint J and Waypoint L. A section of this track, indicated by Waypoint F through Waypoint I, leads NW of Sandettie.

Vessels with drafts up to 22m, up to 22.6m in favorable conditions, can use this Deep Draft Route. However the recommended underkeel clearances stated below should be taken into consideration.

The waypoints indicating the selected route are designated, as follows:

1. Waypoint A 50°19.4'N, 0°02.0'E.
2. Waypoint B 50°29.8'N, 0°58.6'E.
3. Waypoint C 50°35.2'N, 1°13.1'E.
4. Waypoint D 50°40.2'N, 1°21.5'E.
5. Waypoint E 50°54.0'N, 1°28.7'E.
6. Waypoint F 51°04.7'N, 1°40.6'E.
7. Waypoint G 51°10.2'N, 1°44.1'E.
8. Waypoint H 51°15.7'N, 1°53.7'E.
9. Waypoint I 51°22.0'N, 1°58.6'E.
10. Waypoint J 51°33.8'N, 2°20.3'E.
11. Waypoint K 51°47.5'N, 2°36.3'E.
12. Waypoint L 51°53.0'N, 2°44.9'E.
13. Waypoint M 51°56.8'N, 2°53.7'E.
14. Waypoint N 51°57.2'N, 2°51.5'E.
15. Waypoint O 52°02.7'N, 2°41.3'E.
16. Waypoint P 52°01.8'N, 3°53.6'E.

Vessels proceeding to Anchorage Area No. 1 (52°06'N., 2°27'E.) may go direct from Waypoint K to Waypoint O. Vessels proceeding to Anchorage Area No. 2 (51°56'N., 2°55'E.) may go from Waypoint L to Waypoint M. Vessels proceeding into the Eurogeul may go from Waypoint L to Waypoint N, and then to Waypoint P at the E end of the channel.

Deep Draft Routes.—The above northeastbound route is described in detail in a Deep Draft Planning Guide (HP 8), which is published by the Hydrographer of the Royal Netherlands Navy.

There is no official Deep Draft Guide for the southwestbound route. A track, which may be followed by very large vessels, runs from Sullom Voe (Shetland Islands) to the English Channel. This track, having merged with the two-way Deep Water Route in the vicinity of the Off Botney Ground TSS, enters the Noord Hinder Junction Precautionary Area and then follows the southwestbound traffic lanes of the Noord Hinder South TSS and Dover Strait TSS. The British authorities do not endorse these two routes in every detail as both pass through areas which have not been surveyed to modern standards.

In addition, the mandatory provisions of the Deep Water Route in the vicinity of the Off Botney Ground TSS do not apply to vessels sailing between ports on the E coast of the United Kingdom.

Both the northeastbound and the southwestbound Deep Water Routes are shown in the Mariners' Routeing Guide (Chart 5500), which is published by the United Kingdom Hydrographic Office.

Deep-draft vessels may have to make use of the height of tide in order to have a safe underkeel clearance in areas where the depths are critical. This applies especially to southwestbound vessels in the area lying between The Varne and The Ridge.

The recommendations stated below have been extracted from the Netherlands Deep Draft Planning Guide for vessels using the northeastbound Deep Draft Route.

Vessels constrained by their draft should display the appropriate lights and shapes.

The passage should not be undertaken unless both the vessel's GPS and radar equipment are functioning correctly.

A pilot with experience in VLCCs should be employed for the whole route, at least for the vessel's first transit.

Accurate navigation to maintain the selected track is essential. In particular, drift and speed over the ground should be calculated in advance to help maintain the route and initiate turns correctly.

Underkeel clearances.—The British authorities recommend the following underkeel clearances for deep-draft vessels proceeding through Dover Strait at 12 knots:

Northeastbound Vessels—Underkeel Cclearances		
Between Waypoints	Vessel heading	Underkeel clearance
Toward B	072°	6.2m
B to C	059°	6.0m
C to D	048°	6.0m
D to approx. 50°44'N	018°	9.5m
Approx. 50°44'N to E	018°	7.6m
E to approx. 51°00'N	035°	5.7m
Approx. 51°00'N to F	035°	5.1m
F to approx. 51°06'N	021°	5.3m
Approx. 51°06'N to G	021°	5.1m
G to approx. 51°13'N	048°	5.1m
Approx. 51°13'N to H	048°	6.4m
H to I	026°	5.0m
I toward J	049°	6.0m

Southwestbound Vessels—Underkeel Cclearances		
Between Waypoints	Vessel heading	Underkeel clearance
No. 21 to No. 21A	220°	6.0m
No. 21A to approx. 51°14'N	204°	5.1m
Approx. 51°14'N to No. 22	204°	5.3m
No. 22 to approx. 51°04'N	228°	5.3m
Approx. 51°04'N to No. 23	228°	6.3m
No. 23 to No. 24	204°	6.1m

Southwestbound Vessels—Underkeel Cclearances		
Between Waypoints	Vessel heading	Underkeel clearance
No. 24 to No. 25	222°	7.6m
No. 25 to approx. 50°51'N	235°	7.3m
Approx. 50°51'N to No. 26	235°	7.1m
No. 26 toward No. 27	239°	7.1m

A recent British study has shown that an underkeel clearance of 9.5m is required between Vergoyer N Lighted Buoy (50°40'N., 1°22'E.) and ZC2 Lighted Buoy (50°53'N., 1°31'E.) for a vessel with a draft of 22m during SW storms.

Waypoint No. 20 and Waypoint No. 21 were not covered by the study. However, a clearance of 6.1m has been recommended between these two waypoints in winds up to force 7, 7.0m in winds up to force 8, and 8.4m in winds up to force 9.

These underkeel clearances only apply on the normal heading for each of the various legs of the passage. If the vessel is compelled to make a large change of course, bringing storm waves or swell on the beam, then the stated clearances may be insufficient and other measures, such as a reduction in speed, may be required.

The underkeel clearances recommended take into account the course for each leg of the passage, the vessel's movement due to storm waves or swell, uncertainties in charted depths, the vessel's draft, the risks of negative tidal surges, and squat of 1m at a speed of 12 knots.

The clearance should be increased by 0.7m if the vessel's speed is 15 knots; but may be decreased by 0.6m if the vessel's speed is 8 knots.

Tide levels for the passage should be predicted in advance in order that available searoom is known in case of emergency.

The most critical area of the route is in the vicinity of Twin Lighted Buoy (51°32'N., 2°23'E.). The height of tide and depth of water in this area should be obtained from HCC Rotterdam before passing Bassurelle Lighted Buoy.

Sand waves.—Sand waves encroach, in places, into the traffic lanes located in Dover Strait and the S part of the North Sea.

Sand waves of significance to vessels have been discovered in areas lying about 4 miles S and 3 miles SW of Bassurelle Lighted Buoy; between the NE end of Sandtette and Fairy Bank, 8 miles NE; within an area 2 to 5 miles NW of the NE end of Sandtette; in an area lying about 4.5 miles NW of Garden City Lighted Buoy (51°29'N., 2°18'E.); off the SW end of South Falls; within the southwestbound traffic lane E of South Falls; and off the SW end of Sandtette.

Caution

6.6 Many wrecks sunk during the two World Wars lie in Dover Strait, the S part of the North Sea, and in the Thames Estuary. Although the least depths over most wrecks critical to navigation have been established by wire sweeping, new wrecks, formerly unknown, have been found during recent surveys. Consequently, it must be assumed that other unknown wrecks also lie within the traffic lanes.

In addition, wrecks previously covered by sand banks may be uncovered. Strong tidal currents may also cause deep scouring into which wrecks may capsize. Generally, this results in an increase of depth over the wreck. However, a decrease in the depth over the wreck can result from the same cause.

Numerous submarine cables cross Dover Strait and may best be seen on the charts.

The shipping lanes in Dover Strait and the S part of the North Sea are among the busiest in the world and pose serious problems for the safety of navigation. The existence of the TSS schemes within these waters does not imply that the traffic lanes have been adequately surveyed and the existence of sandwave areas, where depths may be less than charted, should be taken into account by deep-draft vessels.

Within Dover Strait and its adjacent waters, one of the greatest risks to navigation is that of collision, especially in poor visibility. In addition to vessels transiting the TSS traffic lanes and inshore traffic zones, there are concentrations of fishing boats and recreational craft during the summer months, and regular cross-channel ferry traffic including ro-ro vessels, jet foils, hovercraft, and high-speed catamarans.

Cross-channel ferries and other vessels in the inshore traffic zones may alter course near the limits of the traffic lanes in order to cross the latter at right angles.

The main ferry ports of the United Kingdom are Folkestone (51°05'N., 1°12'E.), Dover (51°07'N., 1°20'E.), and Ramsgate (51°20'N., 1°25'E.). Ferries from these ports run mainly to Calais (50°58'N., 1°51'E.), Dunkerque (51°03'N., 2°21'E.), and Oostende (51°14'N., 2°55'E.). Most of the cross traffic is therefore concentrated in the area between Sandettie and The Ridge, 20 miles SW.

Cross-channel traffic also runs from the Thames Estuary and Harwich (51°57'N., 1°18'E.) to Zeebrugge (51°20'N., 3°12'E.) and Vlissingen (51°27'N., 3°35'E.). This cross traffic tends to concentrate near the Foxtrot 3 Lighted Buoy (51°24'N., 2°01'E.) (see paragraph 6.3) and the area lying between the N end of Sandettie and the Fairy W Lighted Buoy, 6 miles NNE.

It has been reported that rogue vessels traversing the TSS may be encountered, especially in the area lying between the MPC Lighted Buoy (51°06'N., 1°38'E.) and the F2 Lighted Buoy (51°21'N., 1°56'E.). Such vessels often proceed in a direction which is nearly opposite to that of the TSS traffic lane. Frequently this leads to nearly head-on situations in the area to the NW of Sandettie where the possibility for deep-draft vessels to alter course to starboard is limited.

All vessels should be aware that deep-draft vessels may not be able to alter course in critical areas without the danger of running aground. A good lookout should be kept for vessels constrained by their draft and showing the appropriate signals.

Vessels coming from the English Channel and bound for the Thames Estuary and the E coast of England usually cross the southwestbound traffic lane in the stretch between the S end of South Falls and Varne Lightvessel.

Due to the set caused by cross currents, vessels frequently drift down onto buoys. Subsequently, considerable damage is often done by vessels to South Falls Lighted Buoy (51°14'N., 1°44'E.), CS4 Lighted Buoy (51°09'N., 1°34'E.), and CS3 Lighted Buoy (50°52'N., 1°03'E.).

Vessels using the Deep Draft Route leading NW of Sandettie should take into account the close proximity of vessels using

the southwestbound traffic lane. Such vessels are recommended to avoid overtaking in the vicinity of Sandettie.

Vessels are advised to navigate with extreme caution in the area between Sandettie and Fairy W Lighted Buoy as the Deep Draft Route and the main traffic lane rejoin here.

Vessels should be aware that their speed may need to be reduced in certain areas in order to reduce the effect of squat. In addition, rolling and pitching should also be taken into account.

Squat (shallow water effect) may decrease the forward draft on vessels of 200,000 to 400,000 dwt, as follows:

1. At a speed of 5 knots:
 - a. Keel clearance 2m—Increase of 0.20m.
 - b. Keel clearance 6m—Increase of 0.17m.
 - c. Keel clearance 10m—Increase of 0.15m.
2. At a speed of 9 knots:
 - a. Keel clearance 2m—Increase of 0.66m.
 - b. Keel clearance 6m—Increase of 0.56m.
 - c. Keel clearance 10m—Increase of 0.49m.
3. At a speed of 14 knots:
 - a. Keel clearance 2m—Increase of 1.74m.
 - b. Keel clearance 6m—Increase of 1.45m.
 - c. Keel clearance 10m—Increase of 1.25m.

Rolling may increase a vessel's draft, as follows:

1. With a beam of 45m:
 - a. Rolling 3°—Increase of 1.2m.
 - b. Rolling 6°—Increase of 2.4m.
 - c. Rolling 10°—Increase of 3.9m.
2. With a beam of 60m:
 - a. Rolling 3°—Increase of 1.6m.
 - b. Rolling 6°—Increase of 3.1m.
 - c. Rolling 10°—Increase of 5.2m.
3. With a beam of 75m:
 - a. Rolling 3°—Increase of 2.0m.
 - b. Rolling 6°—Increase of 3.9m.
 - c. Rolling 10°—Increase of 6.5m.

Pitching may increase a vessel's draft, as follows:

1. With a length of 260m:
 - a. Pitching 0.5°—Increase of 1.1m.
 - b. Pitching 1.0°—Increase of 2.3m.
 - c. Pitching 1.5°—Increase of 3.4m.
2. With a length of 350m:
 - a. Pitching 0.5°—Increase of 1.5m.
 - b. Pitching 1.0°—Increase of 3.1m.
 - c. Pitching 1.5°—Increase of 4.6m.
3. With a length of 450m:
 - a. Pitching 0.5°—Increase of 2.0m.
 - b. Pitching 1.0°—Increase of 3.9m.
 - c. Pitching 1.5°—Increase of 5.9m.

Cap d'Antifer to Fecamp

6.7 Cap d'Antifer, previously described in paragraph 5.18, is a rounded perpendicular cliff, about 122m high. The coast from the cape to the town of Ault, about 55 miles NE, consists of gray or white chalky, vertical cliffs, bordered by drying rocks; the cliffs are broken by valleys, where the ports are situated.

Etretat (49°42'N., 0°12'E.), situated about 2 miles NE of Cap d'Antifer, is a small town that lies within the valley of

Etretat. A conspicuous monument in the form of a spire, sometimes illuminated in summer, stands on the E cliff of the valley. L'Aiguille d'Etretat, 51m high, is a pointed detached rock located close off the W cliff.

Yport (49°44'N., 0°19'E.) is a small town where landing can be made, standing close SE of Pointe du Chicart, 6.5 miles NE of Cap d'Antifer. A small stone jetty, at the head of which stands a beacon, projects from the shore abreast Yport. Range lights, in line bearing 166°, lead to the best location for beaching boats.

Tides—Currents.—Currents around Cap d'Antifer run NNE, NE, and ENE towards Fecamp on the flood. Ebb currents flow WSW, SW, and SSW towards Cap de la Heve.

Eddies occur close inshore with both currents. One such eddy, known locally as "Les Hardiers," runs E during the entire ebb current, and extends to about 1 mile offshore.

Fecamp (49°46'N., 0°22'E.)

World Port Index No. 35830

6.8 Fecamp, lying in a valley close S of Point Fagnet, is a small port with facilities for commercial vessels, fishing boats, and pleasure craft. The harbor consists of Avant-port, Arriere-port, Bassin de Mi-Maree, and two non-tidal basins.

Winds—Weather.—With winds from the W through N to NE, visibility is very good, and even in rainy weather, loss of visibility is only temporary.

With strong winds from the SW through N to NE, especially with an ebb current, a dangerous bar forms between the jetties, which may at times completely block the entrance. The effect of a strong swell is felt in the entrance channel, but gradually weakens in Avant-port and Arriere-port.

Winds from the ENE through S to WSW, may result in reduced visibility, especially in cold weather.

Tides—Currents.—Tides at the port rise about 8.3m at MHWS and 6.8m at MHWN.

Off the entrance jetties, the NNE flood current runs from about 4 hours before HW at the harbor until HW. The SSW ebb current starts about 30 minutes after HW at the harbor. The flood current may attain a rate of 2.9 knots at springs. The ebb current is weaker. At about 140m within the jetty heads, the currents flow with the channel. Both currents attain rates of 1 knot at springs and 0.5 knot at neaps.

Depths—Limitations.—The entrance channel is 70m wide and lies between two parallel jetties. The N jetty stands on the SW edge of the drying rocks fronting Pointe Fagnet. A shingle beach extends S from the S jetty.

Avant-port is located on the S side of the entrance channel and has a depth of 1.5m. There is a quay, 150m long, at the E side, but a marina occupies most of this basin.

Bassin Berigny is entered at the SE side of Avant-port through a gate, 16.5m wide, with a sill depth of 1.3m. This basin is used by fishing vessels and pleasure craft.

The entrance channel leads directly into Arriere-port, the inner harbor, through a passage, 40m wide, with a depth of 1.5m. A quay, 250m long, is situated in the S part of this harbor. It is dredged alongside to depth of 7m and used by commercial vessels. The remainder of the harbor is used by fishing vessels and pleasure craft.

Bassin Freycinet is entered from Arriere-port via Bassin de Mi-Maree. The passage leading into Bassin de Mi-Maree is 20m wide and is spanned by a revolving bridge. The gate at the entrance of Bassin Freycinet is 18m wide and has a sill depth of 0.8m. The basin has 450m of berthage with depths up to 6.3m alongside.

Due to the difficulty of maneuvering in the entrance channel, vessels entering Bassin Freycinet are limited to a length of 100m and a beam of 17m. Vessels up to 105m in length can enter Arriere-port with prior permission. Vessels can be accommodated with drafts up to 7m at springs and 5.5m at neaps.

Aspect.—The chapel of Notre-Dame-du-Salut, with a black roof; a television mast; and a signal station, consisting of a disused light tower surmounted by a blockhouse, are situated in the vicinity of Pointe Fagnet and are conspicuous from seaward. A prominent chimney stands 0.8 mile E of the point. The square tower of Saint-Etienne, with its four pinnacles, and the belfry of an abbey, consisting of a large square tower with a pointed roof, stand nearly 0.8 mile, and 1 mile, respectively, SSE of Pointe Fagnet. A conspicuous water tower rises on high ground SE of the town.

Pilotage.—Pilotage is compulsory within 2 miles of the heads of the jetties for vessels over 45m in length. Vessels should send a request for pilotage and an ETA 24 hours in advance or at least 12 hours before HW or on leaving their last port of call if less than 24 hours distant. This request message should include vessel length, overall dimensions, draft, and whether equipped with a bow thruster or other maneuvering capability. On arrival off the port vessels should contact the pilot station by VHF for instructions. Pilots board about 1 mile WNW of the jetties.

Pilotage is provided by Le Havre-Fecamp Pilots (see paragraphs 5.10 and 5.12).

Fecamp pilots may be contacted by e-mail, as follows:

station@pilhavre.fr

Regulations.—Vessels over 1,600 grt carrying hydrocarbons or dangerous substances must report to the port authority before entering the harbor.

Permission for vessels over 100m in length to enter is only given after agreement between the port authority, the pilot, and the agent.

Signals.—International port traffic signals are shown from the root of the S jetty (see paragraph 1.1).

Anchorage.—A designated anchorage area (Waiting Area), with a radius of about 0.5 mile, lies centered about 1.3 miles W of the N jetty. This anchorage has depths of 10 to 16m, sand and shells, bad holding ground and is exposed to winds from the SW through N to NE. The sea rises rapidly and vessels should only anchor in good weather. The best anchorage lies in a depth of 10m at the ESE edge of the area.

Directions.—A lighted range, bearing 082°, indicates the approach to the harbor. However, it is reported that the lights of the town make the range lights difficult to distinguish.

It is recommended that vessels enter at the end of the flood current about 30 minutes before HW, which is the time of slack water.

After approaching the entrance using the range, vessels should adjust course to about ENE in order to pass as close N as possible to the head of the S jetty. This approach allows for the yaw as the bow enters slack water while the stern remains in the current. The effect of any swing should result in the vessel lining up with the entrance channel.

Caution.—Entry is often difficult with strong offshore winds or with a strong swell from the W.

Tidal heights at the port may be affected by strong winds.

Depths in the entrance channel may be less than charted due to the accumulation of silt and shingle.

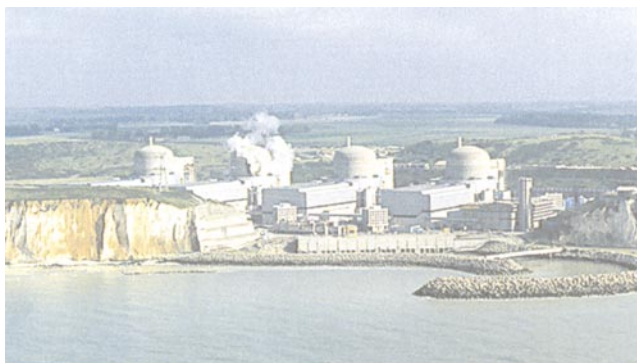
Fecamp to Dieppe

6.9 The valley of Saint-Pierre-en-Port indents the coast about 5 miles ENE of Fecamp and a prominent chapel stands on its E slope.

The valleys of Les Petites-Dalles and Les Grandes-Dalles, separated by a tall cliff, lie about 1.5 miles and 1.8 miles ENE of Saint-Pierre-en-Port.

Paluel Nuclear Power Station (49°52'N., 0°38'E.), with four conspicuous towers 72m high, is situated 6.5 miles ENE of Saint-Pierre-en-Port. A pylon and a water tower, both prominent, stand close SW and about 1.3 miles S, respectively, of the power station.

Two short breakwaters protect the entrance of a channel leading to the power station. A prohibited area, marked by a lighted buoy, surrounds the cooling water pipelines serving the power station.



Paluel Nuclear Power Station

Saint-Valery-en-Caux (49°52'N., 0°43'E.) (World Port Index No. 35820), a small harbor, lies at the entrance of a narrow valley between two white cliffs. It is used by small coasters, fishing boats, and recreational craft.

The harbor consists of an avant-port and a wet dock. The entrance, 60m wide, lies between two jetties. A shingle bank, which dries, forms a bar close outside the entrance. The avant-port dries and has a quay, 100m long, at its E side. The wet dock, which is mostly used as a marina, is entered through a gate, 9m wide, and has a depth of 3.5m. Vessels up to 50m in

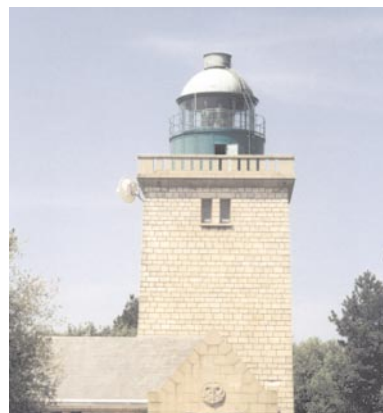
length and 8m beam with drafts up to 4.5m at springs and 3m at neaps can enter. Local knowledge is required.

A prominent water tower, 51m high, stands about 0.8 mile SSW of the harbor entrance. A conspicuous television mast, 82m high, stands about 1.2 miles ESE of the harbor entrance.

6.10 Pointe de Scotteville (49°48'N., 0°50'E.), located 4.8 miles ENE of Saint-Valery-en-Caux, is fronted by large blocks of sandstone extending up to about 0.3 mile offshore. A conspicuous water tower stands close S of the point. A belfry situated 0.2 mile SW of the water tower shows prominently above the surrounding woods. A visible stranded wreck, containing explosives, lies about 1.7 miles WSW of the point.

The valley of Quiberville, at the mouth of the Saane, lies 3.5 miles E of Pointe de Scotteville and is the largest and deepest valley in this vicinity. A prominent water tower, with a church situated close SE of it, stands at the W side of the valley.

Pointe d'Ailly (49°55'N., 0°58'E.), located 5 miles ENE of Pointe de Scotteville, is fronted by dark, vertical cliffs and has a rounded summit. Pointe d'Ailly Light is shown from a prominent square tower, 24m high, standing on the point.



Pointe d'Ailly Light

Roches d'Ailly, consisting of large drying sandstone blocks, border the point and extend up to about 0.5 mile offshore. A lighted buoy, moored about 1.5 miles NNW of the light, marks a dangerous wreck.

Grande Ecamias (49°59'N., 0°59'E.), with a least depth of 12m, and **Petits Ecamias**, with a least depth of 11m, lie about 4 and 7 miles, respectively, N of Pointe d'Ailly. These banks are dangerous in a heavy sea and consist of sand, gravel, and shell.

The valley of Pourville, a conspicuous break in the coastal cliff, is located about midway between Pointe d'Ailly and Dieppe, 5 miles E.

Caution.—A submarine cable, which may best be seen on the chart, extends seaward from the vicinity of Saint-Valery-en-Caux.

Numerous wrecks, which may best be seen on the chart, lie off the coast between Fecamp and Dieppe.

Dieppe (49°56'N., 1°05'E.)

World Port Index No. 35810

6.11 Dieppe lies in a valley at the mouth of the Riviere Arques. The port, which is primarily a cross-channel ferry terminal, also has facilities for cargo vessels, fishing boats, and recreational craft.

The harbor consists of Avant-port, Arriere-port, Bassin du Canada, Bassin de Paris, and Bassin Duquesne.

Winds—Weather.—The most frequent winds are from the SW and W; they cause a heavy sea off the entrance of Dieppe.

Although the trend of the coast shelters it from SW winds, the waves sweep around Pointe d'Ailly and break with violence on the beach.

During bad weather from the NW through N to NE, the sea is very high at the entrance of the harbor during the outgoing current, and a swell is felt in Avant-port.

The geographical position of the valley of Dieppe modifies the direction of the wind; thus E winds turn to SE and SSE at the entrance of the port and along the channel.

When the wind is from the W to seaward of the port it will be from the SW at the entrance and from the S farther inside.

Tides—Currents.—The tides rise about 9.3m at springs and 7.4m at neaps. The LW slack period is shorter than the HW slack.

In good weather, the rate of the tidal current does not exceed 0.5 knot between 1 hour before HW and HW, both at springs and neaps. During W winds, HW may occur 45 minutes late, and during SE winds up to 20 minutes early. The tidal currents within the harbor run directly in and out with no eddies. At a position 0.4 mile off the port entrance the E tidal current commences 5 hours before HW and attains a rate of 2 knots at springs. The W tidal current commences 40 minutes after HW and attains a rate of 1.5 knots at springs.

Depths—Limitations.—The port is entered directly from seaward through a channel, maintained at a depth of 5m, which leads between two converging breakwaters. The W breakwater extends about 200m more to seaward than the E breakwater. Within the breakwaters, the channel narrows to a width of 75m.

A 12° sector, centered on a line bearing 318° from the light standing in front of the Chapel of Notre Dame de Bon Secours, extends 5 miles seaward. The area within this sector was systematically surveyed for obstructions by sonar in 1995.

Avant-port has a maintained depth of 4.5m. Bassin Duquesne, used by recreational craft and fishing vessels, is entered from the SW part of Avant-port through a lock, which is 15m wide and has a depth of 3.5m on the sill. A marina is situated at the NW side of avant-port.

Terminal Multivrac is situated at the NE side of avant-port. It has a quay, 100m long, with a depth of 6m alongside.

Terminal Transmanche, with a depth of 6m alongside, is situated close S of Terminal Multivrac and is used by cross-channel ro-ro ferries.

Arriere-port, with depths of 2.5 to 4m, is entered from the SE part of avant-port through a passage, 37m wide, which is spanned by a swing bridge. A ro-ro berth is located at Quai Guynemer, at the SE end of this basin.

Bassin du Canada, with 300m of quayside, is entered from the SE end of Arriere-port through a lock, which is 23m wide

and has a depth of 1m over the sill. This lock is operated from 2 hours before HW to 1 hour after HW.

Bassin du Paris, with a depth of 6.5m, is entered directly from Bassin de Canada. Quai de Norvege, on the N side, is 683m long and Quai du Maroc, on the S side, is 600m long. A ro-ro berth is situated in the NW part of this basin.

The harbor is only accessible to large vessels from 2 hours before to 1 hour after HW due to the strength of the tidal currents running across the entrance.

The port has facilities for bulk, container, general cargo, ro-ro, and reefer vessels. Vessels up to 164m in length and 21.6m beam can be accommodated in the harbor, with drafts up to 8m at springs and 7m at neaps.

Aspect.—DI Lighted Buoy, moored about 2.5 miles WNW of the harbor entrance, marks the approach to the port.

The conspicuous Chapel of Notre Dame de Bon Secours, with a large belfry, stands on the cliffs, 0.3 mile SSE of the head of the E breakwater. A light structure, 4m high, stands in front of this chapel. A prominent radio mast, 165m high, is situated 2 miles ESE of the chapel.

A prominent signal station stands close N of the chapel. A prominent fortress-type chateau is situated midway up the cliff, about 0.9 mile SW of the harbor entrance.

The cliffs surrounding the port are reported to be radar conspicuous.

Pilotage.—Pilotage is compulsory within an area extending 4 miles seaward from the breakwaters for all vessels carrying hydrocarbons or dangerous substances and other vessels over 50m in length.

Vessels must send a message to the pilot station (Rouen Pilots) 24 hours in advance and 5 hours in advance stating their ETA at DI Lighted Buoy, their draft, and whether or not a pilot is required.

Vessels should then contact the pilot station on VHF channel 12 at least 3 hours prior to their original ETA stating any delay over 2 hours or any incapacity to make the tide.

Pilots board between 1 mile and 2 miles from the breakwaters.

Vessels under 50m in length and equipped with VHF are not obliged to take a pilot. However, they must advise the port authorities in the same manner as other vessels.

Pilotage is provided by La Seine Maritime-Rouen Pilots. (see paragraphs 5.10 and 5.13).

Dieppe pilots may be contacted by e-mail, as follows:

piloseine-rouen@wanadoo.fr

The port of Dieppe may be contacted by e-mail, as follows:

cap.stmd.dde@equipement.gouv.fr

Regulations.—All vessels should send a message to the harbormaster 24 hours prior to arrival at DI Lighted Buoy stating their ETA, length, and draft.

All vessels should then contact the harbormaster on VHF channel 16 on arrival to obtain instructions. A continuous VHF watch must be maintained until berthed.

Fishing vessels and small craft are prohibited from navigating in the approach to the port when the entry or departures signals are displayed.

Special regulations and reporting procedures apply to vessels over 1,600 grt transporting dangerous cargo in bulk in the approaches to the French coasts of the North Sea, the English Channel, and the Atlantic Ocean between the Belgian border and the Spanish border.

For further details of these special procedures, see Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea.

In order to avoid impeding access, anchoring, stopping, or fishing are prohibited within a triangular controlled navigation zone fronting the port. This zone, which may best be seen on the chart, extends up to about 1 mile NW and NE from the harbor entrance. All vessels intending to enter the zone must receive permission from the port authorities.

Signals.—International traffic signals regulating entry and departure are shown by day and at night from the signal mast at the root of the W breakwater (see paragraph 1.1).

When dredges are operating or the channel is obstructed, a yellow light is shown at the same level and to the right of the main signal.

A green light shown above and to the right of the main signal indicates the entry of a ferry. A red light similarly shown indicates a ferry departing.

Anchorage.—The anchorage for vessels waiting to enter the port lies in the vicinity of DI Lighted Buoy (49°57'N., 1°01'E.). There are depths of 8 to 12m; the bottom is sand and shingle or sand and shells, good holding ground.

It is reported (1995) that an area of the bottom within a radius of 1 mile from the lighted buoy has been systematically surveyed by sonar for any obstructions.

The recommended anchorage lies, in a depth of 8m, about 0.4 mile ENE of the lighted buoy. This anchorage is exposed to winds from the W through N to NE and in such conditions vessels may prefer to seek shelter elsewhere.

Caution.—An explosive dumping ground area, which may best be seen on the chart, lies centered about 1.5 miles NNE of the harbor entrance.

Several wrecks lie in the approaches to the harbor and may best be seen on the chart.

A submarine cable, which may best be seen on the chart, extends seaward from the shore, 0.8 mile WSW of the port entrance.

It is reported (2001) that high speed ferries may be encountered in the approaches to the port from March to October.

Dieppe to Le Treport

6.12 The coast from Dieppe to Le Treport, about 14 miles NE, consists of high steep chalk cliffs broken by several valleys.

Mont Jolibois, with a round treeless summit, rises above a perpendicular cliff about 10 miles NE of Dieppe. The valley of Criel-sur-Mer, close E, is the widest in this vicinity. The valley of Mesnil-Val, about 1 mile farther NE, is also conspicuous.

The shore is fronted by a rocky bank which dries and extends up to about 0.5 mile seaward.

Ridens de Belleville (49°59'N., 1°09'E.), a group of shoal patches, has a least depth of 7m and lies centered 3.5 miles NE of the entrance to Dieppe harbor.

Ridins de Neuville, a group of narrow sandbanks, lies centered 8 miles NE of the entrance to Dieppe harbor. These sand banks have a least depth of 7.2m and extend up to about 1.8 miles offshore.

Ridens de Dieppe (50°06'N., 1°06'E.), a group of shoal patches, lies centered 10 miles N of the entrance to Dieppe harbor. This group has a least depth of 7.4m and is formed of sand and gravel.

Roches du Muron, a drying rocky bank, fronts the coast 2.5 miles SW of Le Treport and extends up to about 0.4 mile offshore.

Ridens de Treport (50°06'N., 1°18'E.), with a least depth of 5.1m, lies about 2.8 miles NW of the entrance to Le Treport.

Banc Franc-Marque, with a least depth of 3.6m, lies about 2 miles N of the entrance to Le Treport.

Penly Nuclear Power Station (49°59'N., 1°13'E.) stands near to the shore, 5.4 miles NE of Dieppe. It is fronted by a prohibited area, which extends up to 0.8 mile seaward and is marked by lighted buoys. A narrow winding channel leads between short breakwaters to the power station.

A prominent radio mast stands about 0.8 mile SE of the power station.

Caution.—Numerous wrecks lie along this stretch of the coast and may best be seen on the chart.

A former mined area, which is open to surface navigation, is still considered to be dangerous by the French authorities with regard to anchoring, trawling, or carrying out any sea bed activities. It is bound by a line joining the following positions:

- 50°08.0'N, 1°06.5'E.
- 50°16.5'N, 1°13.5'E.
- 50°16.0'N, 1°20.0'E.
- 50°06.5'N, 1°14.0'E.

Le Treport (50°04'N., 1°22'E.)

World Port Index No. 35800

6.13 Le Treport, situated at the mouth of La Bresle, is a small port used by commercial vessels, fishing boats, and recreational craft. It consists of an Avant-port, which dries, and two wet basins.

Le Treport stands on the SW side of the harbor and the smaller town of Mers-les-Bains stands on the NE side.

Tides—Currents.—The tides rise 9.4m at springs and 7.5m at neaps. Strong onshore winds cause a heavy scend in the outer harbor.

Depths—Limitations.—The harbor entrance, 60m wide, is located between two breakwaters, which are bordered by drying banks of shingle and mud. The channel leading into the entrance dries 2m. Inside the breakwaters the channel narrows to a width of 30m.

Several quays border Avant-port and dry 4 to 5m, with a bottom of soft mud. Part of Quai Bellot, on the N side, is used by recreational craft.

Port du Peche et de Plaisance is entered from the SE end of Avant-port through a lock, 28m long and 9.5m wide. It is used by fishing vessels and recreational craft.

Port du Commerce is entered from the NE end of Avant-port through a dock gate, which is 19m wide and has a depth of 2m on the sill.

The port has facilities for bulk and general cargo vessels. Vessels up to 7,000 dwt, 115m in length, and 16m beam can be accommodated with drafts limited to the height of tide minus 2m. Generally, vessels can enter with drafts up to 7m at springs and 4.4m at neaps.

Aspect.—Le Treport Light is shown from a prominent structure, 14m high, standing on the head of the W breakwater.



Le Treport Light (West Breakwater)

A conspicuous silo, 53m high, stands on the N side of Port du Commerce, 0.5 mile ESE of the harbor entrance. A large prominent church tower stands about 0.4 mile SSE of the harbor entrance and can be seen over the houses. A large church stands at the base of the cliffs near Mer-les-Bains, about 0.7 mile ENE of the harbor entrance, and a prominent television mast is situated 0.6 mile E of it.

A conspicuous statue of the Madonna stands near the coast, about 1 mile NE of the harbor entrance. A prominent pylon is situated about 1.7 miles SE of the harbor entrance.

Pilotage.—Pilotage is compulsory for all vessels 45m or more in length. Vessels should contact the harbor by VHF 3 hours prior to HW and maintain a listening watch. Vessels should maintain a listening watch on VHF channels 16 and 12 when anchored in the Waiting Area. Generally, pilots board about 1.5 miles NW of the harbor entrance, 2 hours before HW.

Regulations.—A triangular area, within which anchoring and fishing are prohibited, extends up to 1 mile NW of the harbor entrance and may best be seen on the chart.

Anchorage.—A designated anchorage area (Waiting Area), with depths of 8 to 15m, sand and shells, lies centered 3 miles NW of the harbor entrance and can best be seen on the chart. This anchorage area, which is untenable with onshore winds, should only be used by vessels waiting to enter the port.

Caution.—An explosive dumping ground area, which may best be seen on the chart, lies centered about 2.8 miles NNE of the harbor entrance.

Several wrecks and obstructions lie in the approaches to the port and may best be seen on the chart.

Le Treport to Baie de Somme

6.14 Adult (50°06'N., 1°27'E.), a village, stands 4 miles NE of Le Treport. The coast between is formed by white or gray cliffs, 100m high, bisected by small valleys.

Adult Light is shown from a prominent tower, 28m high, standing in the village and a conspicuous radio mast is situated close to it.



Adult Light

Between Adult and the Baie de Somme the coast is low and bordered by sand dunes, with a wooded background.

Cayeux-sur-Mer (50°11'N., 1°30'E.), a village, stands about 5 miles NNE of Adult. The prominent spire of a church situated in the village can be seen above the houses.

A light is shown from a conspicuous tower, 32m high, standing about 1 mile NE of the village.



Cayeux-sur-Mer Light

A prominent structure is situated about 0.7 miles SW of the village. This structure consists of a series of pillars in the form of a truncated cone standing on a masonry base and surmounted by a black Saint-Andrew's cross.

Caution.—Numerous obstructions, which may best be seen on the chart, lie within an area extending up to 3.5 miles N and NW of Adult.

Baie de Somme

6.15 Baie de Somme (50°14'N., 1°34'E.), the estuary of the Riviere Somme, is entered between Pointe du Hourdel (50°13'N., 1°34'E.), located 2.5 miles NE of Cayeux-sur-Mer Light, and Pointe de Saint Quentin, 3 miles N. The bay faces W and is obstructed by drying sand banks.

Bancs de Somme extend up to about 1.5 miles seaward of the general line of the coast. These banks frequently vary in position and height. The outermost banks consist of very fine shifting sand and constitute a formidable danger to vessels grounding on them. In such cases the tidal currents wash away the sand from under the stem and the stern, causing the vessel to capsize or break up. With onshore winds a very rough sea occurs on these banks.

Quemer (50°17'N., 1°20'E.) and Bassurelle de la Somme (50°13'N., 1°20'E.), two banks of sand and shells, front the bay and extend up to 9.5 miles offshore. The sea breaks over these banks during bad weather.

Tides—Currents.—The tides at Cayeux-sur-Mer rise about 9.8m at springs 8m at neaps.

Outside the drying banks at the entrance to Baie de Somme, the tidal currents are mainly rotary, counterclockwise. They seem to attain their maximum rates as the drying banks are just covered or just about to be uncovered. In the vicinity of AT-SO Lighted Buoy, the incoming current flows NNE and begins about 4 hours before HW at Dieppe. It attains a velocity of about 2.7 knots at springs. The outgoing current flows SSW and begins about 1 hour 30 minutes after HW at Dieppe. It attains a velocity of about 2.5 at springs.

Winds from W often raise the sea level by up to 0.5m and winds from E lower it by the same amount.

Depths—Limitations.—A buoyed channel, which dries, leads E into the bay from AT-SO Lighted Buoy. This channel changes frequently.

Aspect.—Pointe du Hourdelight is shown from a conspicuous tower, 18m high, standing on Pointe du Hourdel (50°13'N., 1°34'E.).

The AT-SO Lighted Buoy is moored about 3.8 miles WNW of Pointe du Hourdel.

Pilotage.—There is no pilot station in the bay, but unlicensed local pilots are available. The employment of such pilots is advised due to the frequent changes in the banks. Generally, pilots board near AT-SO Lighted Buoy.

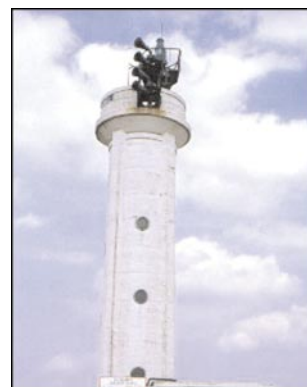
Caution.—If vessels are unable to reach one of the harbors within the Baie de Somme before HW, they should proceed to a position seaward of the banks. Anchoring in the shelter of the banks is not advised because the shifting sands provide poor holding ground.

Local knowledge is required for entry into Baie de Somme.

6.16 Le Hourdel (50°13'N., 1°34'E.), a small harbor, lies between the S side of Pointe du Hourdel and a detached breakwater, 300m long. The basin dries and is used by recreational craft and fishing boats.

Le Hourdel Light is shown from a prominent tower, 18m high, standing on Pointe du Hourdel.

Saint-Valery-sur-Somme (50°11'N., 1°39'E.) (World Port Index No. 35790), a small harbor, is situated on the S shore of



Le Hourdel Light

the bay, 2.5 miles ESE of Pointe du Hourdel. It is used by small commercial vessels and recreational craft.

The entrance channel leading to the harbor dries 5.8m and is marked by buoys and beacons. The fairway stays dry until the incoming tide reaches it, about 2 hours before HW.

The harbor is about 1,700m long and 60m wide. It is bordered on the E side by a breakwater and on the W side by an embankment and a quay. The bottom alongside the quay consists of mud and dries 5m. The tides rise about 10.1m at springs and 8.1m at neaps. Small vessels up to 50m in length and 3.6m draft can be handled at HWS.

Canal de la Somme, connecting the small port of Abbeville with the sea, is entered through a lock 260m long and 50m wide. The locks are accessible for 2 hours, and sometimes 3 hours, during each tide; the sills of the lock are 5m and 5.3m above chart datum.

The canal permits the passage of vessels up to 45m in length, 8m beam, and 3.4m draft. Vessels navigating this canal should request the opening of bridges by sounding a prolonged blast on the whistle.

Abbeville, located 7 miles SE of the lock, extends for about 0.3 mile along the N side of the canal. There is a new berth that does not have a height restriction, but vessels using the old berths are limited by a fixed railway bridge to a vertical clearance of 6.4m.

Le Crotoy (50°13'N., 1°38'E.), a small harbor, is used by fishing boats and recreational craft. It is formed by a creek protected on the W side by a promontory on which stands the town. A quay, on the S side of the harbor, dries 6m. A narrow buoyed channel leads to the harbor.

Baie de Somme to Pointe de Lornel

6.17 The coast between Pointe de Saint Quentin and Pointe du Touquet, 15.5 miles N, is low, sandy, and bordered by dunes. This stretch of coast is indented by the estuary of the Authie Riviere, which is encumbered by drying banks.

The estuary lies between Pointe de Routhiauville, located 6 miles N of Pointe de Saint Quentin, and Pointe du Haut-Banc, 2 miles N. The drying banks shift frequently and are dangerous. A narrow drying channel leads through the banks to the river and is used by local fishing boats.

A conspicuous water tower, 30m high, stands about 1 mile SSE of Pointe de Routhiauville.

Berck-Plage Light (50°24'N., 1°34'E.) is shown from a prominent tower, 45m high, standing on Pointe du Haut-Banc.



Berck-Plage Light

Several large hospital buildings and a church stand along the shore close N of the light and are conspicuous from seaward.

Pointe de Touquet (50°32'N., 1°35'E.) is located 8.7 miles N of Pointe du Haut-Banc. Pointe de Touquet Light, also known as Le Touquet-La Canche Light, is shown from a prominent orange tower, 56m high, standing about 1 mile S of the point.



Pointe de Touquet Light

The resort town of Le Touquet-Paris-Plage stands along the shore, W of the light tower. It is fronted by a conspicuous pyramidal glass structure, 27m high, and a several large buildings.

The estuary of the Riviere Canche lies between Pointe de Touquet and Pointe de Lornel, about 1.5 miles N, and is encumbered by drying banks. These banks extend up to about 1 mile seaward of the entrance and the sea breaks heavily over them during bad weather.

A light is shown from a red pylon, 11m high, standing on the NE bank of the estuary, about 0.8 mile NNE of Pointe de Touquet.

Etaples (50°31'N., 1°38'E.), a small harbor, lies at the head of the estuary, on the N bank. It is used by local fishing boats and recreational craft. An approach channel, which is buoyed and dries 5m, leads to the harbor. Its inner part lies between two training walls, which are covered at HW and marked by beacons. The channel changes frequently and local knowledge is required.

Caution.—Several offshore banks front this stretch of coast. They are described, along with the navigation aids, in paragraph 6.3.

Shellfish beds are located on the drying banks obstructing the estuary of the Authie Riviere.

Pointe de Lornel to Cap d'Alprech

6.18 The stretch of coast extending 6 miles N from Pointe de Lornel is bordered by dunes and backed inland by some conspicuous hills. The coast then turns cliffy for about 2 miles to Cap d'Alprech.

Mont Saint-Frieux, rising 2.8 miles NNE of Pointe de Lornel, consists of two prominent summits, 153m and 143m high, with several lesser elevations. The surveillance radar for Griz-Nez CROSS stands on this hill.

Saint Etienne-au-Mont, surmounted by a chapel with a prominent belfry, stands 2 miles inland about 2.5 miles SE of Cap d'Alprech.

The village of Equihen Plage, situated 1.5 miles SSE of Cap d'Alprech, can be distinguished from seaward by the straight rows of houses standing on the slope of a small hill.

Cap d'Alprech (50°42'N., 1°34'E.) terminates in a brown cliff and is bordered by drying rocks. A light is shown from a prominent white tower, 17m high with spiral outer stairs, standing on the cape. A conspicuous radio mast stands about 0.3 mile ENE of the light.



Cap d'Alprech Light

The prominent ruins of Fort de l'Heurt, a blockhouse, stand on a patch of drying rocks at the edge of the drying coastal bank, 1 mile N of Cap d'Alprech.

Fort du Mont de Couple is situated close to the coast, 0.8 mile NNE of Cap d'Alprech. A former hovercraft terminal is situated close N of this fort.

Boulogne (50°44'N., 1°36'E.)

World Port Index No. 35760

6.19 Boulogne (Boulogne-sur-Mer) lies in the entrance to the valley of La Liane Fleuve, 2.5 miles NE of Cap d'Alprech. The port provides substantial facilities for commercial shipping, cross-channel ferries, and fishing vessels. It is protected by Digue Nord and Digue Carnot, two breakwaters.

Tides—Currents.—The tides rise about 8.8m at springs and 7.2m at neaps.

The tidal currents are strong. They may be strengthened and prolonged by winds blowing in the same direction.

At a position about 0.6 mile W of the head of Digue Carnot, the flood current runs N and begins about 1 hour 50 minutes before HW. It attains a maximum spring rate of 4.8 knots about 1 hour after HW. The ebb current runs S and begins about 3 hours 30 minutes after HW. It attains a maximum spring rate of 4.2 knots. The currents are slightly less strong in the vicinity of the head of Digue Carnot.

Depths—Limitations.—The main Approach Channel, which may best be seen on the chart, leads 4.5 miles E and passes through a gap in Bassure de Baas. This channel, which is navigation controlled, runs between the Dover Strait TSS and the port entrance.

The outer harbor, which is protected by breakwaters, has berths in its S part within Rade Carnot and Darse Sarraz Bournet. The channel leading through the outer harbor is dredged to a depth of 5m.

A channel leads SE between two jetties from the outer harbor into Avant-port. A ro-ro ferry terminal, with three berths, is situated in the SE part of Avant-port. Port de Marie, an open basin connected to the E side of Avant-port, is used by fishing boats and recreational craft. Bassin Napoleon, connected to the S part of Avant-port by a lock, 95m long and 21m wide, is used by fishing boats.

Bassin Loubet, used by commercial vessels and fishing boats, is connected to the SW part of Avant-port by a lock. The lock is 125m long and 25m wide, with a depth of 5m on the sill. This wet basin has a depth of 8.5m and can accommodate vessels up to 135m in length and 21m beam, with drafts up to 7.8m at springs and 7.5m at neaps. Vessels less than 100m in length can be locked at the regular operating times. Vessels 100m to 120m in length can be locked only from 2 hours 30 minutes before HW to 1 hour after HW. Vessels 120m to 135m in length can enter only during the period close to HW when both lock gates are open.

Rade Carnot, on the S side of the outer harbor, has a ro-ro ferry terminal. Ro-ro vessels up to 146m in length and 8.5m draft can be handled in the port.

Darse Sarraz Bournet is an open basin. Quai de l'Europe, on the W side, is 780m long and has a depth of 11m alongside. A bulk berth, on the E side, is 240m long and has a depth of 10m alongside. Vessels up to 35,000 dwt and 230m in length, with drafts up to 11m at springs and 10.5m at neaps, can be accommodated in this basin.

Aspect.—ZC1 Lighted Buoy, marking the SW end of the Approach Channel, is moored about 4.4 miles W of the head of Digue Nord.

Boulogne Approach Lighted Buoy, marking the N side of the Approach Channel, is moored about 2 miles WNW of the head of Digue Nord.

The outer part of Digue Nord, except for the head, is submerged. Digue Carnot is partly covered at HW. A light is shown from a prominent tower, 22m high, standing at the head of Digue Carnot.

**Digue Carnot Light**

Colonne de la Grande Armee, a conspicuous monument, stands 1.9 miles E of the head of Digue Carnot.

The cathedral, with a prominent dome, is situated in the high part of the city, about 0.8 mile E of Avant-port. Two prominent radio masts stand 0.8 mile SE of the cathedral. In the background Mont Lambert, 189m high, rises about 1.5 miles ESE of the cathedral and is surmounted by a television mast.

A prominent tower surmounts the cement works at the NW side of Darse Sarraz Bournet basin.

It is reported (2005) that several wind generators stand in the vicinity of Digue Carnot and are conspicuous from seaward.

Pilotage.—The compulsory pilotage area extends up to 4 miles from the port entrance. Pilotage is compulsory for all vessels, except those less than 50m in length equipped with VHF.

Vessels should send a message to the harbormaster 12 hours in advance of arrival stating their length, beam, draft, last port of call, and pilotage requirements.

Vessels should then contact the harbormaster on VHF channel 12 and confirm their ETA at the roadstead 2 hours prior to arrival. This information will be forwarded to the pilot station. All vessels must then contact the port on VHF channel 12 on arrival in the roadstead.

Generally, pilots board about 0.4 mile S of Boulogne Approach Lighted Buoy (50°45'N., 1°31'E.). In bad weather, when embarking a pilot is not possible, vessels should remain in the vicinity of the outer anchorage and wait for instructions. Vessels must not enter Rade Carnot without instructions.

Pilots are provided by the Boulogne Calais Pilotage Service. Boulogne pilots may be contacted by e-mail, as follows:

boulognecalaispilot@wanadoop.fr

Regulations.—Vessels are prohibited from stopping or anchoring in the Approach Channel.

Vessels not subject to pilotage must keep well clear of large vessels.

Special regulations and reporting procedures apply to vessels over 1,600 grt transporting dangerous cargoes in bulk in the approaches to the French coasts of the North Sea, the English Channel, and the Atlantic Ocean between the Belgian border and the Spanish border.

Such vessels should consider the Approach Channel leading E from the Dover Strait TSS toward the port to be a Mandatory Access Channel. Vessels arriving from Dunkerque or Calais are only required to use that section of the Approach Channel lying E of Boulogne Approach Lighted Buoy.

Such vessels must establish contact with the port on VHF channel 12 before entering the channel and maintain a listening watch on the same frequency.

Such vessels transiting the Approach Channel are deemed to be restricted in their ability to maneuver and must show the appropriate lights and shapes.

For further details of these special procedures, see Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea.

Signals.—International port traffic signals are shown from masts situated at the E side of the entrance to Darse Sarraz Bournet, at each end of Jetee Sud-Ouest on the S side of the entrance to Avant-port, and at the central control tower standing close S of Jetee Sud-Ouest. For further information, see paragraph 1.1.

A yellow light is shown level with the top of the main traffic signal when dredges are operating in the harbor channel.

Anchorage.—The outer anchorage area for large vessels lies midway between the gap in Bassure de Baas and Digue Carnot. It has depths of 14 to 16m and lies S of the Approach Channel, about 1 mile W of the head of Digue Carnot. When anchorage is untenable in this roadstead, vessels are advised to seek shelter off the English coast.

Directions.—The main Approach Channel leads 4.5 miles E from the Dover Strait TSS to the harbor.

Rade d'Ambleteuse, 3 miles long, extends N from the port entrance and lies inside Bassure de Baas. It provides an approach for vessels coming from the N. Such vessels should pass E of Bassure de Baas Lighted Buoy (50°48.5'N., 1°33.0'E.).

By an agreement with the local fishermen, ferries transiting between the port and Cap Gris-Nez usually use a channel leading through Rade d'Ambleteuse.

The time at which vessels may enter Darse Sarraz Bournet depends on their draft and the height of tide. The best time for vessels with drafts over 9m to enter is from 2 hours before to 2 hours after HW.

Because of the strong currents, vessels over 180m in length, which need to maintain a relatively high speed for maneuvering, should enter either 3 hours before or 1 hour after HW, depending on their draft.

Within the port, a lighted range, which may best be seen on the chart, indicates the limit of shoal ground lying on the N side of Rade Carnot. Vessels must stay S of this alignment.

Caution.—Numerous wrecks lie in the approaches to the port and may best be seen on the chart.

An area lying between Digue Nord and the shore is reserved for the use of pleasure craft.

Boulogne to Calais

6.20 The coast between the N side of Boulogne and Cap Gris-Nez, 7.5 miles N, consists of dark red cliffs with grassy summits, interspersed with beaches and dunes.

Landmarks along this stretch of coast include the residential buildings of Wimereux (50°46.0'N., 1°36.7'E.), with a prominent water tower; Ambleteuse (50°48.6'N., 1°36.4'E.), with a round fort situated close off the beach; Audresselles (50°49.5'N., 1°35.7'E.), with a prominent square belfry standing among the red-roofed houses; and Audinghen (50°51.2'N., 1°36.7'E.), with a prominent large belfry standing on the skyline.

Cap Gris-Nez (50°52'N., 1°35'E.), a precipitous headland, is 50m high and steep-to on its W side. A light is shown from a conspicuous tower, 31m high, standing on the cape.

The CROSS surveillance station and a radar tower are situated close N of the light.



Cap Gris-Nez Light

Pointe du Riden, located 1 mile S of Cap Gris-Nez, is steep-to and marked by a beacon.

Between Cap Gris-Nez and Cap Blanc-Nez, 6 miles NE, the shore is bordered by a coastal bank and several reefs, which extend up to about 1.8 miles seaward in places. CA3 Lighted Buoy is moored at the outer side of the coastal bank, about 1.6 miles NW of Cap Blanc-Nez.

Cap Blanc-Nez presents a very white cliff to seaward and consists of several rounded grassy summits. The conspicuous Dover Patrol monument surmounts the highest summit.

A church, with a low square prominent belfry, stands at Tardinghen, 2 miles E of Cap Gris-Nez, and can be seen on the skyline. Mont Couple rises about 3 miles E of the church and can be identified by its summit, which slopes steeply to the S.

The chalky cliffs continue as far as Sangatte, 2 miles NE of Cap Blanc-Nez. A prominent square belfry standing in this village can be seen over the dunes.

Between Sangatte and Calais, 4 miles ENE, the coast is low and sandy.

Tides—Currents.—The tidal currents are very strong off the coast between Boulogne and Calais. At about 2.5 miles

NW of Cap Gris-Nez, the flood and ebb tidal currents attain velocities of about 3.5 knots at springs.

At 1 mile NW of Cap Gris-Nez, the NE tidal current begins about 2 hours before HW at Dover, and the SW tidal current begins about 3 hours 45 minutes after HW at Dover; the velocity in both directions is about 4 knots at springs.

For additional information concerning currents in Dover Strait, see paragraph 6.2.

Caution.—An explosives dumping area, which may best be seen on the chart, lies about 1.5 miles N of the entrance to Boulogne.

Large concentrations of drift-net fishing vessels may be encountered in the vicinity of Cap Gris-Nez during December and January.

A submarine power cable area, within which anchoring by vessels over 50m in length is prohibited, lies between Cap Blanc-Nez and Calais, and may best be seen on the chart.

Calais (50°58'N., 1°51'E.)

World Port Index No. 35750

6.21 Calais is the most important port for cross-channel ferry traffic from England. It also provides extensive facilities for commercial shipping and is connected to the network of canals in the N part of France.



Calais

Winds—Weather.—During strong winds from WSW, through N, to ENE, a very heavy sea may be created in the harbor entrance and entry is sometimes impossible. A strong swell may be experienced within the harbor in such conditions.

Depths—Limitations.—The tides rise about 7.2m at springs and 5.9m at neaps.

At a position 0.5 mile NW of the jetty heads, the flood current runs ENE and begins 2 hours 45 minutes before HW at the port. The ebb current runs WSW and begins 3 hours 30 minutes after HW. The flood current attains a maximum rate of 3 knots at springs and the ebb current a rate of 2 knots.

Close to the jetty heads the slack water periods, which last 15 minutes in good weather, occur 2 hours 30 minutes after HW at the port and 3 hours 30 minutes before HW (LW slack). These times may be advanced by 30 minutes during strong W winds and retarded by 30 minutes during strong E winds.

The current is rectilinear. There is probably little or no current between the jetties or within the harbor.

Depths—Limitations.—The Approach Channel, which has been swept for obstructions, has depths over 10m. The entrance channel, which is 230m wide between the jetties, has a dredged depth of 9m.

The entrance channel leads into Avant-port. Bassin Henri Ravisse (Bassin des Guerlettes-Bassin Est), a large tidal basin, is entered at the E side.

Bassin Henri Ravisse, which is dredged to a depth of 9m, is 1,200m long and 200m wide. The N side provides 820m of berthage with a depth of 12.5m alongside. A berth, with a depth of 9m alongside, is situated at the E side and is used by cross-channel catamaran ferries. A service berth, 200m long, is situated at the S side of the basin.

Arriere-port is entered from the SW side of Avant-port. Quai Paul-Devot, located in the SE part, is 240m long and has a depth of 9m alongside.

Gare Maritime, situated between the SE end of Avant-port and the N side of Arriere-port, has four berths, with depths of 5 to 7m, for cross-channel ro-ro ferries located at each side.

Basin West is entered from the SW side of Arriere-port through a dock gate, 17m wide, which is spanned by a road bridge. The gate has a depth of 2m over the sill and the basin is maintained at a depth of 7.6m. Vessels up to 110m in length, 16m beam, and 6m draft can enter the basin but it is mainly used by small craft and pleasure boats.

Bassin Carnot is entered from the E end of Arriere-port through a lock, 133m long and 21m wide, with a depth of 1.8m over the sill. The basin is maintained at a depth of 7.6m and provides 1,700m of berthage. Vessels up to 150m in length and 16m beam can enter with drafts up to 6.6m. Vessels with beams between 16m and 19.5m can enter with drafts up to 5.9m. Vessels over 115m in length have to canal through the lock at near HW.

The port has facilities for ro-ro ferries, container, general cargo, bulk, and passenger vessels. Vessels up to 245m in length and 11.5m draft can be accommodated.

The port also provides repair facilities. A drydock, situated at the S end of Bassin Carnot, can handle vessels up to 150m in length, 19m beam, and 6m draft.

It is reported (2003) that high-speed vessels are operating from the former hovercraft terminal which is situated 1.5 miles E of the main port entrance.

Aspect.—Ridens de la Rade, a bank of sand and shells, fronts the port and extends up to about 1.5 miles offshore. This bank lies almost parallel to the coast and is an extension of the coastal bank bordering the shore to the E of the port. It has depths of 3 to 8m in the W part and almost dries in the E part. The sea breaks heavily on this bank with N to E winds.

Ridens de Calais, a bank with depths of 8 to 16m, extends about 5.3 miles NE from the NW end of Ridens de la Rade.

A directional sector light (Sangatte) is shown from a pylon, 8m high and surmounted by a radar scanner, standing in the E part of Sangatte (50°57'N., 1°46'E.).

The Approach Channel leading SE and E along the S side of Ridens de la Rade to the port entrance is marked by lighted buoys, which may best be seen on the chart.

A light is shown from a prominent structure, 10m high, standing on the E jetty head. A light is shown from a structure, 12m high, standing on the W jetty head.

Calais Light, is shown from a conspicuous white tower, 51m high, standing 0.8 mile SSE of the head of the W jetty.



Calais Light

Two conspicuous silos, 56m and 42m high, stand on the N side of Henri Ravisse Basin (Bassin Est), about 0.2 mile E of the root of the E jetty.

A prominent water tower, 31m high, is situated at Bleriot-Plage, about 1.5 miles W of Calais Light. A pyramid-shaped building stands on Quai de la Maree, about 0.4 mile SE of the W jetty head, and houses the pilot station.

A prominent chimney stands at an elevation of 78m, about 1 mile ENE of Calais Light. Notre Dame Church, with a prominent spire, is located 0.2 mile S of the Calais Light. A conspicuous hotel, with a prominent pointed roof, is reported (2002) to stand 0.3 mile S of the church.

A prominent signal tower, 30m high, stands on the E jetty, about 250m from the light at the head. A conspicuous radar tower is situated on the E jetty, between the head and this signal tower.

Pilotage.—Pilotage is compulsory for vessels 50m or more in length, inbound or outbound, within 3.5 miles of the port entrance.

All vessels should send a message to the pilot station 12 hours in advance, giving their ETA at Calais Approach Lighted Buoy (formerly designated CA4) (50°59'N., 1°45'E.) and also stating their length, beam, draft, and last port of call.

Vessels should then contact the pilot station by VHF 2 hours prior to arrival in order to confirm their ETA.

Pilots usually board about 0.7 mile N of Calais Approach Lighted Buoy (formerly designated CA4). During bad weather, small vessels may, at the latest, embark the pilot on passing CA2 Lighted Buoy (formerly designated CA6) (50°58'N., 1°46'E.).

Pilots are provided by the Boulogne Calais Pilotage Service. Calais pilots may be contacted by e-mail, as follows:

boulognecalaispilot@wanadoop.fr

Vessels should not confuse the Dunkerque pilot vessel, stationed about 4.5 miles NE of Calais Approach Lighted Buoy

(formerly designated CA4), with the Calais pilot boat, which only leaves port to meet vessels.

Regulations.—A Vessel Traffic Service (VTS) system (call: Calais Port Control) operates in the approaches to the port. This VTS area is bounded, as follows:

1. On the SW side—by the SW boundary of the controlled area (a line joining 50°56.6'N, 1°44.5'E; 50°57.1'N, 1°41.2'E; and 50°58.6'N, 1°37.0'E).

2. On the NW side—by the NW boundary of the controlled area (a line extending between 50°58.6'N, 1°37.9'E and 51°01.4'N, 1°41.7'E).

3. On the N and E sides—by the parallel of RCW Lighted Buoy (51°01.3'N., 1°45.4'E.) and a line joining RCW Lighted Buoy, the RCE Lighted Buoy (51°02.5'N., 1°53.2'E.) and the disused Point Walde Lighthouse (50°509.6'N., 1°54.9'E.).

Inbound vessels must send an ETA at the roadstead 48 hours in advance to the Harbormaster. The message must include their characteristics, and, if appropriate, the nature and quantity of dangerous goods onboard.

Vessels must then confirm their ETA to the Harbormaster 12 hours in advance giving their ETA at Calais Approach Lighted Buoy (formerly designated CA4) (50°59'N., 1°45'E.) and also stating their length, beam, draft, last port of call, whether fitted with bow or stern thrusters or other maneuvering aids, and whether a pilot is required.

Vessels must then contact Calais Port Control 2 hours prior to arrival on VHF channel 17 and confirm their ETA and the above information. They will be advised of their berth, time of entry, and, if appropriate, an anchorage.

Vessels must report on VHF channel 17 when entering the VTS area and then maintain a continuous listening watch.

Vessels without pilots should request permission to enter the Approach Channel when passing Calais Approach Lighted Buoy (formerly designated CA4) or CA2 Lighted Buoy (formerly designated CA6) (50°58'N., 1°46'E.) (ferries).

The Calais Harbormaster may be contacted by e-mail, as follows:

smbc-calais-capitainerie@equipement.gouv.fr

Special regulations and reporting procedures apply to vessels over 1,600 grt transporting dangerous cargo in bulk in the approaches to the French coasts of the North Sea, the English Channel, and the Atlantic Ocean between the Belgian border and the Spanish border.

Such vessels should consider the Approach Channel leading SE from the Dover Strait TSS and E toward the port entrance to be a Mandatory Access Channel. The outer N limit of this Approach Channel is marked by Calais Approach Lighted Buoy (formerly designated CA4). They must also establish contact with the port traffic control on VHF before entering the Approach Channel and maintain a listening watch on the same frequency. Such vessels may not enter the channel to the E of the meridian of Calais Approach Lighted Buoy (formerly designated CA4) without a pilot on board. While transiting the Approach Channel these vessels are deemed to be restricted in their ability to maneuver and must show the appropriate lights and shapes.

Such vessels must also use the designated Waiting Area (anchorage).

For further details of these special procedures, see Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea.

Signals.—International port traffic signals are shown from the signal tower standing on the E jetty, at the entrance to Bassin Henri Ravisse, and on the W side of the entrance to Arriere-port. For further information, see paragraph 1.1.

Anchorage.—A designated Waiting Area, the limits of which are shown on the chart, lies centered 5 miles NNW of the port entrance. This anchorage area has depths of 17 to 28m and is shared with the port of Dunkerque. Vessels waiting to enter Calais may anchor in the S part of this area.

A recommended anchorage for vessels waiting to enter Calais lies between Ridens de Calais and Ridens de la Rade, and between the meridians of 1°47'E and 1°48'E.

During strong N winds, vessels unable to enter the port may seek shelter in The Downs (51°13'N., 1°13'E.).

Anchorage in the vicinity of Calais Approach Lighted Buoy (formerly designated CA4) (50°59'N., 1°45'E.) is not recommended due to the remains of numerous wrecks and obstructions.

Directions.—The Approach Channel, which may best be seen on the chart, leads SE from the Dover Strait TSS toward Sangatte Light and then 5 miles in an E direction along the S side of Ridens de la Rade to a position close NW of the harbor entrance. Sangatte Light (50°57.2'N., 1°46.5'E.), bearing between 089° and 152°, indicates the approach from seaward.

A directional light is shown from a structure standing about 0.3 mile NNE of Calais Light. However, the harbor entrance alignment depends on the time of the tide. The best time for entering the harbor is at slack water, about 3 hours before HW.

Cautions.—According to recent French surveys, depths are generally less than charted on the N side of the port approach channel (on Ridens de la Rade). Vessels are recommended not to sail closely along the N edge of the Approach Channel.

Vessels proceeding in the channel between the jetties at the port entrance must allow for the strong cross tidal current.

An area, within which anchoring and fishing are prohibited, extends up to about 1 mile W of the port entrance and may best be seen on the chart.

An explosives dumping area, which may best be seen on the chart, lies 1.4 miles N of the port entrance, at the N side of Ridens de la Rade.

A spoil ground (dumping area) lies about 1.2 miles NW of the port entrance, at the N side of Ridens de la Rade.

High speed ferries may be encountered in the approaches to the port.

It is reported (2005) that the designations (numbers) of the lighted buoys marking the approach channel have been changed.

Off-lying Banks between Calais and the Belgian Frontier

6.22 Bancs de Flandre (Flanders Banks) lie E of the meridian of 1°48'E and extend up 12 miles offshore. They are long, narrow, and diverge to the E. The inner banks trend ENE and lie parallel to the coast.

The banks are composed of fine grey and black sand. They are generally steep-to on the inshore side and slope gradually seaward. The sea breaks heavily on the shallowest parts of the banks when the wind is against the tidal current. The shape and position of these banks are subject to change.

Except for Sandettie Bank, which lies in the center of Dover Strait, Bancs de Flandre form several lines of banks.

The outer line of banks consists of Out Ruytingen, In Ruytingen, and Bergues Bank. This line extends about 26 miles NE from a position 7 miles N of Calais.

Sandettie (51°15'N., 2°00'E.), the outermost of the Bancs de Flandre lying off the French coast, is situated within the Dover Strait TSS and described in paragraph 6.3.

Out Ruytingen (51°08'N., 2°04'E.), the outermost bank lying S of the Dover Strait TSS limit, is described in paragraph 6.3.

In Ruytingen (51°13'N., 2°16'E.), with depths of 1.9 to 9.7m, extends NE for about 5 miles. Its NE end is marked by Ruytingen Est Lighted Buoy.

Bergues Bank (51°16'N., 2°20'E.), with depths of less than 10m, extends NE for about 5 miles and lies adjacent to the SE side of the West Hinder TSS.

The Dyck Banks, lying 2 to 3 miles inside the Ruytingens, extend about 31 miles NE from a position 4.5 miles NNE of Calais. This line consists of Dyck Occidental, Le Dyck (Dyck Central), and Dyck Oriental (Oost Dyck).

Oost Dyck Radar Tower (51°16.5'N., 2°26.9'E.), 15m high, stands at the SE side of Dyck Oriental (Oost Dyck). It is lighted and equipped with a racon. A second tower, with a helipad, is situated alongside the radar tower and connected to it by an aerial walkway.



Oost Dyck Radar Tower

The Ratel Banks, lying inside the Dyck Banks, extend about 19 miles NE from a position 4.5 miles NNE of Port Ouest (Dunkerque). This line consists of In Ratel, Binnen Ratel, and Buiten Ratel. Banc Breedt, which dries in its central part, runs almost parallel to In Ratel and Binnen Ratel. This bank lies about 0.5 mile inside In Ratel and connects with Binnen Ratel near its NE extremity.

There are also a number of inner banks which may best be seen on the chart. Most of these banks are extensions of the coastal bank.

Haut-Fond de Gravelines, with a least known depth of 4.3m, lies about 3 miles N of the entrance to Gravelines, and also NW of the crossroads where Passe de Ruytingen and Passe de l'Ouest meet.

Bancs du Snouw, Break, Hills, Traepegeer, and Smal, with many drying patches, border the N side of Rade de Dunkerque.

Tides—Currents.—In the area of Bancs de Flandre, the flood tidal current in spring tides lasts about 5 hours, and the ebb about 7 hours; in neap tides, the differences are reduced.

The tidal currents are alternating; offshore the currents run in a general NE to SW direction, and nearer shore the currents run parallel to the shore in an E to W direction.

The currents turn slowly counterclockwise, except near the change where the rotation is rapid.

The maximum velocities of the NE and E tidal currents, about 1.7 to 3 knots in spring tides, occur offshore between 1 and 2 hours after HW at Calais, and nearer shore at the time of HW at Dunkerque; the SW and W tidal currents, attaining about the same velocities, occur offshore 4 hours after HW at Calais, and nearer shore between 4 and 5 hours before HW at Dunkerque.

Calais to the Belgian Frontier

6.23 The coast from Calais to Gravelines, about 10 miles ENE, is very low, sandy, and backed by a flat countryside. The coastal bank along this stretch dries in places and extends up to about 1 mile offshore.

Pointe de Walde Lighthouse (50°59.6'N., 1°54.9'E.), disused, consists of a hut surmounting a framework tower, 18m high. It stands on the drying coastal bank, about 0.6 mile offshore, and is prominent.



Pointe de Walde Lighthouse (disused)

The pointed belfry of the church situated at Oyle-Plage, 5 miles ESE of Pointe de Walde Lighthouse, is prominent from seaward.

Dyck Lighted Buoy (51°03'N., 1°52'E.), equipped with a racon, is moored at the W end of Dyck Occidental, about 4.7 miles NNE of the entrance to Calais.

RCE Lighted Buoy (51°02'N., 1°53'E.) is moored at the NE end of Ridens de Calais, about 1 mile SE of Dyck Lighted Buoy. Buoys (special) are moored close SE and SW of this lighted buoy.

DKA Lighted Buoy (51°02'N., 1°57'E.), marking the W approach to Passe de l'Ouest, is moored about 3.3 miles E of Dyck Lighted Buoy.

Gravelines Nuclear Power Station (51°01'N., 2°08'E.) is situated about 8 miles E of Pointe de Walde disused lighthouse, between the entrance to Gravelines and Dunkerque (Port Ouest). Four lighted buoys (special thermograph), which may best be seen on the chart, are moored up to 0.7 mile offshore in the vicinity of the power station. The six chimneys, which are 60m high and grouped in three pairs, are conspicuous.



Gravelines Nuclear Power Station

The coast between Dunkerque (Port Est) and the border with Belgium is backed by dunes and fronted by a drying bank.

A prominent water tower and a chimney stand at Zuydcoote, 5.2 miles E of Dunkerque (Port Est). A factory plant, with two conspicuous water towers and several chimneys, is situated about 1.2 miles SW of Zuydcoote.

A church, with a conspicuous belfry, and a prominent casino are situated at Bray Dunes (51°05'N., 2°31'E.), about 6.5 miles E of Dunkerque (Port Est).

The border between France and Belgium lies about 1.2 miles E of Bray Dunes.

For a description of the waters lying E of the France-Belgium border, see Pub. 192, Sailing Directions (Enroute) North Sea.

Caution.—Numerous wrecks lie off this section of the coast and may best be seen on the chart.

Submarine cables, which may best be seen on the chart, extend seaward from points on the shore located about 1.2 miles SW and 4.7 miles E of Pointe de Walde Light.

Three detached breakwaters, used for sand stabilization, lie about 0.3 mile offshore, 1.8 miles E of Dunkerque (Port Est).

An area, within which fishing is prohibited, lies centered 0.6 mile SE of Dyck Lighted Buoy (51°03'N., 1°52'E.) and may best be seen on the chart.

An extensive area, within which anchoring and mooring are prohibited, lies centered 1 mile SE of Dyck Lighted Buoy (51°03'N., 1°52'E.) and may best be seen on the chart.

6.24 Gravelines (51°00'N., 2°07'E.) (World Port Index No. 35740), a small port, lies 1 mile SE of the coast. It is used by fishing vessels, coasters, and pleasure craft. The harbor consists of an Avant-port and Bassin Vauban, a wet basin. The entrance to Avant-port lies at the mouth of the Riviere Aa.

Tides—Currents.—The tides rise about 6.3m at springs and 5.1m at neaps.

Winds from the N through W raise the water level up to 0.5m, while winds from the opposite direction decrease the level of water by as much as 0.7m.

At a position about 0.5 mile off the jetties, the flood current runs ENE and starts about 2 hours 30 minutes before HW at Dunkerque. It attains a normal maximum rate of 2 knots about 10 minutes before HW at Dunkerque, although rates up to 3.5 knots have been observed. Slack water occurs for 15 minutes about 3 hours after HW at Dunkerque. The ebb current runs WSW and starts after the slack water period. It attains a maximum rate of 1.7 knots between 4 hours 50 minutes and 5 hours 50 minutes after HW at Dunkerque.

Close off the jetty heads, the currents begin about 30 minutes earlier. Within the jetties the currents do not exceed a rate of 1.5 knots.

Depths—Limitations.—The port is approached from Passe de l'Ouest. The entrance to the river is protected by two jetties, which extend about 0.8 mile seaward. A bar, consisting of sand banks, fronts the entrance and dries 1m.

The Avant-port extends along the river to the wet basin. A wharf, 170m long, is situated on the W bank. It dries 1.5m and is used by fishing vessels. The fairway is 15m wide and marked by beacons.

Bassin Vauban, the wet dock, is entered through a lock, which is 28m long and 10m wide, with a depth of 0.6m on the sill. The lock is spanned by a revolving bridge. The dock has 390m of berthage and provides facilities for pleasure craft. Coasters up to 70m in length and 9.8 beam can be accommodated with drafts up to 3.4m at springs and 2.1m at neaps.

Small craft can gain access to the river and the canal system from the SW end of the wet dock through three lock gates, each 6m wide.

Aspect.—The small towns of Petit-Fort-Philippe and Grand-Fort-Philippe stand, respectively, on the E and W banks of the river at the entrance.

The prominent structure of a former lighthouse, 27m high, stands close to the root of the E jetty. The spire, 46m high, of a church standing in Petit-Fort-Philippe is prominent. The belfry, 38m high, of a church standing in Grand-Fort-Philippe is prominent. A conspicuous square church tower is situated about 0.4 mile E of the wet dock, among the factory chimneys.



Gravelines Lighthouse (disused)

Pilotage.—Pilots are provided by the station at Dunkerque (see paragraph 6.26). Vessels requiring pilotage should proceed to the boarding ground off Rade de Dunkerque Est.

Anchorage.—Anchorage can be taken off the entrance, in depths of 6 to 10m, sand and shells, with good holding ground. This anchorage is untenable with strong onshore winds and should only be used by vessels waiting to enter the harbor.

Caution.—Local knowledge is advised. Entry to the harbor is especially difficult with onshore winds. Larger vessels usually enter the port 30 minutes before HW and must make allowance for the flood current running ENE across the entrance.

An explosives dumping area, which may best be seen on the chart, lies 1.7 miles NW of the jetty heads.

Approaches to Dunkerque

6.25 There are three main approaches to Dunkerque (Port Ouest) or Dunkerque (Port Est).

Passe de l'Ouest (51°03'N., 2°09'E.) is the principal route for vessels approaching from the W. It leads to Port Ouest. The channel is dredged to a depth of 22m as far as the entrance to Port Ouest. Chenal Intermediaire, a continuation of Passe de l'Ouest, leads to Port Est and has a least depth of 12.5m.

The approach to Passe de l'Ouest lies between Dyck Lighted Buoy (51°03'N., 1°52'E.) and RCE Lighted Buoy (51°02'N., 1°53'E.), moored about 1 mile SE. The entrance is marked by DKA Lighted Buoy (51°02'N., 1°57'E.), which is moored about 3.3 miles E of Dyck Lighted Buoy.

From a position about 2.5 miles E of DKA Lighted Buoy, the channel leads in an ENE direction for 4 miles to the harbor entrance. This section of the channel passes S of Haut-Fond de Gravelines and N of the coastal bank. It is marked on each side by lighted buoys, which may best be seen on the chart.

Chenal Intermediaire, marked by lighted buoys, leads 8.5 miles E from the E end of Passe de l'Ouest to the entrance to Port Est. The channel passes N of Banc de Mardyck and Banc de Saint-Pol, and S of Banc de Snouw and Banc Braek. A recommended track, which may best be seen on the chart, leads through this channel.

Bancs de Flandre (51°15'N., 2°26'E.) is a route leading from NE. It should only be used by vessels with local knowledge or under pilotage.

From a position about 3 miles S of the West Hinder Light Platform (51°23'N., 2°26'E.) and S of the West Hinder TSS limit, the route leads 26 miles in a general SW direction. The route passes between Dyck Oriental (Oost Dyck) (51°15'N., 2°26'E.) and Bergues Bank (51°17'N., 2°22'E.), and then N and W of the N part of In Ruytingen (51°13'N., 2°16'E.). It then passes through Passe de Ruytingen (51°10'N., 2°10'E.), which lies between In Ruytingen and Out Ruytingen (51°08'N., 2°04'E.). The route then passes through Passe du Dyck (51°06'N., 2°06'E.), which lies between the E end of Dyck Occidental and the W end of Le Dyck (Dyck Central). It then passes through Passe du Haut-Fond de Gravelines, lying W of the W end of Haut-Fond de Gravelines, and connects with Passe de l'Ouest, about 3.5 miles W of the harbor entrance (Port Ouest).

Generally, depths over 11m can be maintained on this route from NE, except within Passe du Dyck and Passe du Haut-

Fond de Gravelines, where depths less than 9m are found. After passing through Passe de Ruytingen (51°10'N., 2°10'E.), vessels with deeper drafts may continue WSW and stay N of Dyck Occidental. Such vessels may then round Dyck Lighted Buoy (51°03'N., 1°52'E.) and enter Passe de l'Ouest.

Passe de Zuydcoote (51°08'N., 2°31'E.), a coastal route, leads from the E. From a position at the SW end of Westdiep close E of E12 Lighted Buoy (51°08'N., 2°31'E.), the route, which is marked by buoys, leads 3.5 miles S and SW through Passe de Zuydcoote. It then leads 4.5 miles WSW through Passe de l'Est into Rade de Dunkerque, which fronts the harbor entrance (Port Est). A recommended track, which may best be seen on the chart, indicates the route. The depths along this route are subject to frequent changes. The route through Passe de Zuydcoote crosses depths of less than 5m.

Passe de Zuydcoote connects Dunkerque with Nieuwpoort (51°09'N., 2°43'E.) and Oostende (51°14'N., 2°55'E.). From the position close E of E12 Lighted Buoy (51°08'N., 2°31'E.), a route leads 16.5 miles ENE through Westdiep (Belgian waters) and Kleine Rede (51°10'N., 2°13'E.) to the vicinity of Oostende.

Caution.—Depths in the approach channels are subject to change and the port authorities should be consulted prior to using them.

A former mined area lies in the vicinity of the approaches to Dunkerque. The area is considered safe for surface navigation, but remains dangerous for anchoring, trawling, or carrying out any seabed activities. These dangers do not apply to the E and W approach channels. For further details, see Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea.

Dunkerque (51°03'N., 2°21'E.)

World Port Index No. 35730

6.26 Dunkerque is a large commercial port serving the industrial and mining regions of the N part of France. The port complex extends from Gravelines to the old town of Dunkerque, about 10 miles E.

The port of Dunkerque has two harbors, Port Ouest and Port Est, with their entrances 6 miles apart. These harbors are linked internally by a canal and to seaward by Chenal Intermediaire.

Dunkerque is connected to the French and Belgian canal networks.

Tides—Currents.—The tides rise about 6m at MHWS and 5m at MHWN.

In the area of the off-lying banks, the tidal currents are more or less reciprocal in direction and follow the line of the main channels. In the vicinity of the harbor entrances the current turns away from the land at the end of the flood and turns toward the land at the end of the ebb.

The tidal currents off Dunkerque attain their maximum rate of about 2.5 knots where the banks are close together. They are weaker to the E, attaining rates of 1.5 to 2 knots off Bray-Dunes, and to the W, attaining rates of 1.7 to 2.2 knots off Gravelines.

Off Gravelines and Port Est, the E flood current attains its maximum rate about the time of local HW and the W ebb current attains its maximum rate about 5 hours before local HW.

The duration of slack water off Dunkerque is about 15 minutes. It may be reduced to 10 minutes during W winds and increased to 20 minutes during E winds. Slack water occurs 2 hours before and 4 hours after local HW.

Generally, the duration of the flood current is appreciably less than the duration of the ebb current and it is probably stronger.

The times and strengths of the tidal currents may differ significantly due to meteorological conditions. At springs, the predicted strength of the tidal currents may be exceeded by 25 per cent. At neaps, the predicted strength of the tidal currents may be exceeded by as much as 40 per cent. The timing of slack water may also vary by as much as 2 hours.

Winds from NE may reduce the predicted tidal height by up to 0.3m while winds from other directions may increase the height by up to 0.5m.

Two buoys, which indicate the direction of the tidal current, are moored 0.9 mile WNW of the head of Port Ouest W jetty and 0.4 mile WNW of the head of Port Est W jetty. Viewed from N these buoys show a black side by day and a white light over an orange light at night when the E flood current is running. They show a white side by day and two white lights at night when the W ebb current is running.

Depths—Limitations.—Port Ouest.—Port Ouest is protected by two angled jetties which form an entrance, 450m wide. It consists of an Avant-port, 1 mile long, and Bassin de l'Atlantique, a large tidal basin.

The entrance channel, leading SE into Avant-port from Passe de l'Ouest, is dredged to a depth of 20m. The dredged depth reduces to 19m within Avant-port and to 17m within Bassin de l'Atlantique.

Flandres Fuel Terminal is situated at the W side of Avant-port. It consists of a finger pier extending from the W jetty and has a depth of 23m alongside. Tankers up to 300,000 dwt, 360m in length, 60m beam, and 20.5m draft have been accommodated.

Quai de Flandre, situated at the SE side of Bassin de l'Atlantique, is used by container and ro-ro vessels. It is 600m long and has a depth of 13.3m alongside. Vessels up to 12.5m draft can be accommodated alongside.

Darse de la Manche is connected to the NE side of Bassin de l'Atlantique. Quai de Lorraine, situated on the S side, provides 490m of berthage at the W end, with a depth of 13.3m alongside, and 260m of berthage at the E end, with a depth of 7m alongside. It is used by container, ro-ro, and passenger vessels.

Both Quai de Flandre and Quai de Lorraine are collectively known as Port Rapide. Movements in Port Rapide are unrestricted day or night.

Quai d'Alsace and Quai de Ramsgate, situated at the E side of Darse de la Manche, have depths of 7 to 8m alongside. They provide passenger, rail, and freight facilities for the cross-channel ferries. Vessels up to 7m draft can be handled.

Western Bulk Terminal, with 870m of total quayage, is situated on the SW side of Bassin de l'Antique. Berth No. 1 (Quai a Pondereux Ouest), at the N end, is 350m long and has a depth of 23m alongside. Berth No. 2 is 295m long and has a depth of 15m alongside. Berth No. 3, at the S end, is 225m long and has a depth of 13m alongside. Bulk vessels up to

180,000 dwt and 18m draft can be accommodated alongside at this terminal.

Canal des Dunes, with a depth of 3.5m, connects Bassin de Mardyck in Port Este to Darse de la Manche in Port Ouest. It is mostly used by small craft and barges.

Port Est.—Port Est, protected by two jetties, is entered directly from Rade de Dunkerque. It consists of an Avant-port and a number of enclosed wet basins.

Avant-port and the approach to Ecluse Charles de Gaulle, the main lock, are dredged to a depth of 13.5m.

Port d'Echouage, a tidal basin, is connected directly to the E side of Avant-port by a channel dredged to a depth of 5m. It is used by fishing vessels and pleasure craft.

Ecluse Trystam, a lock, is situated on the W side of Port d'Echouage and leads into the E part of Bassins de Freycinet. It has a usable length of 150m, a usable width of 22m, and a depth of 4.5m over the sill. This lock is used when the Ecluse Watier lock is occupied or for pleasure craft during weekends.

Ecluse Watier, a lock, is situated at the S side of Avant-port and approached through a channel dredged to a depth of 8m. It leads into the W part of Bassins de Freycinet. This lock has a usable length of 230m, a usable width of 32m, and a depth of 8m over the sill.

Bassin de Freycinet consists of six smaller basins, which are separated by piers. A passage, 26m wide and spanned by a swing bridge, divides the two southeasternmost basins from the remaining four. These basins provide a total of 50 berths, with depths of 6.7 to 12.8m alongside. The piers are fronted by quays, 114 to 406m long. Vessels up to 250m in length and 12m draft can be accommodated.

Three small inner basins, which are used by fishing vessels and small craft, are connected to the SE side of Bassin de Freycinet by a narrow passage.

Ecluse Charles de Gaulle, the main lock, is entered at the W side of Avant-port. It is 364m long and 47.5m wide, with a depth of 13.5m over the sill. This lock is operational at all times. Vessels up to 289m in length, 45m beam, and 14.2m draft can be accepted by day, in favorable conditions.

This lock leads into Bassin d'Evitage, a turning area dredged to a depth of 13.2m. Bassin d'Evolution is entered at the SE side of the turning area and leads into the W end of Bassin de Freycinet. Bassin Maritime is entered at the W side of the turning area and leads to Bassin de Mardyck, 2.8 miles WSW.

An oil terminal, fronting a refinery, is situated on the S side of Bassin d'Evolution. It can handle tankers up to 245m in length and 12.5m draft.

Bassin Maritime, with a swinging area at its W end, has a general dredged depth of 12m.

A grain terminal berth, 195m long, is situated at the E end Bassin Maritime and has a depth of 14.5m alongside. It is capable of accepting vessels up to 250m in length and 14.2m draft.

Quai Usinor, situated close W of the grain terminal, provides six bulk berths, with alongside depths of 8 to 17m. A T-shaped quay, 720m long, is situated close W of Quai Usinor and handles heavy bulk commodities.

Quai de Grand Synthe, 590m long, is situated at the W end of the Bassin Maritime. It is capable of accepting vessels up to 80000 dwt and 14.2m draft.

A tanker terminal, situated on the SW side of Bassin de Mardyck, has depths up to 16.2m alongside. It is capable of accepting vessels up to 275m in length and 14.2m draft.

Stoknord Petro-chemical wharf, situated W of the tanker terminal, handles chemical tankers and gas carriers. It is capable of accepting vessels up to 100,000 dwt, 280m in length, and 14.2m draft.

An ore terminal berth, 642m long, is situated at the E side of Bassin de Mardyck and has a depth of 12m alongside. It is capable of accepting vessels up to 11.3m draft.

Dunkerque (Port Ouest and Port Est) provides extensive facilities for bulk, container, oil, ro-ro, rail, LPG, passenger, chemical, general cargo, fishing, and ferry vessels. The port also has repair facilities. A drydock, situated at the N side of Bassin de Freycinet, is 310m long and 50m wide. It can accommodate vessels up to 289m long, 45m beam, and 6.5m draft.

Vessels up to 300,000 dwt, 360m in length, 60m beam, and 20.5m draft have been accommodated in Port Ouest. Generally, vessels over 300m in length can enter only by day.

Vessels up to 120,000 dwt, 289m in length, 45m beam, and 14.2m draft have been accommodated in Port Est. Generally, vessels over 250m in length and 40m beam can enter only by day. The preferred time for vessels over 180m in length and 10m draft to enter is at slack water at the jetty heads, which is either about 3 hours before HW or 2 hours after, depending on the weather conditions and the tidal predictions. Such vessels have priority over other commercial vessels, which may enter and leave at any time.

Aspect.—Port Ouest.—Lighted ranges, which may best be seen on the chart, indicate the entrance channel leading into Port Ouest. They consist of high intensity sector lights. A directional sector light, situated at the S end of the basin, indicates the fairway within Bassin de l'Atlantique.



Dunkerque—Port Ouest from S

Conspicuous landmarks in the vicinity of Port Ouest include the nuclear power station, previously described in paragraph 6.23; the light structure, 23m high, standing at the head of the E jetty; a group of silos standing at the W side of Bassin de l'Atlantique; and the container gantry cranes situated in the vicinity of Quai de Lorraine. It is reported (1999) that numerous prominent wind generators stand close E of the root of the E breakwater, along the N side of Canal des Dunes.

Port Est.—Lighted ranges, with a common rear light, indicate the limits of the entrance channel leading into Port Est and may best be seen on the chart.



Dunkerque—Port Est

The head of the W jetty is faced with two white-painted panels, which are illuminated at night. The E jetty, which is partly submerged at HW, is marked by reflectors. A prominent light structure, 36m high, stands on the head of the W jetty.

Dunkerque Port Est Light is shown from a conspicuous tower, 56m high, standing 0.8 mile SE of the head of the E jetty, close NW of Ecluse Trystam Lock.



Dunkerque Port Est Light

Conspicuous landmarks in the vicinity of Port Est include a casino situated on the foreshore at Malo-les-Bains, about 1 mile E of Dunkerque Port Est Light; a building, 85m high, standing 0.8 mile SE of Dunkerque Port Est Light, at the S end of Port d'Echouage; and a prominent chimney, 110m high, standing near the power station, about 0.9 mile SW of the head of the W jetty.

Pilotage.—The Dunkerque pilotage area is divided into two zones. The Outer Zone is limited, as follows:

To the W—by the meridian of Calais Light (1°51.2'E).

4. To the N—by a line extending 3 miles seaward from the low-water mark.

5. To the E—by the meridian of 2°27'E.

6. To the S—by the coast, the Calais pilotage limit, and the Inner Zone limit.

The Inner Zone is limited, as follows:

1. To the W—by a line joining position 51°00.0'N, 2°02.8'E and position 51°03.0'N, 2°08.0'E.

2. To the N—by a line consisting of the parallel of 50°03.0'N, the coast, the meridian of 2°20.0'E, and the parallel of 51°04.5'N.

3. To the E—by the meridian of Dunkerque Light (2°21.9'E.).

Pilotage is compulsory for the following vessels:

1. All vessels of 100m or more in length in the Outer Zone.

2. All vessels of 70m or more in length in the Inner Zone bound for Port Ouest (West Port).

3. All vessels of 50m or more in length in the Inner Zone bound for Port Est (East Port).

4. All vessels carrying dangerous cargo or without VHF within both zones, regardless of length.

All vessels should send a request for pilotage at least 12 hours in advance (or on departure from a previous port if less than 12 hours) to the pilot station. The message, which must also be addressed (sent) to the Harbormaster, must include the vessel's name, length, beam, draft fore and aft, last port of call, and ETA at the appropriate pilot boarding position. The words "Dyck" must be stated for the boarding position at Dyck Lighted Buoy, "E12" for E12 Lighted Buoy, or "Rade Dunkerque Est" for Dunkerque East Roads (see below).

Vessels should send amendments to their ETA of more than 2 hours at least 6 hours before arrival. Vessels should then confirm their ETA by VHF, telex, or telephone 2 hours prior to arrival at the pilot boarding position.

Vessels approaching from the W must also contact the Pilot Radar Station 2 hours before arrival at the boarding position on VHF channel 72, with a confirmation of their ETA 1 hour prior to arrival.

For additional reporting requirements to Dunkerque VTS, see Regulations.

Pilots can be contacted on VHF channel 72 and board vessels in the following positions:

1. Near Dyck Lighted Buoy (51°03.0'N., 1°51.8'E.).

2. Near E12 Lighted Buoy (51°07.9'N., 2°30.7'E.).

3. In Rade de Dunkerque Est (51°04.0'N., 2°21.4'E.).

When embarking the pilot, care should be taken not to drift down onto Dyck Lighted Buoy as the tidal currents are very strong in this location.

All vessels crossing or anchoring in the Dunkerque waiting area should maintain a continuous listening watch on VHF channel 72.

The local pilot operations station may be contacted by e-mail, as follows:

tov.piloduk@wanadoo.fr

Boarding by helicopter depends on the weather conditions and is at the discretion of the pilot. Vessels will receive instructions from Pilotes Dunkerque on VHF channel 72 or by tele-

phone 2 hours prior to arrival at Dyck Lighted Buoy (51°03'N., 1°52'E.). Pilots may, at the request of the vessels's master:

1. Board on passing Cape Gris-Nez passage.
2. Board or disembark on passing the following:
 - a. MPC Lighted Buoy (51°06.1'N., 1°38.2'E.).
 - b. Ruytingen N Lighted Buoy (51°13.2'N., 2°10.3'E.).
 - c. Oost Dyck Lighted Buoy (51°21.5'N., 2°31.1'E.).

Deep sea pilots are available and should be requested from Pilotage Hauturier Dunkerque at least 48 hours in advance through Brest Le Conquet (FFU) or Boulogne (FFB). The message must include destination, length, draft, and contact details of the agent or vessel owner. Vessels should also send their ETA 48 hours and 24 hours in advance of arriving at the pilot boarding position.

The deep sea pilot station may be contacted by e-mail, as follows:

pilotage-hauturier@wanadoo.fr

Radar coverage of the pilot boarding area at the entrance to the W pass is provided by the pilot station. Radar coverage of the access channels is provided by the port.

Regulations.—A Vessel Traffic Service (VTS) system is operated by the port authority. Vessels must send an ETA to Dunkerque VTS via their agent 48 hours in advance. The ETA message sent to the pilot station 12 hours prior to arrival must also be addressed (sent) to the Port Harbormaster.

Vessels subject to SURNAV while on route between the Dover Strait TSS and the Dunkerque regulated zone or waiting area must maintain a continuous listening watch on VHF channel 13 with Gris-Nez Traffic and on VHF channel 73 with Dunkerque VTS.

SURNAV is a system designed to monitor the movements of vessels carrying dangerous cargo navigating in the approaches to the French coast. For more information, see Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea.

All vessels in the regulated shipping zone, access channel, and dumping spoil ground areas must maintain a continuous listening watch on VHF channel 73.

Vessels must confirm their ETA at the pilot boarding position on VHF channel 73 to Dunkerque VTS, as follows:

1. Vessels embarking the pilot at Dyck Lighted Buoy (51°03.0'N., 1°51.8'E.) or E12 Lighted Buoy (51°07.9'N., 2°30.7'E.)—2 hours in advance.
2. Vessels embarking the pilot at Rade de Dunkerque Est (51°04.0'N., 2°21.4'E.)—On passing Dyck Lighted Buoy or E12 Lighted Buoy on arrival from E or W. Dunkerque VTS may be contacted by e-mail, as follows:

harbourmaster@portdunkerque.fr.

Vessels are prohibited from stopping, fishing, or anchoring, except in emergency, within the approach channels (Passe de l'Ouest, Passe Est, Westdiep, Passe de Zuydcoote, and Chenal Intermediaire) and roadsteads of Dunkerque. This regulation also applies to the four dumping ground areas lying N of the approach channels.

Restricted Areas (Release Zones), the limits of which may be best seen on the chart, lie about 2 miles NW and 7 miles W of the entrance to Port Ouest. Vessels waiting to enter the port can stop or anchor in these areas only with permission of the Harbor Master.

Vessels with drafts over 10m or lengths over 230m are considered to be constrained. Such vessels must display the appropriate shapes and lights when transiting the approach channels.

Special regulations and reporting procedures apply to vessels over 1,600 grt transporting dangerous cargo in bulk in the approaches to the French coasts of the North Sea, the English Channel, and the Atlantic Ocean between the Belgian border and the Spanish border.

Such vessels should contact Gris-Nez Traffic on VHF channel 13 or Dunkerque Port Control on VHF channel 73 when arriving within VHF range, and, in any case, before leaving the Dover Strait TSS. Vessels should then maintain a continuous listening watch on these frequencies.

Such vessels must report any significant defects to propulsion, steering, anchoring, or radar equipment prior to entering French territorial waters. Vessels must send an ETA 12 hours before arrival to the pilot station and to Dunkerque Port Control.

Such vessels are authorized to proceed without a pilot to the Waiting Area anchorage lying to the W of Dyck Lighted Buoy. They are not permitted to proceed E of Dyck Lighted Buoy unless a Dunkerque pilot is on board. However, vessels less than 100m in length unable to embark a pilot because of weather may, with permission from the authorities, proceed through the approach channel.

For further details of these special procedures, see Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea.

Signals.—Dredges operating on the S side of the approach channel display a black cone by day and a green light at night. When operating on the N side of the approach channel, they display a red cylinder by day and a red light at night.

Movement signals controlling entry are shown from the ends of the three locks at Port Est. A green fixed light and a green flashing light indicate that vessels should enter the lock and secure to the side with the flashing light. Two red lights indicate that entry is prohibited. When permission to enter the lock is about to be given, the red light situated on the side of the lock to which the vessel should secure starts flashing.

Anchorage.—A designated Waiting Area (anchorage), which may best be seen on the chart, extends SW from the vicinity of Dyck Lighted Buoy (51°03'N., 1°52'E.). Care should be taken to avoid the wrecks and obstructions lying within this area. The recommended anchorage berth within the area for vessels with drafts over 15m lies about 5 mile WSW of Dyck Lighted Buoy. Vessels with drafts of 10 to 15m should anchor about 2 to 3 miles WNW of Dyck Lighted Buoy.

Vessels should anchor at slack water (2 hours 30 minutes before and 3 hours after HW at Calais) and not at HW, when the tidal currents may attain rates of 3 knots. The Waiting Area has depths of 17 to 28m and is shared with vessels bound for Calais, which anchor in the S part.

Caution.—Numerous wrecks lie in the approaches to the port and may best be seen on the chart.

Buoyage marking the approach channels may be missing or changed without notice. Vessels are recommended to contact the local authorities for the latest information concerning the routes.

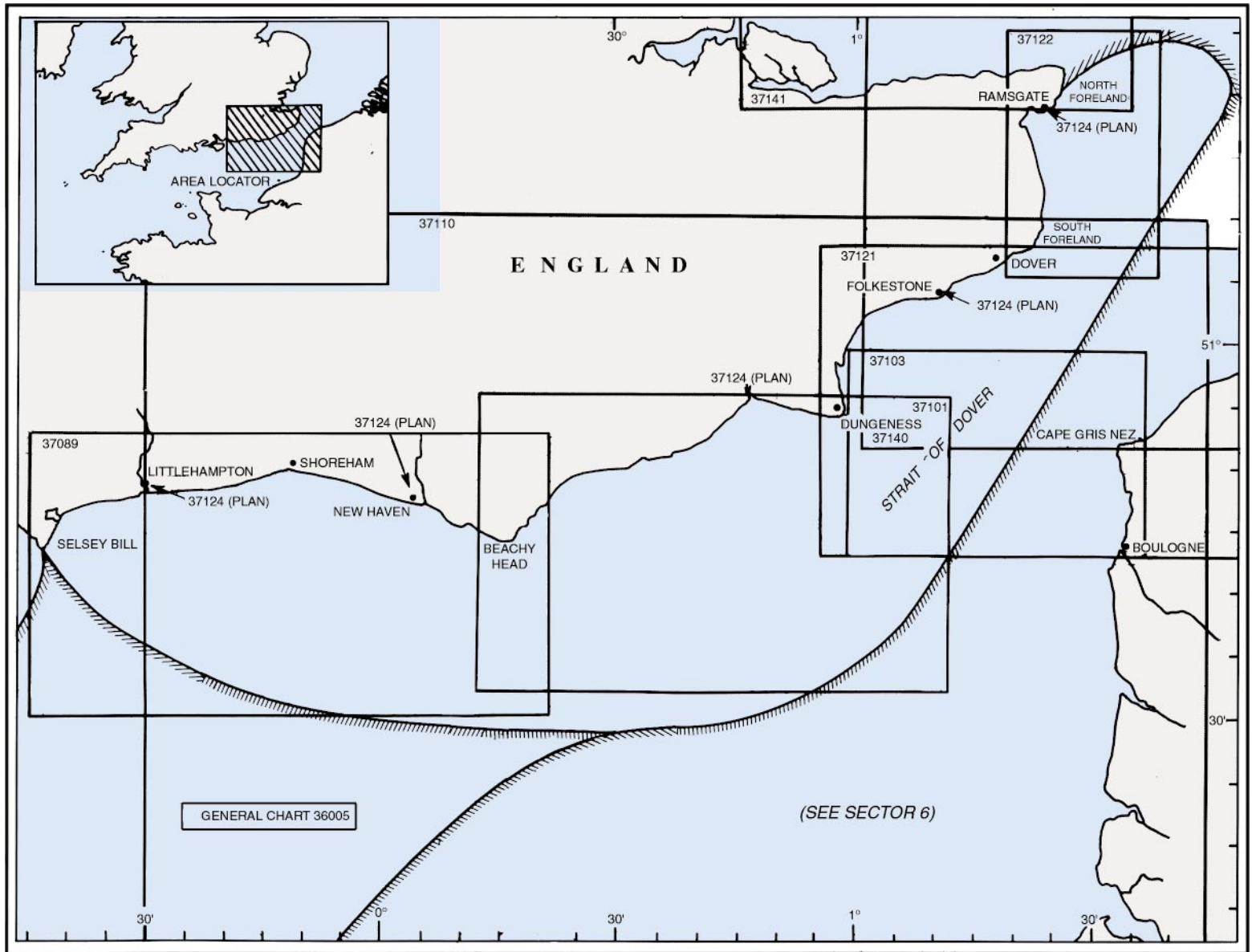
Dumping ground areas (spoil areas), which may best be seen on the chart, lie centered about 1.5 miles N and 3.4 miles NNE of the entrance to Port Ouest, and 1.2 miles N and 2.5 miles NW of the entrance to Port Est.

An explosives dumping ground area, which may best be seen on the chart, lies centered about 2 miles NNW of the entrance to Port Est.

It is reported that frequent accidents have occurred at Port Est due to vessels disregarding the effect of the wind on the tidal currents.

High speed ferries may be encountered in the approach channels.

It is reported (1999) that submerged masonry extends up to about 50m seaward from the head of the W jetty at Port Est.



Additional chart coverage may be found in NGA/DLIS Catalog of Maps, Charts, and Related Products (Unlimited Distribution).

SECTOR 7 — CHART INFORMATION

SECTOR 7

ENGLAND—SOUTH COAST—DOVER STRAIT—NORTH FORELAND TO SELSEY BILL

Plan.—This sector describes the SE coast of England from North Foreland to Selsey Bill, including the English Inshore Traffic Zone within Dover Strait. The descriptive sequence is from NE to SW.

General Remarks

7.1 Shipping lanes in the area are among the busiest in the world and for the safety of navigation Traffic Separation Schemes have been introduced to alleviate maritime casualties.

The United Kingdom Department of Transport view is that if a vessel, other than one less than 20m in length, a sailing vessel, or a vessel engaged in fishing, commences its voyage from a location beyond one limit of the Inshore Traffic Zone and proceeds to a location beyond its furthest limit, and is not calling at a port, pilot station, destination, or sheltered anchorage within the Inshore Traffic Zone, then that vessel should, if it can safely do so, use the appropriate lane of the adjacent Traffic Separation Scheme unless some abnormal circumstance exists in that lane.

In that context, reduced visibility in the area or the density of traffic using a lane does not justify use of the Inshore Traffic Zone.

The existence of a Traffic Separation Scheme (TSS) does not imply that the traffic lanes have been adequately surveyed. In addition, the existence of sandwave areas, where depths may be less than charted, should also be taken into account by masters of deep-draft vessels. See paragraph 6.4 for further details.

The inshore waters described in this sector, from the meridian of North Foreland Light, lie within the English Inshore Traffic Zone of the Dover Strait TSS.

Regulations concerning the use of Inshore Traffic Zones are given in the rules of the International Regulations for Preventing Collisions at Sea (72 COLREGS). Rule 10 of these regulations states that a vessel shall not use the inshore traffic zone when it can safely use the appropriate traffic lane within the adjacent traffic separation scheme. However, vessels of less than 20m in length, sailing vessels, and vessels engaged in fishing may use the inshore traffic zone.

Notwithstanding the above, a vessel may use the inshore traffic zone when enroute to or from a port, offshore installation or structure, pilot station or any other place situated within the inshore traffic zone, or to avoid immediate danger.

A vessel outbound from a port is recommended to join the adjacent traffic lane as soon as possible, as provided for and described in the rules.

Pilotage.—Vessels bound for ports in Dover Strait and the English Channel area may wish to pick up a deep-sea pilot before reaching the complex Traffic Separation Schemes. Such pilots, who are properly licensed, should be requested through the various pilotage agencies based in the British Isles or other European countries.

Reporting Systems.—The Dover Strait Reporting System (CALDOVREP) is a mandatory reporting system under SOLAS regulations which operates in the Dover Strait Traffic Separation Scheme (TSS).

For further details concerning CALDOVREP, see paragraph 6.4.

The Ship Movement Reporting System (MAREP) is a voluntary reporting system operating in the English Channel and Dover Strait. Vessels are requested to report to the appropriate shore station when approaching the following:

1. The TSS off Ile d'Ouessant.
2. The TSS off Casquets.
3. The TSS within Dover Strait.

For further details of MAREP, see Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea.

Due to the CALDOVREP reporting system being mandatory in the area of the Dover Strait TSS, vessels are advised that this system takes precedence over the Ship Movement Report System (MAREP), which is voluntary.

Directions.—The main coastal route connects to the N with the Outer Passage, which crosses the Thames Estuary. For more information concerning the Outer Passage, see Pub. 192, Sailing Directions (Enroute) North Sea.

Vessels bound for the N part of the North Sea usually keep to the E side of the Outer Passage. They pass E of the East Goodwin Lightvessel (51°13'N., 1°36'E.), W of South Falls, and E of Drill Stone.

Vessels heading S usually keep to the W side of the passage. They pass E of Kentish Knock and then shape a course to lead E of Elbow Lighted Buoy and E of North Foreland. Vessels then pass E of NE Goodwin Lighted Buoy (5°20'N., 1°34'E.), E of E Goodwin Lighted Buoy (51°16'N., 1°36'E.), E of SE Goodwin Lighted Buoy (51°13'N., 1°34'E.), clear of East Goodwin Lightvessel (51°13'N., 1°36'E.), SE of S Goodwin Lighted Buoy (51°11'N., 1°32'E.), NW of CS4 Lighted Buoy (51°09'N., 1°34'E.), and SE of SW Goodwin Lighted Buoy (51°08'N., 1°28'E.).

Light-draft vessels may also transit The Downs and Gull Stream, which are described in paragraph 7.5 and paragraph 7.6, respectively.

Caution.—An offshore scallop fishing ground extends from a line S of Rye (50°43'N., 0°50'E.) to a line S of Selsey Bill (50°43'N., 0°47'W.), 60 miles W, in a zone 15 miles wide.

Fishing vessels may be encountered anywhere within the area described in this sector, which includes the entire W portion of the SW traffic lane of the Dover Strait TSS and the waters lying close W of it.

An area to be avoided surrounds CS4 Lighted Buoy (51°09'N., 1°34'E.), which marks the NW limit of the Dover Strait TSS. This area, which may best be seen on the chart, has been established because of the damage inflicted by vessels that have been set down onto the buoy by the tidal currents.

North Foreland to Ramsgate

7.2 North Foreland (51°22'N., 1°27'E.), with its nearly perpendicular chalk cliffs and prominent light tower, forms the S entrance point of the Thames Estuary. In good weather it is usually the first point of land seen when approaching Dover Strait from the NE.

For more information concerning North Foreland and the waters located to the N of it, see Pub. 192, Sailing Directions (Enroute) North Sea (Sector 4).

The cliffl coast in the vicinity of North Foreland is fringed by rocky ledges, which extend up to about 0.2 mile offshore. A very conspicuous building stands 1.5 miles WNW of the light and, when viewed from N, is the highest landmark in this area.

Elbow (51°22'N., 1°31'E.), a sandy ridge, forms the NE extremity of the shoal bank extending seaward from North Foreland. It is marked by a lighted buoy moored about 3 miles ENE of the light.

Broadstairs (51°21'N., 1°27'E.), a small town fronted by a drying boat harbor, is situated 1 mile S of North Foreland.

Broadstairs Knolls, with depths of less than 5m, are the outermost shoal patches on the flats that front the coast between Ramsgate and North Foreland. They extend up to about 1.5 miles seaward and are marked by a lighted buoy moored 1.8 miles ESE of Broadstairs.

7.3 Off-lying banks.—South Falls (51°23'N., 1°47'E.), with a least depth of 6.4m, lies 13 miles E of North Foreland and forms the southernmost part of the Outer Banks fronting the Thames Estuary. This shoal, which is marked by lighted buoys, is about 15 miles long and consists of a narrow ridge of sand and shells.

Drill Stone (51°26'N., 1°42'E.), with depths of 11 to 18m, lies about 10 miles ENE of North Foreland and is marked by a lighted buoy. Strong tide rips occur in the vicinity of this patch.

Caution.—Outfall pipelines extend up to about 2 miles ENE from the coast in the vicinity of North Foreland and may best be seen on the chart.

Numerous submarine cables, some disused, extend seaward from points on the shore close N and about 1.5 miles S of North Foreland, and may best be seen on the chart.

A dumping area (spoil ground), which may best be seen on the chart, lies 7.2 miles E of North Foreland.

Ramsgate (51°20'N., 1°25'E.)

World Port Index No. 35715

7.4 Ramsgate is an artificial harbor containing Western Marine Terminal, the cross-channel ferry harbor, Royal Harbour, the old commercial port, and Inner Harbour, which is a yacht marina. The harbor is enclosed by breakwaters. East Pier and North Breakwater, its extension, provide protection on the E side while South Breakwater provides protection on the S side.

Tides—Currents.—The tides rises about 5.2m at MHWS and 4m at MHWN.

The tidal currents run strongly across the port entrance. It is reported that the NE current produces an eddy off the head of South Breakwater. This eddy runs SW taking vessels toward

the breakwater. The ebb current sets SW from about 6 hours after HW at Dover to about 1 hour before HW at Dover. The flood current sets NE from about HW at Dover to about 4 hours after HW at Dover. The currents off the entrance attain a maximum rate of about 1.2 knots at springs.

Depths—Limitations.—The main approach channel, which may best be seen on the chart, leads 2.5 miles W to the port entrance. It is marked by lighted buoys and dredged to a depth of 7.5m. The port entrance is 180m wide between the breakwater heads. The fairway channel leading through the entrance is 125m wide.

Royal Harbour, situated in the N part of the port, has an entrance, 63m wide. It is dredged to a depth of 2m and mostly used by pleasure craft. A commercial quay, 109m long, is situated at the NW side and has a depth of 2.1m alongside. Vessels up to 120m in length and 5m draft can be accommodated at HW.

The Inner Harbour, a large marina, has a dredged depth of 3m. It is entered from Royal Harbour through dock gates, 12.1m wide, which are spanned by a bascule bridge. Yachts up to 24m in length and 2.4m draft can enter.

Western Marine Terminal, the ferry harbor, has a dredged depth of 7.5m. It provides extensive facilities for cross-channel passenger and freight ferries. Three ro-ro ferry berths, with depths of 7.5m alongside, are situated at the W side of the harbor. Vessels up to 165m in length and 6m draft can be accommodated.

Aspect.—A lighted range, with a directional sector light, indicates the main approach channel and may best be seen on the chart.

An approach, used by small craft, is indicated by a lighted range, which may best be seen on the chart. It leads WNW and joins the main channel about 0.3 mile E of the port entrance.

The Granville Hotel, with a prominent tower, stands about 0.7 mile N of the port entrance. Conspicuous, large buildings are situated 0.2 mile W and 0.5 mile SW of this hotel.

An aluminum flagstaff standing on the NW side of the Inner Harbour, about 0.4 mile NW of the port entrance, is reported to be conspicuous. A dome situated near the shore at Pegwell, 1.2 miles W of the port entrance, is prominent from S.

Pilotage.—The Compulsory Pilotage Area includes the port and a segment extending 3 miles seaward between the bearings of 065° and 145° from West Pier Light (51°19.6'N., 1°25.4'E.).

An Outer Pilotage Area, which is non-compulsory, includes the waters outside the Compulsory Pilotage Area bound by a line joining (approximately) North Foreland Light, Elbow Lighted Buoy, NE Goodwin Lighted Buoy, Deal Bank Lighted Buoy, and Deal Pier.

Pilotage is compulsory for all vessels carrying petroleum products or other hazardous cargo, passenger vessels, and all vessels over 80m in length, except those exempt by law. Pilots can be contacted by VHF or telephone and board about 3 miles ENE of the port entrance.

Vessels must request pilotage by contacting the Harbor Authority through the Vessel Traffic Service (VTS) Port Control 12 hours before arriving at the pilot boarding position. Vessels should then confirm their ETA 2 hours prior to arrival.

Pilotage for the River Stour is not compulsory. However, pilots are available by prior arrangement.

Ramsgate also provides pilots for the NE Spit (Thames Estuary) pilot boarding area. See Pub. 192, Sailing Directions (Enroute) North Sea for further information.

Regulations.—A Vessel Traffic Service (VTS) system operates in the vicinity of the harbor and is managed by Ramsgate Port Control Center. It controls navigation within the port area and provides advice and marine information to vessels in the pilotage areas.

All vessels navigating within the harbor limits and approaches must maintain a continuous listening watch on VHF channel 14.

Any inbound vessel requiring a pilot must report to the Port Control on VHF channel 14 or by telephone 12 hours and 2 hours prior to arrival at the pilot boarding position.

All inbound vessels over 20m in length and not requiring a pilot must report to the Port Control by VHF or by telephone as, follows:

1. Conventional vessels:
 - a. 1 hour before Point Romeo (See Note 3).
 - b. 30 minutes before Point Romeo (See Note 1).
 - c. At Point Romeo (See Note 2).
 - d. Entering the channel.
 - e. Vessel secure.
2. High speed craft:
 - a. 30 minutes before Point Romeo (See Note 3).
 - b. At Point Romeo (See Note 2).
 - c. Entering the channel.
 - d. Vessel secure.

Note 1.— Vessels must advise the VTS of any circumstances which may affect the maneuvering capability and also the number of any Exemption Certificate.

Note 2.— Vessels must obtain permission to proceed into the channel or to leave a berth.

Note 3.— Vessels should keep a listening watch on VHF channel 14 from this time until secure.

Point Romeo is defined as any point on a circle with a radius of 2.5 miles centered midway on a line extending between No. 1 Channel Lighted Buoy and No. 2 Channel Lighted Buoy (51°19.5'N., 1°27.4'E.).

Vessels requiring tug services should send a request at least 3 hours in advance by VHF, fax, or telephone.

Signals.—International Port Traffic Signals are exhibited above the Port Control Building on the East Pier and regulate the movement of vessels to and from Royal Harbour (see paragraph 1.1).

The above signals are augmented by the Ferry Terminal Movement Signal, which is shown when a ferry is maneuvering. While this signal is displayed, no other vessels may, without permission from the VTS, enter the harbor limits from seaward, leave the Royal Harbour, or move within Western Marine Terminal.

Anchorage.—Ramsgate Road provides good anchorage with winds between WNW and NNE. However, S or E winds with a strong tidal current make this anchorage untenable. The recommended anchorage is in a depth of 3.5m about 0.3 mile S of the head of South Breakwater.

Caution.—During strong NE gales, a sand bank frequently forms at the mouth of Royal Harbour and the depths in the entrance are reduced.

Ferries, including high speed craft, enter and leave the port at frequent intervals.

A dumping ground area (spoil ground), which may best be seen on the chart, lies 1 mile SE of the port entrance.

Ramsgate to Dover

7.5 Pegwell Bay (51°19'N., 1°22'E.), lying 1.5 miles WSW of Ramsgate, is fronted by a drying coastal bank, which extends up to about 1.2 miles seaward. The River Stour runs into this bay through drying flats of mud and sand. A drying channel, marked by buoys and beacons, leads through the coastal bank to the river mouth. Richborough Port, with a drying wharf, lies close inside the river mouth. Sandwich Haven, used by pleasure craft, is located about 3 miles above Richborough Port. The river is no longer used by commercial shipping.

A prominent power station chimney, with an elevation of 135m, and three conspicuous cooling towers stand about 0.8 mile WSW of the river mouth, 3 miles WSW of Ramsgate.

Deal (51°13'N., 1°24'E.), a small town, is situated 5 miles N of South Foreland. It extends along the shore for about 1.5 miles and is fronted by a castle, a hospital, and a barracks, which are all prominent. A T-headed pier, alongside of which berthing is prohibited, extends seaward from the shore about 0.2 mile N of the castle.

Sandown Castle, in ruins, and Walmer Castle, surmounted by a flagstaff, stand close to the N end and close to the S end, respectively, of Deal. They are both prominent from seaward.

The coast extending to the N of the town is low. The coast between a point located close S of the town and Dover consists of chalk cliffs.

South Foreland (51°08.5'N., 1°22.5'E.), a bold headland, is faced by chalk cliffs, which have layers of flint in horizontal lines. A conspicuous disused white light tower, 21m high, stands on the summit of this headland. An old lighthouse is situated 0.2 mile ENE of the disused tower and at a lower level.



South Foreland Light Tower (disused)

A white windmill, prominent in strong sunlight, stands 0.2 mile NE of the disused light tower.

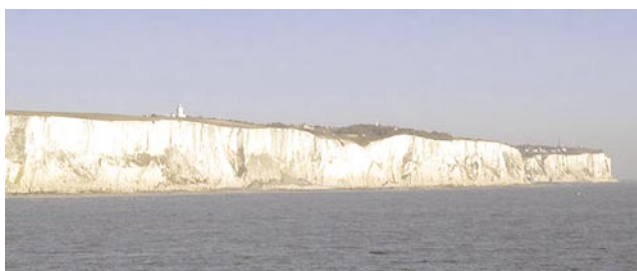
Dover Patrol Memorial (51°09.4'N., 1°23.6'E.), a conspicuous stone monument, stands above the cliffs, 1.2 miles NE of the disused light tower.



Dover Patrol Memorial



White Cliffs of Dover



White Cliffs of Dover

A radar surveillance station is situated close E of the memorial.

Saint Margaret's Bay, with a beacon standing at the head, lies 0.5 mile SW of the memorial

Tides—Currents.—The tidal currents run strongly along the coast between South Foreland and Deal, 5 miles N. In the bay formed between Deal and Ramsgate, the currents are weak.

The currents in the vicinity of The Downs (51°13'N., 1°27'E.) and Goodwin Sands are mostly rotary clockwise, although the degree of rotation varies over the area. Near the E side (N portion) of Goodwin Sands, the flood current probably sets NE out of Kellett Gut while the ebb current probably sets into the it. Within Kellett Gut, the NE current is dangerous because it sets toward the sands near the time of HW.

Reports indicate that E of Goodwin Sands the flood current sometimes sets NW with considerable velocity. If this occurs,

the set is likely to be strong and dangerous near the time of HW.

Care is advised, as S of South Sand Head (51° 10'N., 1°29'E.) the flood current sets strongly toward and across the S portion of Goodwin Sands, from about 1 hour before to about 3 hours after HW at Dover.

Anchorage.—The Downs (51°13'N., 1°26'E.), an anchorage area for ocean-going vessels, lies centered about 1 mile E of the town of Deal and may best be seen on the chart. The holding ground is not good in some parts of this area, particularly S of Goodwin Fork Lighted Buoy (51°14.3'N., 1°26.9'E.). However, good anchorage can be taken, in a depth of 12.8m, about 1.3 miles ESE of the castle at Deal or, in a depth of 12.5m, about 1.1 miles E of Walmer Castle.

The Small Downs (51°15'N., 1°26'E.), lying 1.8 miles NNE of Deal, is an area that provides anchorage to vessels with drafts less than 5m. It is more sheltered and has better holding ground than The Downs.

Trinity Bay (51°12'N., 1°30'E.) provides good anchorage during NE winds, but the tidal currents can be strong. Vessels may anchor, in a depth of 21m, about 3.2 miles ESE of Deal.

Caution.—Several submarine cables, which may best be seen on the chart, extend seaward from the vicinity of Saint Margaret's Bay.

Several wrecks and obstructions, which may best be seen on the chart, lie within the anchorage areas of The Downs and The Small Downs.

7.6 Off-lying dangers.—Goodwin Sands (51°14'N., 1°32'E.), a shifting mass of drying sand banks, extends up to about 7 miles offshore between North Foreland and South Foreland and is marked by lighted buoys. The area surrounding the sands, which may best be seen on the chart, is littered with the wrecks of numerous vessels. Some of these wrecks are visible depending on the state of the tide.

The sands are moved by the tidal currents and their forms are frequently changed. Large drying patches lie along the E and W edges. Except for The Downs, where an area of deeper water exists, the 20m contour lies to the E of Goodwin Sands.

Kellett Gut (51°14'N., 1°32'E.), a passage bordered by drying patches, leads 4.5 miles NE between Trinity Bay and Goodwin Knoll. This channel is unmarked and subject to frequent changes. It should only be used by small vessels with local knowledge.

Gull Stream (51°18'N., 1°30'E.) leads NE from The Downs to the North Sea or the Thames Estuary. This passage, which is marked by lighted buoys, may be used by medium-draft vessels with local knowledge. The fairway frequently changes and the navigational aids are often moved without prior notice.

A sand bar, subject to sandwave action, lies near the NE end of Gull Stream. Several shoal patches and other dangers lie in the vicinity of the channel and may best be seen on the chart.

Historically, depths over all the shoal patches in the channel have been shallower than presently charted. Periods of accretion, influenced by the ebb tidal flow, are followed by periods of erosion brought on by the effect of storms and the resulting system seems to be self-regulating. On the W side of the channel the minimum depth is about 10m. For the remainder of the channel the minimum depth is about 8m. The authorities should be contacted for the latest depth information.

NE Goodwin Lighted Buoy (51°20'N., 1°34'E.) is moored about 5.5 miles E of Ramsgate and is equipped with a racon.

East Goodwin Lightvessel (51°13'N., 1°36'E.), with a red hull, is moored about 7.5 miles E of Deal and is equipped with a racon.

See Directions in paragraph 7.1.

Dover (51°07'N., 1°20'E.)

World Port Index No. 35710

7.7 Dover, a fairly large harbor, can easily be identified by its breakwaters and the castle surmounting the cliffs above.

Although of some commercial importance, the port is primarily used as a cross-channel terminal for ro-ro ferries. The harbor is enclosed by Admiralty Pier, Southern Breakwater, and Eastern Arm, which together form the W and E entrances to the port.

Winds—Weather.—The greatest proportion of wind in the Dover area is from the SW, usually with a force of 4 to 7 in the winter months.

From February to June, winds from the NE increase somewhat, nearly equaling those from the SW in May. Rain occurs mostly from October to December, nearly twice that of the summer season. Fog occurs fairly frequent in the winter, averaging about 4 or 5 days a month. During the summer haze can be a problem anytime.

Tides—Currents.—The tides rise 6.7m at MHWS and about 5.3m at MHWN. Tidal currents in the entrances are subject to great variations hourly. In either entrance there may be an in-flowing current in one part and out-flowing current in another.

Eddies run off the breakwater heads, and due to the variable directions of the currents, may also produce turbulence in the entrances. The sub-surface currents may differ appreciably from those near the surface and caution is necessary.

Depths—Limitations.—The W entrance is 225m wide, but is obstructed by foul ground and a shoal, with a least depth of 8.9m, lying on the W side of the channel. Another foul shoal area, with a least depth of 1.1m, lies on the E side of the entrance. It extends NNW from close to the W head of Southern Breakwater and is marked by a lighted buoy. The E entrance is 204m wide.

Both entrance channels are maintained with depths in excess of 10m. Vessels up to 300m in length and 9m draft can enter the port.

Outer Harbour, the inner part of which it lies the anchorage, forms the central part of the port. Fairway, with a least depth of 6.4m, is the area lying between the S limit of the anchorage area and the N side of Southern Breakwater.

Eastern Docks are situated N of the E entrance and include a ferry terminal and a cargo terminal. The ferry terminal has eight ro-ro berths and one fast ferry berth. The berths have depths up to 8.6m alongside and can handle ferries up to 200m in length, 35m beam, and 8.5m draft. Five of the berths are double-decked, loading vehicles on two levels simultaneously.

The cargo terminal, South Jetty, has 220m of quayage, with a depth of 8.6m alongside. It can handle vessels up to 200m in length and 8.5m draft.

Eastern Arm provides 480m of quayage. It has depths up to 10m alongside and can handle vessels up to 300m in length.

The Western Docks lie close NNW of the W entrance. Inner Harbour, the outer basin, lies between Prince of Wales Pier and the E side of Admiralty Pier.

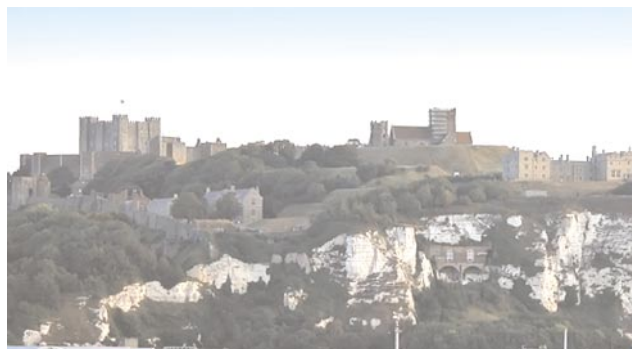
Tidal Harbour, with depths up to 2.7m, is entered from the Inner Harbour through a channel dredged to a depth of 5m. It is only by small craft and yachts.

Granville Dock and Wellington Dock, two wet basins, are entered from Tidal Harbour and are used as marinas.

Admiralty Pier and its extension, which provide 1,100m of quayage, form a cruise terminal. The two berths have depths of 8.9 to 10m alongside.

Prince of Wales Pier provides 400m of quayage on its E side, with depths up to 6.5m alongside. However, vessels may only berth alongside by special arrangement.

A catamaran (Seacat) terminal is situated along the W side of Prince of Wales Pier.



Dover Castle and Church Tower (from S)

Aspect.—Dover Castle, standing on the top of the cliffs behind the harbor, is conspicuous along with a church tower located close SE of it. Three radio masts, standing about 0.8 mile NE of the castle, are also very prominent from seaward.

Langdon Battery, with a radar surveillance station, is situated about 0.4 mile N of the root of Eastern Arm.

A light is shown from a prominent tower, 22m high, standing on the head of Admiralty Pier. Another light is shown from a prominent tower, 21m high, standing on the W end of Southern Breakwater. A light is also shown from a prominent tower, 16m high, standing on the knuckle of Southern Breakwater.

The Port Control Signal Station building is situated near the head of Eastern Arm.

Pilotage.—Deep-sea pilots for the English Channel, the North Sea, and the Baltic Sea may be ordered from Dover. Vessels should send a request at least 48 hours and 24 hours prior to arrival at the boarding place. Pilots will board at Brixham and Cherbourg (by launch or helicopter), Penzance, Fishguard, Pentland Firth, Dover (by launch only), or any port in NW Europe.

Pilotage in Dover Harbour is compulsory for vessels 80m or more in length, fishing vessels 47.5m or more in length, and vessels 20m or more in length which are restricted in their maneuverability or carrying dangerous substances in bulk.

The pilotage area includes the waters extending up to 1 mile seaward of the breakwaters.



Courtesy of M. J. Wilson Brantag Inc. UK

Dover Harbor

All inbound vessels should send an ETA 6 hours and 2 hours in advance, requesting instructions. Vessels requiring pilotage should send a request and ETA 2 hours in advance stating their grt and maximum draft. The Dover Harbour Control may be contacted on VHF channels 16, 12, and 74.

Pilots can be contacted by VHF and board 3 miles E of the E entrance.

All vessels should maintain a continuous listening watch on VHF channel 74 until berthed.

Dover pilots may be contacted by e-mail, as follows:

dmms@doverport.co.uk

Regulations.—All vessels passing the harbor and the area within 1 mile to seaward of the breakwaters should contact Dover Port Control on VHF channel 74 and report their ETA at a range of 3 miles from the port. Such vessels should then monitor the frequency for movement broadcasts.

Permission must be obtained from Dover Port Control before vessels enter or leave by the E or W entrances, even though the respective traffic signals are shown in their favor.

Vessels must not enter or maneuver within the restricted area, the limits of which are shown on the chart, lying in the vicinity of Eastern Docks without specific permission from Dover Port Control.

Signals.—International Port Traffic Signals for regulating traffic entering and leaving the Outer Harbour are displayed by

day and night from the head of Admiralty Pier Extension, for the W entrance, and from the Port Control Signal Station, for the E entrance (see paragraph 1.1).

Movement is allowed one-way only at each entrance. In all cases when a signal allows a vessel to proceed in one direction, a signal prohibiting movement is shown in the opposite direction.

The Port Control Signal Station is situated near the head of Eastern Arm.

Light signals may be by the Port Control and vessels not equipped with VHF. A signal of Morse SV indicates “I wish to enter the port” and Morse SW means “I wish to leave port.”

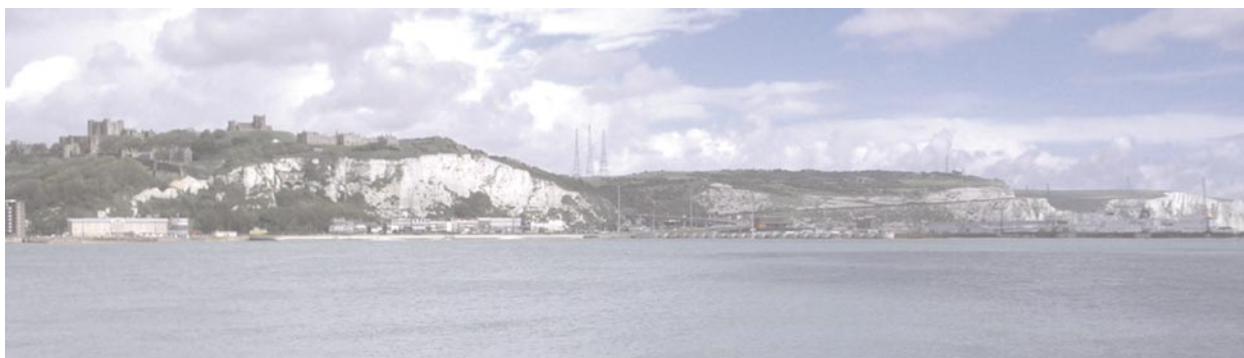
Port Control will reply either “OK” or “WAIT.”

If a signal appears to be misunderstood, a series of short flashes from Port Control indicates “STOP-WAIT.”

Fairway is patrolled by a launch with the inscription “Harbour Patrol” painted on the side. The launch is fitted with VHF and at night exhibits an all-round blue flashing light at the masthead.

The launch will, if necessary, relay messages to and from Port Control. Vessels must comply with instructions passed by the patrol launch.

Anchorage.—Anchorage is available, with the permission of the harbormaster, within a designated area located in Outer Harbour. The area has a least depth of 8m, with good holding ground, and may best be seen on the chart. Vessels must not anchor outside of this designated area.



Courtesy of M. J. Wilson Brantag Inc. UK

Dover from SW

Caution is advised during strong winds, as gales between SW and W raise a considerable scend at about HW. In E gales, smooth water may be found in the lee of Eastern Arm.

Several foul areas lie in the approaches to the harbor and anchoring outside is not recommended.

Caution.—A prohibited area, with a radius of 50m, lies close NE of the head of Eastern Arm and contains a current meter.

Depths within the harbor are liable to change and the Port Control should be contacted for the latest information. Silting often occurs in the central part of Outer Harbour.

A spoil ground (dumping area), which may best be seen on the chart, lies centered 1.5 miles SSE of the E entrance.

Vessels passing Dover are warned that cross-channel ferries, including high speed craft, frequently enter or leave the port by both the W and E entrances. Vessels are cautioned to keep at least 1 mile seaward of Southern Breakwater.

Tidal cross-currents, with velocities at times up to 2.5 knots, run in the vicinity of the port entrances. The Port Control should be contacted for the latest information.

A submarine power cable extends between the heads of Eastern Arm and the E end of Southern Breakwater.

Dover to Folkstone

7.8 The coast between Dover and Folkstone, 5 miles SW, is formed mostly by chalk cliffs.

Shakespeare Cliff, 103m high, stands about 1 mile SW of Dover and is the first chalk cliff. It is prominent and appears conical when seen from the E. Abbot's Cliff, standing 2.5 miles SW of Dover, is also prominent

A conspicuous radio mast, with an elevation of 382m, is situated near Hougham, about 0.7 mile N of Abbot's Cliff.

Copt Point (51°05'N., 1°12'E), with a conspicuous Martello Tower standing above it, is located 4.5 miles SW of Dover. Copt Rocks, formed by drying ledges of sandstone, front the point and extend up to 0.3 mile E.

Mole Head Rocks extend SW from Copt Rocks to the vicinity of the entrance to Folkstone.

East Wear Bay lies between Copt Point and Abbot's Cliff, 2 miles NE. It provides good holding ground and is sheltered on the W side. However, this bay is recommended only as a

temporary anchorage for vessels waiting for the tide. The best berth is in the middle of the bay, in a depth of about 9m.

Caution.—Numerous wrecks, which may best be seen on the chart, lie offshore between Dover and Folkstone.

Yacht racing marker buoys are moored in season (April to November) about 0.6 mile WSW of Abbot's Cliff.

Several submarine cables, which may best be seen on the chart, extend seaward from the vicinity of Copt Point.

Folkstone (51°05'N., 1°12'E.)

World Port Index No. 35700

7.9 Folkstone is a terminal for cross-channel ferries, including high speed craft. It is rarely used by other regular cargo vessels.

Tides—Currents.—The tides rise about 7.2m at MHWS and 5.7m at MHWN.

Off the head of the breakwater, the ENE tidal current starts about 2 hours before HW at Dover and attains a rate of 2 knots at springs. The WSW tidal current starts about 3 hours 20 minutes after HW at Dover and attains a rate of 1.5 knots at springs.

During the ENE current, an eddy runs W along the coast from Copt Point, and sets strongly toward the South Quay head.

Depths—Limitations.—Three berths, with depths of 5 to 6m alongside, are situated along the NE side of the main breakwater and are used by ro-ro ferry vessels and high speed craft. Outer Harbour dries but has depths of 3 to 4.5m at HWS. South Quay, at the S side of Outer Harbour, has a depth of 5m alongside at HWS. The N side of Outer Harbour is used by fishing vessels and pleasure craft.

Aspect.—A light is shown from a prominent tower, 13m high, standing at the head of the main breakwater. A lighted range, which may best be seen on the chart, indicates the approach to the ferry berths. A conspicuous motel is situated about 0.2 mile WNW of the root of the main breakwater.

Pilotage.—Pilotage is compulsory for all vessels over 50m in length, except those exempted by law. Pilotage should be requested from the Port Control 24 hours in advance. Pilots may be contacted by VHF and board by arrangement.

The port of Folkestone may be contacted by e-mail, as follows:

harbourmaster@folkestoneharbour.com

Signals.—International Port Traffic Signals are displayed from a mast at the head of the main breakwater. These signals control vessels leaving and entering, and, when shown, ensure that traffic is one-way (see paragraph 1.1).

Anchorage.—Anchorage off the port is exposed, and should only be used by vessels waiting for a favorable tide to enter harbor. The best holding ground is in depths of 12 to 18m, clay and sand. A good berth is with Copt Point, 1 mile NE of the harbor, in line with the light on the breakwater bearing 025°, and approximately 0.2 mile distant.

Caution.—High speed ferry craft may be encountered in the approaches to the port.

Folkstone to Dungeness

7.10 The coast between Folkestone and Dungeness, 13 miles SW, forms a bay the shore of which is low and flat. However, near Folkestone the interior hills join the coast and it becomes cliffy.

Sandgate is situated about 2.5 miles W of Folkstone. Sandgate Roads provide sheltered anchorage, in depths of 11 to 15m, good holding ground, mud and clay.

Two conspicuous green domes, surmounting hotels, are situated about 1 mile W of Folkstone and about 1 mile E of Sandgate.

Hythe (51°04'N., 1°04'E.) is situated about 2 miles WSW of Sandgate. Hythe Flats form a shallow bank fronting the shore in this vicinity and may best be seen on the chart. An outfall sewer pipeline extends 1.5 miles SSE across the flats.

A conspicuous radio tower, with an elevation of 268m, stands on Tolsford Hill, about 2 miles N of the town of Hythe.

To the SW of Hythe, the shore is low and flat with only embankments to hold the marsh land in place.

Dymchurch is situated 4 miles SW of Hythe and 7 miles N of Dungeness. Dymchurch Wall, an embankment protecting the pasturage of Romney Marsh, extends along the coast and terminates in Dymchurch Redoubt, 2 miles NE.

Six prominent Martello Towers stand along the shore between Dymchurch and Hythe. A conspicuous red brick tower is situated at Littlestone-on-Sea, 2.5 miles SSW of Dymchurch.

East Road provides anchorage, sheltered from SW through W to N, in depths of 12 to 18m, about 3 miles E of the tower at Littlestone-on-Sea.

Roar Bank, a ridge of sand with depths of 2.5m, runs nearly parallel with and about 1 mile off the shore to the E of Littlestone-on-Sea. Vessels should avoid this bank by keeping in a least depth of 10m.

A conspicuous dark grey water tower stands 0.8 mile inland at Lydd-on-Sea, 2 miles S of Littlestone-on-Sea and 2 miles N of Dungeness.

Dungeness (50°55'N., 0°59'E.), the SE extremity of a large area of marsh, is a very low point. It is steep-to on the SE side

but fronted elsewhere by a shingle beach which is progressively advancing seaward.

Dungeness Light is shown from a conspicuous tower, 43m high, standing on the point. This tower is floodlit at night.

A prominent disused light tower is situated 0.3 mile W of the light.



Dungeness Light

Dungeness Nuclear Power Station (50°55'N., 0°58'E.) stands 0.5 mile W of the light and is radar conspicuous. The station consists of several prominent buildings, which are 51m high and marked by red lights.

It is reported by vessels approaching from SW that the power cables and pylons running inland in a WNW direction from the power station appear prominently on radar prior to the low shoreline.



Dungeness Nuclear Power Station

For information concerning the Dover Strait TSS, off-lying banks, and navigation aids in this vicinity, see paragraph 6.3 through paragraph 6.6.

Caution.—A rifle range, with a danger area extending 2 miles seaward, is situated close SW of Hythe. When firing is taking place, red flags are displayed by day and red lights are exhibited at night between Dymchurch Redoubt and Hythe. Range safety craft also patrol the area.

When approaching from E, vessels must take care not to confuse the water tower standing near Lydd-on-Sea, 2 miles N of Dungeness, with either of the two light towers at Dungeness.

Several disused submarine cables, which may best be seen on the chart, extend seaward from a point on the shore about 1 mile N of Dungeness.

Dungeness to Beachy Head

7.11 Rye Bay (50°54'N., 0°49'E) lies open to the S between Dungeness and Fairlight, 12 miles W. It has low marshy shores which are marked on the E side by several concrete observation towers.

West Road provides shelter from winds between N and E in the E part of the bay. The best anchorage lies, in a depth of 8m, inside of Stephenson Shoal, about 3 miles WSW of Dungeness Light.

A number of banks, including Boulder Banks, Tower Knoll, and Fairlight Knoll, lie in the W part of the bay and may best be seen on the chart.

Rye Harbour (50°57'N., 0°44'E.) (World Port Index No. 35690) lies at the mouth of the River Rother, near the head of the bay. It is mostly used by pleasure craft. The town of Rye stands about 1.5 miles NW of the mouth. It is built on sandstone rock and rises above the surrounding marshes. The land on either side of the river mouth is flat with no landmarks.

The entrance, which lies between two training walls, is approached directly from seaward. A fairway lighted buoy is moored about 2 miles SSE of the harbor entrance. A sand bar lies at the entrance and has a depth of 5.2m at HWS.

The main commercial quay, 180m long, is situated 1 mile above the entrance. Vessels take the muddy ground at LW. Tides rise about 5.4m at springs and 3.6m at neaps. Vessels up to 80m in length and 4.5m draft can be handled at HWS.

Local knowledge is advised. Pilotage is compulsory for vessels over 30m in length. Vessels should send an ETA at least 24 hours in advance. Vessels should only contact the port by VHF when they are less than 10 miles from the entrance and wait for the pilot near the fairway lighted buoy.

7.12 Hastings (50°51'N., 0°35'E.), with the town of St. Leonards located close W, stands on high ground about 3 miles WSW of Fairlight, the W extremity of Rye Bay. These two resort towns are separated by a prominent valley with buildings on each side. Hastings is fronted by a promenade and a small pier, which is radar prominent. The coast extending close E of the town is composed of steep, yellow-brown cliffs broken by grassy slopes. Fairlight Down is located E of the town and about 1.5 miles W of Fairlight. It has an elevation of 172m and is the highest area of land in this vicinity. A prominent hotel fronts the town of St. Leonards.



Hastings Pier

Hastings Shoal, lying about 0.8 mile S of the town, and Four Fathoms Sand Ridge, lying 4 miles S of the town, may best be seen on the chart. The latter shoal extends NE and merges with the coastal bank fronting the shore of Rye Bay.

Anchorage may be taken during fair weather off Hastings. The best berth lies, in a depth of 6m, sand and mud, about 0.6 mile S of the pier.

Bexhill, situated 4.5 miles WSW of Hastings, can be identified by its numerous red brick houses. The old town, surrounded by trees, stands on a hill, about 0.5 mile inland.

Pevensey Bay is a slight indentation in the coast extending between Bexhill and a low projection, marked by a light, known as Langney Point. The shore of this bay is mostly flat and desolate, except for a line of martello blockhouse towers standing along the W side. Anchorage within this bay is not recommended. A marina, protected by breakwaters, is situated close N of Langney Point.

A prominent gas storage tank stands about 1 mile W of Langney Point. A conspicuous building, 81m high, is situated near the shore at the S end of Eastbourne, 2.7 miles SW of Langney Point.

The conspicuous dome of the Isaac Newton telescope (observatory) is situated at Herstmonceux, 5 miles N of Langney Point.

Eastbourne (50°46'N., 0°17'E.), a resort town, extends about 3 miles SW from close W of Langney Point to within 1.5 miles of Beachy Head. It is fronted by promenades, large buildings, and hotels. A pier, 295m long, extends seaward from the town and is radar prominent.



Eastbourne Pier

Anchorage, sheltered from winds from W through N to NE, may be found, in a depth of 9m, sand and mud, good holding ground, about 0.8 mile SE of the pier. However, care is necessary to avoid the wrecks lying in this area.

Caution.—Fishing nets, marked by small buoys, may be encountered within Rye Bay.

Drift net fishing is carried out between Royal Sovereign Shoals and Dungeness, from May to July and November to January.

Lydd Firing Range, with a danger area extending 3 miles seaward, is situated between Dungeness and Rye. When firing is taking place, red flags are displayed by day and red lights are exhibited at night from two observation towers. Range safety craft also patrol the area.

An outfall pipeline, marked at its outer extremity by a lighted buoy, extends about 1.7 miles SSE from a point on the shore at the E end of Bexhill.

An outfall pipeline extends about 1.8 miles SSE from the vicinity of Langney Point.

7.13 Off-lying dangers—Shingle Bank ($50^{\circ}44'N.$, $0^{\circ}35'E.$), with a least depth of 14.8m, lies 7.5 miles S of Hastings. A dredging area, within which gravel is extracted, lies in the vicinity of this bank. It is marked by buoys and may best be seen on the chart.

Royal Sovereign Shoals ($50^{\circ}44'N.$, $0^{\circ}26'E.$), a group of rocky patches with a least depth of 3.5m, lie centered about 7 miles E of Beachy Head and directly in the path of vessels heading for Dungeness. Strong eddies are formed over these shoals at springs and the sea breaks heavily on the heads during bad weather.

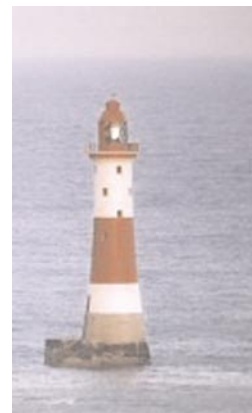
Royal Sovereign Light ($50^{\circ}43'N.$, $0^{\circ}26'E.$) is shown from a prominent tower, 28m high, standing on Southern Head, at the S side of Royal Sovereign Shoals. The light structure surmounts a helicopter deck standing on a concrete column.



Beachy Head



Royal Sovereign Light



Beachy Head Light

Beachy Head to Selsey Bill

7.14 Beachy Head ($50^{\circ}44'N.$, $0^{\circ}15'E.$), a steep cliffy headland, is very remarkable, especially when viewed from the SW, because of its long line of white segmented cliffs known as The Seven Sisters. This headland is radar conspicuous.

Beachy Head Light is shown from a prominent tower, 43m high, standing on drying rocks, which front the base of the cliff. A conspicuous watch tower (radio) is situated on the head, about 0.5 mile ENE of the light.

A prominent disused lighthouse, 14m high, stands on the summit of the cliffs, about 1 mile W of Beachy Head.

The Seven Sisters front the coast between Birling Gap, 1.3 miles W of the head, and the valley of the Cuckmere River at Cliff End, about 2.5 miles WNW of the head.

A prominent hotel stands at Birling Gap and a conspicuous water tower is situated about 1.3 miles N of it.

Seaford Head, 83m high, rises 1.3 miles W of the Cuckmere River and 2.5 miles SE of the entrance to Newhaven. It has a chalky, but rust-streaked, appearance and may also be identified by a patch of green on the face of the cliff, just under the summit. A conspicuous barn stands 0.8 mile E of this head.



Beachy Head Disused Light Tower

The town of Seaford is situated close W of Seaford Head. The coast abreast the town is fronted by numerous groins, the larger of which are marked by beacons.

The foreshore between Beachy Head and Seaford consists mainly of rocky ledges and shingle, strewn with boulders fallen from the cliffs above.

Anchorage may be taken all along this part of the coast, with offshore winds, in depths of 7 to 16m.

Caution.—During bad weather, vessels should keep at least 2 miles from Beachy Head in order to avoid the overfalls.

Vessels proceeding E and close to the coast, in poor visibility, should take care not to mistake Seaford Head for Beachy Head.

7.15 Newhaven (50°47'N., 0°03'E.) (World Port Index No. 35650) lies at the mouth of the Ouse River, about 8.5 miles WNW of Beachy Head. The port is used by commercial vessels and cross-channel ferries.

Tides—Currents.—Tides rise about 6.7m at springs and 5m at neaps.

Depths—Limitations.—The entrance channel, which has a least width of 70m, is dredged to a depth of 6m. The S part of the harbor adjacent to the ferry berths is dredged to a depth of 5.5m. There is a marina and berths for small craft on the W side of the harbor. East Quay, at the E side of the harbor, is the main commercial wharf. It is 510m long and provides five berths with depths of 4.5 to 5m alongside. North Quay is 360m long and has a depth of 2.1m alongside.

Vessels up to 165m in length and 7.6m draft can be handled at HW. Large vessels take the soft mud bottom at LW.

Aspect.—The harbor may be easily identified from seaward by its outer breakwater curving from the W shore. A light is shown from a prominent tower, 14m high, standing on the breakwater head.

A conspicuous television mast stands on high ground about 1 mile WNW of the harbor entrance.

Pilotage.—Pilotage is compulsory for all vessels over 49m in length. Vessels should send an ETA 12 hours in advance through their agent. Vessels should then send a request for pilotage 2 hours before ETA on VHF channel 12. Pilots can be contacted by VHF and board about 1 mile SW of the breakwater.

Regulations.—No vessel may enter or leave the harbor without permission from the harbormaster or in contravention of the traffic signals.

No vessel may be navigated so as to interfere in any manner with the arrival or departure of an advertised passenger vessel.

Signals.—The following traffic signals, displayed vertically, are shown from a mast near the head of the West Pier:

1. An orange triangle over an orange ball by day, or a green light at night, indicates that vessels may enter the harbor, but no vessels may leave.
2. An orange ball over an orange triangle by day, or a red light at night, indicates that vessels may leave the harbor, but no vessels may enter.
3. An orange triangle with an orange ball above and below it by day, or a green light with a red light above and below it at night, indicates that the port is temporarily closed to traffic.

4. An orange ball by day, or a green light over a red light at night, indicates that vessels less than 15m in length may enter or leave with care.

Anchorage.—Good anchorage, during offshore or E winds, can be taken, in a depth of 7m in Seaford Road, about 1.3 miles ESE of the breakwater head. It is reported (2006) that anchorage can be taken in a depth of 14m, good holding ground, about 1.7 miles SW of the breakwater head.

Caution.—High speed craft may be encountered in the approaches to the port.

An outfall pipeline extends about 1 mile S from a point on the shore 0.5 mile E of the harbor entrance.

The entrance channel is subject to siltation and local knowledge is required.

7.16 Brighton (50°49'N., 0°08'W.), a coastal resort center, is situated 8 miles WNW of Newhaven. The coast between this town and Shoreham, about 4 miles W, is built up and contains many churches, hotels, and large buildings.

An extensive marina, protected by two curved breakwaters, fronts the shore at the E end of the town. The W breakwater is 630m long while the E breakwater is 1,220m long; both are radar prominent. The marina entrance faces SE.

The town is fronted by two piers. It is reported (2003) that the westernmost pier, formerly known as Brighton Pier, was destroyed by a storm and a fire. The easternmost pier, known as Brighton Palace Pier, extends about 0.3 mile seaward and is marked by lights. It is radar prominent.



Brighten Palace Pier

Rodean School, with a rambling building and two spires, is situated 0.4 mile E of the marina and is prominent from seaward.

A television tower stands on a hill at the E end of Brighton, about 0.8 mile NW of the marina, and is very conspicuous.

A prominent black windmill stands near the shore at Rottingdean, about 1.3 miles ESE of the marina.

Caution.—Lobster pots are frequently placed up to 0.5 mile offshore between Brighton and Newhaven.

Several lighted buoys (special), which are used as recreational racing marks, are moored up to 3 miles offshore between Shoreham and Newhaven. Other temporary buoys may be moored close off Brighton, from March to October.

A sewer outfall pipeline, the seaward end of which is marked by a lighted buoy, extends about 1 mile SSW from a point on the shore about 3 miles ESE of the marina.



Rottingdean Windmill

Shoreham (50°50'N., 0°15'W.)

World Port Index No. 35630

7.17 Shoreham is a small commercial port situated at the mouth of the River Adur, about 20 miles WNW of Beachy Head. It is protected by breakwaters and divided into three parts. Western Arm leads W from the entrance and is formed by the lower reaches of the river. Eastern Arm leads E from the entrance to The Canal, a wet basin.

Winds—Weather.—The greatest percentage of the wind is from the SW throughout the year, with force 3 to 4 most common. Winds from the NW to NE occur at night and are more marked in winter than summer, when they reach mean speeds of about 10 knots. Fog occurs on the average of 3 to 4 days a month in winter, but less in summer. Visibility is often restricted by haze.

Tides—Currents.—The tides rise about 6.3m at springs and 4.8m at neaps.

Within the harbor, the flood tidal current sets almost entirely up Western Arm. It can attain a rate of 4 knots at springs in the narrowest section. Eastern Arm has practically no current, even at the height of the flood.

Depths—Limitations.—The entrance channel between the breakwaters is 122m wide. There is a least depth of 1.9m on the entrance range. Vessels may take the mud ground at LW in both Eastern Arm and Western Arm.

The main quay in Eastern Arm is Outer Lay-by Wharf, which is situated on the S side. It is 260m long and has a depth of 1.6m alongside. Vessels up to 120m in length, 20m beam, and 6.7m draft can be handled at this quay at HW.

Western Arm provides about 1,840m of total quayage. There are nine berths, 80 to 346m long, with depths of 0.5 to 1.8m alongside. Vessels up to 83m in length, 14.3m beam, and 5.5m draft can be handled at HW.

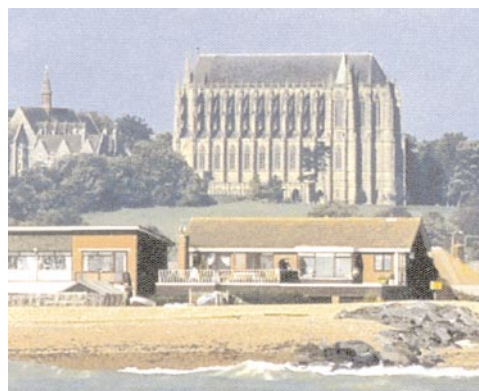
Two locks provide access to The Canal. Commercial vessels enter the wet dock through Prince Philip Lock. Vessels up to 106m in length and 16.4m beam can enter, with drafts up to 6.7m at springs and 5.5m at neaps. Prior approval from the authorities is required for vessels over 103m in length. A yacht lock is situated within the confines of the existing Prince George Lock.

The wet basin has depths of 7 to 7.6m and provides about 3,600m of total quayage. There are 21 berths, 61 to 406m long, and two turning basins. There are facilities for general cargo, timber, bulk, and tanker vessels.

Aspect.—A lighted range indicates the approach to the harbor. The rear range light, known as the High Light, is shown from a prominent stone tower, 12m high.

A church, with a prominent tower and flagstaff, is situated in the W part of the port. The conspicuous chapel at Lancing College stands inland, about 2.4 miles NW of the harbor entrance.

A conspicuous chimney, 103m high, stands at a power station located in the vicinity of the harbor. A prominent chimney, 91m high, stands at a cement works located about 3 miles NW of the harbor entrance but is only visible between NNW and NNE.



Lancing College Chapel (Shoreham)



Shoreham Power Station

Pilotage.—Pilotage is compulsory for vessels over 50m in length and all vessels carrying dangerous cargo. Pilots can be contacted by VHF and board within 2 miles of the harbor entrance.

Regulations.—Vessels over 50 grt should send an ETA to the Port Control Office at least 24 hours in advance. The message should include name, draft, beam, and length.

Vessels should then contact the Port Control when within VHF range. A continuous listening watch should be maintained on VHF channel 14 when entering the port. Tidal and navigation information is available on request.

This port lies at the W limit of the Inshore Traffic Zone.

The port of Shoreham may be contacted by e-mail, as follows:

shorport@pavilion.co.uk

Anchorage.—Anchorage can be taken anywhere S of the harbor, according to draft. The best holding ground lies in a depth of 6m, sand and gravel over clay, about 1 mile S of the entrance.

Caution.—Several wrecks lie in the approaches to the port and may best be seen on the chart.

A sewer outfall pipeline, the seaward end of which is marked by a lighted buoy, extends about 1.6 miles S from a point on the shore about 0.8 mile E of the entrance.

The harbor is subject to siltation and the authorities should be contacted for information concerning the latest depths.

7.18 The coast between Shoreham and Littlehampton is low and backed by the South Downs. Chanctonbury Ring, a clump of trees standing on the highest part of the downs, is prominent and often the first landmark sighted when approaching the land in this vicinity.

The towns of Lancing, Worthing, and Goring by Sea stand along the shore, with no break between them.

A number of prominent buildings stand near the shore, about 3 miles W of Shoreham. A conspicuous gas storage tank is situated about 4.5 miles W of Shoreham, at the E end of Worthing.

Worthing is fronted by a pier, with a pavilion at its outer end, which is reported to be radar prominent. The town is low-lying, distinguishing it from Brighton, which stands on a cliff.



Worthing Pier

A church, with a prominent spire, is situated Goring by Sea, 4.5 miles E of Littlehampton and a gas storage tank stands 0.5 mile NE of it. Highdown Hill rises to an elevation of 80m about 1.5 mile NW of the church. It has two chalk pits on the W slope and one larger pit on the E slope.

Rackham Hill, with a conspicuous clump of trees, rises inland about 6 miles NNE of Littlehampton. A deep break in the

downs, formed by the valley of the River Arun, is located 2 miles W of this hill and is prominent from seaward.

Caution.—A sewer outfall pipeline extends about 3.5 miles S from a point on the shore about 2.5 miles W of Shoreham harbor entrance.

A sewer outfall pipeline, the outer end of which is marked by a lighted buoy, extends about 2 miles SSE from a point on the shore 0.6 mile E of Littlehampton harbor entrance.

Buoys (special), used as racing marks, may be moored offshore between Shoreham and Littlehampton from April to October.

Several dangerous rocks, which may best be seen on the chart, lie up to 2 miles offshore between Shoreham and Littlehampton.

7.19 Littlehampton (50°47'N., 0°32'W.) (World Port Index No. 35610) lies at the mouth of the River Arun and is a small commercial port and yachting center.

Tides—Currents.—The tides rise about 5.9m at springs and 4.4m at neaps.

The tidal currents are strong and may attain a rate of 6 knots between the piers. The flood current continues until about 1 hour 30 minutes after HW at springs and 30 minutes after HW at neaps. The ebb current continues until about 4 hours before HW.

Depths—Limitations.—The harbor is formed by the lower reaches of the river. The entrance, 33m wide, lies between two pile piers. A low training wall, covered at half-tide, extends seaward from the E pier and is marked at its outer end by a beacon.

The bar fronting the entrance dries up to 1m. The entrance channel dries until abreast of the E pier, where there are depths of 1 to 2m. There are berths for recreational craft and a marina along the W bank of the river.

There are two commercial berths, 80m and 100m long, at the E side of the harbor. Vessels take the ground at LW. Vessels up to 2,000 dwt and 70m in length can be handled, with drafts up to 4.6m at springs and 3.8m at neaps.

Aspect.—Lighted range beacons indicate the approach to the harbor. A fort, in ruins, stands on the shore near the root of the W pier. The town stands on the E bank and is centered about 1 mile N of the entrance.

A prominent gas storage tank stands about 0.8 mile NW of the harbor entrance. A conspicuous block of apartments, 38m high, and another conspicuous building are situated 0.3 mile ENE and 0.8 mile E, respectively, of the harbor entrance.

Pilotage.—Pilotage is compulsory for vessels over 50 grt. Vessels should send their ETA 12 hours in advance. Pilots can be contacted by VHF and board within 2 miles of the harbor entrance.

The port of Littlehampton may be contacted by e-mail, as follows:

harbour@littlehampton.org.uk

Anchorage.—Vessels can anchor, in depths of 5 to 7m, stiff blue clay, about 2 miles S of the harbor entrance.

Caution.—The harbor may be inaccessible during strong SE winds.

7.20 The coast between Littlehampton and Bognor Regis, 5 miles WSW, is low. The 10m depth contour in this area lies about 4 miles offshore.

Bognor Regis, a prominent coastal resort, is fronted by a pier. It is reported that the glare of the town lights is very conspicuous at night.



Bognor Regis Pier

Pagham Harbour, an area of saltings intersected by drying creeks, lies 3.5 miles SW of Bognor Regis and 2.5 miles NE of Selsey Bill. Most of this area is a nature reserve.

The entire coast between Bognor Regis and Selsey Bill (50°43'N., 0°47'W.) is fronted by an area consisting of foul ground, rocks, and shoals. This area extends up to about 2 miles seaward and vessels should keep well clear of it. The shore consists of a shingle beach with numerous groins.

The Park (50°40'N., 0°41'W.), an anchorage area, lies between the Owers Shoals and the foul ground fronting Pagham Harbour between Selsey Bill and Bognor Regis. It is well-sheltered from W and SW winds, but dangerous with winds from E to S. The holding ground is good, being a thin layer of gravel over stiff clay, and there are depths of 5 to 11m. However, this anchorage cannot be recommended for large

vessels, because of frequent and sudden shifts in the wind and the rapidity with which the sea gets up, especially during the winter months.

For a description of Selsey Bill and the dangers lying off this point, including The Owers, see paragraph 2.29.

Caution.—An outfall pipeline extends 1.5 miles S from a point on the shore at the W side of Bognor Regis.

Lobster pots may be encountered in the vicinity of Kingmere Rocks, about 5.5 miles SE of Littlehampton.

An offshore scallop fishing ground extends from a line S of Selsey Bill (50°43'N., 0°47'W.) to a line S of Rye, 60 miles E, in a zone 15 miles wide.

English Inshore Traffic Zone

7.21 Sector 7 has been described from the NE to SW due to the large volume of traffic that normally use the SW traffic lane of the Dover Strait TSS while proceeding from the North Sea to the Atlantic Ocean. Vessels are reminded that the Rules of the International Regulations for Preventing Collisions at Sea are applicable.

Vessels navigating in the above zone should expect to meet vessels proceeding in the opposite direction and a considerable amount of cross-channel ferry traffic in the Dungeness to South Foreland area.

Caution.—Royal Sovereign Shoals lie directly in the track of vessels proceeding between Beachy Head and Dungeness, and can be especially dangerous during poor visibility and on the flood when the E currents rounding the headland set down on them. The light structure, situated directly S of Southern Head, has been designed to withstand severe weather and is conspicuous (see paragraph 7.13).

Numerous wrecks lie up to 9 miles offshore, especially between Dungeness and Beachy Head. Many of these wrecks rise well above the seabed and should be avoided.

French

FRENCH	English	FRENCH	English
A			
abri, abrite	shelter, sheltered	chenal	channel
aiguille	needle	clocher	steeple
aimante.....	magnetic	coffre	mooring buoy
amer	landmark, beacon	colline	hill
amont	upstream, landmark	compas	compass
anse	bay, creek	coquilles	shells
apponement	wharf, pier, quay	cote	coast
argile	clay	courant	current, stream
atterrissage	making land, landfall	courant de flot	flood tidal stream
aval	downstream, seaward	courant de jusant	ebb tidal stream
avant port	outer port	crique	creek
azur	blue	crue	freshet or flood
B			
babord	port	darse	basin
baie	bay, gulf	detroit	strait, narrow
balisage	beaconage	digue	breakwater, mole
balise	beacon	douane	customhouse
banc	bank, sandbank	droit	right (side)
barre	bar	due d'albe	dolphin
basse mer	low water	E	
basse	shoal	echelle	scale
bassin afloat	wet basin or dock	echelle de maree	tide gauge
bassin	basin, dock	ecluse	lock of a canal or basin
bassin d'echouage	tidal basin where vessels ground	ecueil	rock, breaker
bateau de sauvetag	lifeboat	eglise	church
blanc, he	white	encablure	cable's length, about 183m
bleu, bleue	blue	entree	entrance, mouth of a river
bois	wood	epave	wreck
bouche	mouth of a river	epi	small jetty, groin
bouee a sifflet	whistle buoy	escarpe	bluff
bouee acloche	bell buoy	etale	(of tide) slack, (of wind) settled
bouee	buoy	etang	lake
bouee lumineuse	light buoy	etiage	low-water mark of a river
boussole	compass	F	
brisant, brisants	shoals, breakers	falaise	cliff
brise-lames	breakwater	fanal	harbor lighthouse
brouillard	fog, mist	feu	light
brume	fog	feu permanent	a light constantly burning and unwatched
C			
caboteur	coaster	fin	fine
cale de radoub	marine railway	fleche	spire
cap	cape, headland	fleuve	river, stream
champ-de-tir	firing range	flot	flood
chapelle	chapel	foc	jib (sail)
charbon	coal	fond	bottom
chaussee	bank, causeway	forme de radoub	drydock
chemin de fer	railroad	fosse	ditch, a deep
cheminee	chimney	G	
		galets	shingle

FRENCH	English	FRENCH	English
gaunche	left (side)	pertuis	opening or strait
golfe	gulf	petit	small
goulet	narrow entrance	phare	lighthouse
gravier	gravel	pic	peak
greve	sandy beach	pierre	stone
gris	gray	pignon	gable
gros	coarse	pin	pine or fir tree
guet	watch-house	plage	shore, beach
H		plateau	tableland, or flat below water
haut-fond	a shoal	pleine mer	high water
haute mer	high water	pointe	point
houle	swell	pont	bridge, deck
I		presq'île	peninsula
île	island, isle	Q	
ilot	islet	quai	quay, wharf
J		R	
jaune	yellow	rade	road, roadstead
jetee	jetty	rafale	squall
jusant	ebb	raz (bas breton)	tidal race or violent current
L		recif	reef
lac	lake	roche	rock
M		rocher	rock
marais	swamp, marsh	rouge	red
maree	tide	ruisseau	rivulet
maree descendante	falling tide	S	
maree montante	rising tide	sable	sand
massif	main group of mountains	salines	salt-water lagoons, salt works
mat	mast	seche	dry shelf, flat
mole	mole, pier	seuil	sill (as of a dock)
mortes eaux	neap tides	sud	south
mouillage	anchorage	T	
musoir	pierhead	temps	time, weather
N		terre-plein	leveled ground, platform
niveau	level	tour	tower
noeud	knot	tourelle	small tower, turret
noir, noire	black	tribord	starboard
nouveau, nouvel	new	U	
O		usine	factory
occidental	western	V	
onde	wave	vase	mud
oriental	eastern	vent	wind
ouest	west	vert	green
P		vieil, vieille	old, ancient
passee	pass, fairway, channel	ville	town
patente de sante	bill of health	vive-eau	spring tide

How to use the Index—Gazetteer

Geographic names of navigational features are generally those used by the nation having sovereignty and are listed alphabetically. Diacritical marks, such as accents, cedillas, and circumflexes, which are related to specific letters in certain foreign languages, are not used in the interest of typographical simplicity.

Geographic names or their spellings do not necessarily reflect recognition of the political status of an area by the United States Government. Positions are approximate and are intended merely as locators to facilitate reference to the charts.

To use as a Gazetteer note the position and Sector number of the feature and refer to the Chart Information diagram for the Sector. Plot the approximate position of the feature on this diagram and note the approximate chart number.

To use as an Index of features described in the text note the paragraph number at the right. To locate this feature on the best scale chart use the Gazetteer procedure above.

Index—Gazetteer

	Position			Sec. Para		Position			Sec. Para		
A											
ADULT	50	06 N	1	27 E	6.14	BOLT HEAD	50	13 N	3	47 W	1.23
ALDERNEY	49	43 N	2	11 W	4.28	BOLT TAIL	50	14 N	3	52 W	1.22
ALDERNEY HARBOUR	49	43 N	2	12 W	4.29	BOULOGNE	50	44 N	1	36 E	6.19
ANSE D'YFFINIAC	48	32 N	2	42 W	3.25	BREHON TOWER	49	28 N	2	29 W	4.18
ANSE DE BREHAC	48	44 N	2	56 W	3.25	BRIDPORT HARBOUR	50	43 N	2	46 W	2.10
ANSE DE PAIMPOL	48	49 N	3	00 W	3.21	BRIGHTON	50	49 N	0	07 W	7.16
ANSE DE VAUILLE	49	37 N	1	55 W	3.44	BRIXHAM HARBOUR	50	24 N	3	31 W	2.5
ANTIFER A5 LT BUOY	49	46 N	0	17 W	5.10	BROADSTAIRS	51	21 N	1	27 E	7.2
ANVIL POINT	50	36 N	1	57 W	2.16	BULLOCK BANK	50	45 N	1	05 E	6.3
ARROMANCHES LES BAINS	49	20 N	0	37 W	5.7	BURHOU	49	44 N	2	15 W	4.26
B											
BAIE DE LANNION	48	44 N	3	40 W	3.10	CAEN-OUISTREHAM	49	11 N	0	21 W	5.9
BAIE DE MORLAIX	48	44 N	3	54 W	3.8	CALAIS	50	58 N	1	51 E	6.21
BAIE DE SAINT-BRIEUC	48	40 N	2	50 W	3.23	CANAL DES SEPT-ILES	48	52 N	3	27 W	3.12
BAIE DE SAINT-MALO	48	40 N	2	02 W	3.30	CANCALE	48	41 N	1	36 W	3.34
BAIE DE SOMME	50	14 N	1	34 E	6.15	CAP D'ALPRECH	50	42 N	1	34 E	6.18
BAIE DU GRAND VEY	49	25 N	1	07 W	5.4	CAP D'ANTIFER	49	41 N	0	10 E	5.18
BAIE DU MONT SAINT-MICHEL	48	40 N	1	40 W	3.34	CAP DE CARTERET	49	22 N	1	48 W	3.42
BANC DE LA SCHOLE	49	35 N	2	14 W	4.23	CAP DE FLAMANVILLE	49	31 N	1	53 W	3.44
BANC DES LANGOUSTIERS	49	15 N	3	21 W	3.17	CAP DE LA HAGUE	49	44 N	1	56 W	4.31
BANC DESORMES	49	19 N	2	17 W	4.4	CAP DE LA HEVE	49	31 N	0	04 E	5.10
BANC DU MILIEU	49	39 N	2	09 W	4.30	CAP FREHEL	48	41 N	2	19 W	3.29
BANCHENOU	48	40 N	2	11 W	3.29	CAP GRIS-NEZ	50	52 N	1	35 E	6.20
BAR AR GALL	48	50 N	3	35 W	3.10	CAP LEVY	49	42 N	1	28 W	4.34
BARFLEUR	49	40 N	1	16 W	5.3	CARENTAN	49	18 N	1	14 W	5.5
BAS	48	45 N	4	01 W	3.5	CARREC-MINGUI	48	55 N	3	00 W	3.18
BASSE DE SAUVAGES	48	45 N	2	12 W	3.29	CASQUETS	49	43 N	2	23 W	4.25
BASSE DU MOULEC	49	03 N	2	15 W	3.17	CAUX DES MINQUIERS	49	00 N	2	00 W	3.38
BASSE DU NID	48	44 N	1	54 W	3.33	CAYEUX-SUR-MER	50	11 N	1	30 E	6.14
BASSE GRUNE	48	45 N	1	54 W	3.33	CHANNEL ISLANDS	48	46 N	2	06 W	4.2
BASSE LE MARIE	49	02 N	1	48 W	3.40	CHANNEL LIGHTFLOAT	49	54 N	2	54 W	4.1
BASSE MAURICE	48	58 N	2	56 W	3.17	CHARLESTOWN HARBOUR	50	20 N	4	45 W	1.15
BASSE NORD DU PLOMB	48	52 N	2	02 W	3.38	CHAUSSÉE DES BOEUFs	49	07 N	1	47 W	3.40
BASSE RAULT	48	44 N	1	56 W	3.33	CHENAL DE LA GRANDE-PORTE	48	40 N	2	08 W	3.31
BASSE TROUVEE	48	49 N	2	05 W	3.29	CHENAL DE LA PETITE-PORTE	48	41 N	2	06 W	3.31
BASSURE DE BAAS	50	27 N	1	20 E	6.3	CHERBOURG	49	39 N	1	38 W	4.33
BASSURELLE	50	38 N	1	05 E	6.3	CHICHESTER HARBOUR	50	47 N	0	56 W	2.28
BASSURELLE LT BUOY	50	33 N	0	58 E	6.3	COCKBURN BANK	50	01 N	8	45 W	1.2
BEACHY HEAD	50	44 N	0	15 E	7.14	COLBERT N LIGHTED BUOY	50	07 N	1	24 E	6.3
BEC DU NEZ	49	27 N	2	22 W	4.21	COPT POINT	51	05 N	1	12 E	7.8
BEER HEAD	50	41 N	3	06 W	2.9	COURSEULLES-SUR-MER	49	20 N	0	28 W	5.8
BELLE HOUGE POINT	49	15 N	2	06 W	4.10	COVERACK COVE	50	01 N	5	06 W	1.12
BERCK-PLAGE LIGHT	50	24 N	1	34 E	6.17	COWES HARBOUR	50	46 N	1	18 W	2.26
BERGUES BANK	51	16 N	2	20 E	6.22	CREAC'H LIGHT	48	28 N	5	08 W	3.2
BERRY HEAD	50	14 N	3	29 W	2.4	CS4 LIGHTED BUOY	51	09 N	1	34 E	6.3
BIG RUSSEL	49	27 N	2	25 W	4.23	CUDDEN POINT	50	06 N	5	26 W	1.10
BILL OF PORTLAND	50	31 N	2	27 W	2.11	D					
BINIC	48	36 N	2	49 W	3.26	DARTMOUTH	50	21 N	3	35 W	2.3
BISHOP ROCK	49	45 N	6	35 W	1.3	DEAL	51	13 N	1	24 E	7.5
BLACK HEAD	50	00 N	5	06 W	1.12	DEMIE DE PAS	49	09 N	2	06 W	4.7
BLACK HEAD	50	17 N	4	46 W	1.14	DEROUTE DE TERRE	48	54 N	1	38 W	3.43
BLANCHARD	49	26 N	2	18 W	4.22	DIELETTE	49	33 N	1	52 W	3.44
BODIC LIGHT	48	49 N	3	05 W	3.19	DIEPPE	49	56 N	1	05 E	6.11
BOIS DE BIEN-ASSIS	48	35 N	2	30 W	3.24						

	Position			Sec. Para		Position			Sec. Para
	°	'				°	'		
DKA LIGHTED BUOY	51	02 N	1	57 E	6.23				
DODMAN POINT	50	13 N	4	48 W	1.14				
DOVER	51	07 N	1	20 E	7.7				
DOVER PATROL MEMORIAL	51	09 N	1	24 E	7.5				
DOVER STRAIT	51	00 N	1	20 E	6.2				
DOWNS, THE	51	13 N	1	26 E	7.5				
DRILL STONE	51	26 N	1	42 E	7.3				
DUNGENESS	50	55 N	0	59 E	7.10				
DUNGENESS NUCLEAR PW STN	50	55 N	0	58 E	7.10				
DUNKERQUE	51	03 N	2	21 E	6.26				
DYCK LIGHTED BUOY	51	03 N	1	52 E	6.23				
E									
EAST CHANNEL LT BUOY	49	52 N	2	29 W	4.1				
EAST GOODWIN LIGHTVESSEL	51	13 N	1	36 E	6.3, 7.6				
EAST RUTTS	50	14 N	3	52 W	1.22				
EASTBOURNE	50	46 N	0	17 E	7.12				
EC2 LIGHTED BUOY	50	12 N	1	12 W	4.1				
EDDYSTONE ROCKS	50	11 N	4	16 W	1.20				
EGYPT POINT	50	46 N	1	19 W	2.19				
EIGHT FATHOM LEDGE	49	43 N	2	24 W	4.25				
ELBOW	51	22 N	1	31 E	7.2				
ENTREE DE LA DEROUTE	48	54 N	1	55 W	3.43				
ERQUY	48	38 N	2	28 W	3.28				
ETAPLES	50	31 N	1	38 E	6.17				
ETRETAT	49	42 N	0	12 E	6.7				
EXMOUTH HARBOUR	50	37 N	3	25 W	2.8				
F									
F1 LIGHTED BUOY	50	11 N	1	45 E	6.3				
F2 LIGHTED BUOY	51	21 N	1	56 E	6.3				
FALMOUTH	50	09 N	5	03 W	1.13				
FALMOUTH BAY	50	08 N	5	04 W	1.12				
FECAMP	49	46 N	0	22 E	6.8				
FLAMANVILLE NUCLEAR PW ST	49	32 N	1	53 W	3.44				
FOLKESTONE	51	05 N	1	12 E	7.9				
FORT DOYLE	49	30 N	2	30 W	4.15				
FOWEY HARBOUR	50	19 N	4	39 W	1.17				
FOXTROT 3 LIGHTED BUOY	51	24 N	2	01 E	6.3				
G									
GOODWIN SANDS	51	14 N	1	32 E	7.6				
GOREY	49	12 N	2	01 W	4.11				
GRANDCAMP MAISY	49	23 N	1	03 W	5.5				
GRANDE AMFROQUE	49	31 N	2	25 W	4.18				
GRANDE ECAMIAS	49	59 N	0	59 E	6.10				
GRANDE ILE CHAUSEY	48	52 N	1	49 W	3.39				
GRANDE RADE DE CANCALE	48	42 N	1	49 W	3.34				
GRANDE-CONCHEE	48	41 N	2	03 W	3.30				
GRANDE-HUPEE	48	41 N	2	06 W	3.30				
GRAND-JARDIN	48	40 N	2	05 W	3.30				
GRAND-LEJON	48	45 N	2	40 W	3.23				
GRANVILLE	48	50 N	1	36 W	3.36				
GRAVELINES	51	00 N	2	07 E	6.24				
GRAVELINES POWER STATION	51	01 N	2	08 E	6.23				
GREAT BANK, THE	49	26 N	2	31 W	4.17				
GREAT SOLE BANK	49	53 N	9	36 W	1.2				
GREENWICH LIGHTVESSEL	50	24 N	0	00 E	6.2				
GRIBBIN HEAD	50	19 N	4	40 W	1.16				
GROSNEZ POINT	49	16 N	2	15 W	4.4				
GUERNSEY	49	28 N	2	37 W	4.13				
GULL STREAM	51	18 N	1	30 E	7.6				
GWENNAP HEAD	50	02 N	5	41 W	1.7				
H									
HASTINGS	50	51 N	0	35 E	7.12				
HAUT-FOND-DU-CHENAL	48	46 N	3	44 W	3.10				
HELTFORD RIVER	50	06 N	5	06 W	1.12				
HERM	49	28 N	2	27 W	4.18				
HONFLEUR	49	25 N	0	15 E	5.14				
HOPE'S NOSE	50	27 N	3	29 W	2.4				
HUGH TOWN	49	55 N	6	19 W	1.4				
HURD DEEP	49	40 N	3	00 W	4.2				
HURST POINT	50	42 N	1	33 W	2.18				
HYTHE	51	04 N	0	04 E	7.10				
I									
ILE ARGOT	48	38 N	2	10 W	3.29				
ILE D'OUessant	48	28 N	5	05 W	3.2				
ILE DE BATZ	48	45 N	4	01 W	3.5				
ILE DE BATZ LIGHT	48	45 N	4	02 W	3.5				
ILE DE BREHAT	48	51 N	3	00 W	3.18				
ILE DE CEZEMBRE	48	41 N	2	04 W	3.30				
ILE DES RIMAINS	48	41 N	1	50 W	3.34				
ILE GRANDE	48	48 N	3	35 W	3.10				
ILE HARBOUR	48	40 N	2	48 W	3.25				
ILE TOME	48	50 N	3	24 W	3.13				
ILE VIERGE LIGHT	48	38 N	4	34 W	3.3				
ILES CHAUSEY	48	52 N	1	49 W	3.39				
ILES SAINT-MARCOUF	49	30 N	1	09 W	5.4				
IN RUYTINGEN	51	13 N	2	16 E	6.22				
INTER BANK LIGHTED BUOY	51	17 N	1	52 E	6.3				
IRON GATES	50	04 N	5	26 W	1.10				
ISIGNY	49	19 N	1	06 W	5.5				
ISLE OF WIGHT	50	40 N	1	18 W	2.19				
J									
JERSEY	49	16 N	2	15 W	4.3				
JONES BANK	49	53 N	7	58 W	1.2				
K									
KAISER-I-HIND BANK	48	06 N	6	34 W	1.2				
KEREON LIGHT	48	26 N	5	01 W	3.2				
L									
LA CATHEUE	49	07 N	1	47 W	3.40				
LA CATIS	48	43 N	2	15 W	3.29				
LA CORBIERE LIGHT	49	11 N	2	15 W	4.4				
LA COUPE POINT	49	14 N	2	01 W	4.11				
LA CROIX LIGHT	48	50 N	3	03 W	3.19				
LA JUMENT LIGHT	48	25 N	5	08 W	3.2				
LA PENZE RIVER	48	39 N	3	57 W	3.9				
LA ROCQUE POINT	49	10 N	2	02 W	4.9				
LA SEINE MARITIME	49	30 N	0	15 E	5.13				
LAND'S END	50	04 N	5	43 W	1.6				
LANGSTONE HARBOUR	50	47 N	1	02 W	2.28				
LANNION	48	44 N	3	28 W	3.11				
LE BECQUET	49	39 N	1	33 W	4.34				
LE CROTOY	50	13 N	1	38 E	6.16				
LE FOUR LIGHT	48	31 N	4	48 W	3.3				
LE HAVRE	49	29 N	0	06 E	5.12				
LE HOURDEL	50	13 N	1	34 E	6.16				
LE LEGUE	48	32 N	2	45 W	3.27				
LE MONT SAINT-MICHEL	48	38 N	1	31 W	3.34				
LE PAON LIGHT	48	52 N	2	59 W	3.18				
LE ROHEIN	48	39 N	2	38 W	3.23				
LE RONQUET	49	00 N	1	37 W	3.40				
LE SENEQUET	49	05 N	1	40 W	3.40				
LE STIFF LIGHT	48	28 N	5	03 W	3.2				
LE TREPORT	50	04 N	1	22 E	6.13				
LE TRIEUX	48	50 N	3	04 W	3.19				
LE VIDECOQ	48	50 N	1	42 W	3.35				
LE VIEUX BANC	48	42 N	2	10 W	3.29				
LEGUER	48	44 N	3	33 W	3.11				
LES ARDENTES	48	58 N	1	52 W	3.38				
LES BUCARATS	48	40 N	2	07 W	3.31				
LES CHEMINEES	48	40 N	2	07 W	3.31				
LES DERVINIS	48	52 N	3	27 W	3.12				
LES DIROUILLES	49	18 N	2	02 W	3.41				
LES ECREHOU	49	17 N	1	56 W	3.41				
LES HANOIS	49	26 N	2	42 W	4.14				
LES HEAUX	48	55 N	3	05 W	3.16				
LES HUQUETS DE JOBOURG	49	39 N	1	57 W	3.45				
LES MAISONS	48	59 N	2	10 W	3.38				
LES RIDENS	50	45 N	1	18 E	6.3				
LES SAUVAGES	48	54 N	2	01 W	3.38				
LES SEPT ILES	48	53 N	3	29 W	3.12				
LES TRIAGOZ LIGHT	48	52 N	3	39 W	3.12				

	Position				Sec. Para		Position				Sec. Para
	°	'	°	'			°	'	°	'	
LEVI	49	42 N	1	28 W	4.34	PLATEAU DES HORS	48	39 N	2	45 W	3.25
LEZARDRIEUX	48	47 N	3	06 W	3.20	PLATEAU DES MINQUIERS	48	59 N	2	04 W	3.38
LHA LANBY	49	32 N	0	10 W	5.10	PLATEAU DES ROCHES-DOUVRES	49	06 N	2	49 W	3.17
LITTLE SOLE BANK	48	27 N	8	53 W	1.2	PLATEAU DES TRIAGOZ	48	53 N	3	40 W	3.12
LITTLEHAMPTON	50	47 N	0	32 W	7.19	PLATEAU DES TROIS-GRUNES	49	22 N	1	54 W	3.41
LIZARD POINT	49	57 N	5	12 W	1.11	PLATEAU DU CRAPAUD	48	47 N	3	44 W	3.10
LOCQUIREC	48	42 N	3	39 W	3.10	PLATEAU DU ROHEIN	48	39 N	2	37 W	3.23
LONGSHIPS	50	04 N	5	45 W	1.6	PLATTE FOUGERE	49	31 N	2	29 W	4.17
LOOE HARBOUR	50	21 N	4	27 W	1.19	PLEMONT POINT	49	16 N	2	14 W	4.10
LOOE ISLAND	50	20 N	4	27 W	1.19	PLYMOUTH	50	20 N	4	10 W	1.21
LYME BAY	50	36 N	3	18 W	2.9	POINT LA MOYE	49	11 N	2	15 W	4.5
LYME REGIS HARBOUR	50	43 N	2	56 W	2.10	POINT ROBERT	49	26 N	2	21 W	4.21
LYMINGTON	50	45 N	1	32 W	2.18	POINTE D'AGON	49	00 N	1	35 W	3.42
						POINTE D'AILLY	49	55 N	0	58 E	6.10
M						POINTE DE BEG POL	48	41 N	4	21 W	3.4
MAITRE ILE	49	17 N	1	56 W	3.41	POINTE DE L'ARCOUEST	48	49 N	3	00 W	3.21
MAITRESSE ILE	48	58 N	2	04 W	3.38	POINTE DE LA BARFLEUR	49	42 N	1	16 W	5.2
MANACLE ROCKS	50	03 N	5	02 W	1.12	POINTE DE LA CHAINE	48	40 N	1	50 W	3.34
MEAN RUZ LIGHT	48	50 N	3	29 W	3.13	POINTE DE LA LATTE	48	40 N	2	17 W	3.29
MELVILLE KNOLL	49	14 N	8	16 W	1.2	POINTE DE LA PERCEE	49	24 N	0	55 W	5.6
MEVAGISSEY	50	16 N	4	47 W	1.14	POINTE DE MEINGA	48	42 N	1	56 W	3.30
MONT SAINT-MICHEL	48	38 N	1	31 W	3.34	POINTE DE PLENEUF	48	36 N	2	33 W	3.28
MONTE UBE LIGHT	49	00 N	2	04 W	4.9	POINTE DE QUERQUEVILLE	49	40 N	1	41 W	4.32
MORLAIX	48	35 N	3	50 W	3.9	POINTE DE ROSELIER	48	33 N	2	43 W	3.25
MOUNTS BAY	50	04 N	5	26 W	1.8	POINTE DE SAINT QUENTIN	50	16 N	1	33 E	6.17
MPC LIGHTED BUOY	51	06 N	1	38 E	6.3	POINTE DE SAIRE	49	36 N	1	14 W	5.3
MULLION ISLAND	50	01 N	5	16 W	1.10	POINTE DE SCOTTEVILLE	49	48 N	0	50 E	6.10
						POINTE DE TOUQUET	50	32 N	1	35 E	6.17
N						POINTE DE VER	49	20 N	0	27 W	5.8
NAB CHANNEL	50	42 N	0	57 W	2.23	POINTE DE WALDE LIGHT	51	00 N	1	55 E	6.23
NAB TOWER	50	40 N	0	57 W	2.23	POINTE DU CHATEAU	48	52 N	3	13 W	3.14
NE GOODWIN LT BUOY	51	20 N	1	34 E	7.6	POINTE DU DECOLLE	48	38 N	2	08 W	3.29
NEEDLES CHANNEL	50	38 N	1	39 W	2.22	POINTE DU GROUIN	48	43 N	1	51 W	3.33
NEEDLES POINT	50	40 N	1	35 W	2.19	POINTE DU HAUT-BANC	50	24 N	1	34 E	6.17
NEEDLES ROCKS	50	40 N	1	35 W	2.19	POINTE DU NID	48	42 N	1	53 W	3.33
NEWHAVEN	50	47 N	0	03 E	7.15	POINTE DU ROC	48	50 N	1	37 W	3.35
NEWLYN	50	06 N	5	33 W	1.8	POL BANK	49	50 N	6	28 W	1.3
NEZ DE JOBOURG	49	41 N	1	56 W	3.45	PONTRIEUX	48	42 N	3	09 W	3.20
NIVIDIC LIGHT	48	27 N	5	09 W	3.2	POOLE HARBOUR	50	41 N	1	57 W	2.17
NOIRMONT POINT	49	10 N	2	10 W	4.5	PORT BLANK	48	50 N	3	18 W	3.13
NORTH FORELAND	51	22 N	1	27 E	7.2	PORT DU HAVRE-ANTIFER	49	39 N	0	10 E	5.19
						PORT-EN-BESSIN	49	21 N	0	45 W	5.7
O						PORTHLEVEN	50	05 N	5	19 W	1.10
OOST DYCK RDR TOWER	51	16 N	2	27 E	6.22	PORTLAND HARBOUR	50	35 N	2	26 W	2.13
ORTAC CHANNEL	49	44 N	2	81 W	4.27	PORTRIEUX	48	39 N	2	50 W	3.26
OUESSANT NE LT BUOY	48	59 N	5	24 W	3.1	PORTSMOUTH	50	48 N	1	06 W	2.24
OUESSANT SW LANBY	48	30 N	5	45 W	3.1	PORZ KERNOK	48	45 N	4	01 W	3.5
OUISTREHAM	49	17 N	0	15 W	5.9	PRESQU'ILE DE SAINT-LAURENT	48	31 N	4	46 W	3.3
OUT RUYTINGEN	51	08 N	2	04 E	6.3						
OWERS LIGHTED BUOY	50	39 N	0	41 W	2.29	Q					
						QUEMER	50	17 N	1	20 E	6.15
P						QUENARD POINT	49	44 N	2	10 W	4.28
PAIGNTON	50	26 N	3	33 W	2.5						
PAIMPOL	48	47 N	3	03 W	3.22	R					
PALUEL POWER STATION	49	52 N	0	38 E	6.9	RACE OF ALDERNEY	49	44 N	2	05 W	4.30
PAR	50	21 N	4	42 W	1.16	RADE D'ERQUY	48	38 N	2	28 W	3.28
PAR SANDS	50	21 N	4	42 W	1.16	RADE DE CANCALE	48	42 N	1	49 W	3.34
PARSONS BANK	48	25 N	6	32 W	1.2	RAME HEAD	50	19 N	4	13 W	1.19
PASSAGE DE LA DEROUTE	49	15 N	1	50 W	3.43	RAMSGATE	51	20 N	1	25 E	7.4
PASSAGE ROCK	49	10 N	2	12 W	4.6	RCE LIGHTED BUOY	51	02 N	1	53 E	6.23
PASSE DE L'OUEST	51	03 N	2	09 E	6.25	REDCLIFF POINT	50	38 N	2	24 W	2.15
PEGWELL BAY	51	19 N	1	22 E	7.5	REPORTING SYSTEMS	50	00 N	2	30 W	1.1
PENCARROW HEAD	50	19 N	4	36 W	1.18	RIDENS DE BELLEVILLE	49	59 N	1	09 E	6.12
PENLY POWER STATION	49	59 N	1	13 E	6.12	RIDENS DE DIEPPE	50	06 N	1	06 E	6.12
PENZANCE	50	07 N	5	32 W	1.9	RIDENS DE TREPORT	50	06 N	1	18 E	6.12
PENZANCE BAY	50	06 N	5	30 W	1.8	RIDGE, THE	50	53 N	1	20 E	6.3
PERROS-GUIREC	48	48 N	3	27 W	3.13	RIVIERE DE LANNION	48	44 N	3	33 W	3.11
PETITE ANQUETTE	49	09 N	1	56 W	4.9	RIVIERE DE MORLAIX	48	40 N	3	53 W	3.8
PIERRE DE HERPIN	48	44 N	1	49 W	3.33	RIVIERE DIVES	49	18 N	0	06 W	5.10
PIERRES LECQ OU PATERNOSTERS	49	17 N	2	12 W	4.10	ROCHER ROHEIN	48	39 N	2	38 W	3.23
PLATEAU DE BARNOUIC	49	02 N	2	48 W	3.17	ROCHES DE SAINT-QUAY	48	39 N	2	46 W	3.25
PLATEAU DE LA HORAINNE	48	54 N	2	54 W	3.18	ROCHES DUON	48	44 N	3	55 W	3.8
PLATEAU DE MELOINE	48	47 N	3	47 W	3.7	ROCHES-DOUVRES LIGHT	49	06 N	2	49 W	3.17
PLATEAU DES DUONS	48	44 N	3	55 W	3.8	ROSCOFF	48	44 N	3	59 W	3.6
						ROSCOFF BLOSCON	48	43 N	3	58 W	3.6
						ROSEDO LIGHT	48	52 N	3	00 W	3.18
						ROUEN	49	27 N	1	06 E	5.16
						ROUND ISLAND	49	59 N	6	19 W	1.3

	Position			Sec. Para		Position			Sec. Para	
	°	'				°	'			
ROYAL SOVEREIGN LIGHT	50	43 N	0	26 E	7.13	50	20 N	4	27 W	1.19
ROYAL SOVEREIGN SHOALS	50	44 N	0	26 E	7.13	49	55 N	6	19 W	1.4
RUYTINGEN SW LT BUOY	51	05 N	1	47 E	6.3	50	07 N	5	29 W	1.8
RYDE	50	44 N	1	09 W	2.20	50	47 N	1	21 W	2.18
RYDE MIDDLE	50	46 N	1	14 W	2.25, 2.27	50	13 N	3	38 W	2.2
RYE BAY	50	54 N	0	49 E	7.11	50	36 N	3	21 W	2.9
RYE HARBOUR	50	57 N	0	44 E	7.11	49	43 N	2	15 W	4.27
S										
SAINT ALBANS HEAD	50	35 N	2	03 W	2.16					
SAINT ANTHONY HEAD	50	09 N	5	03 W	1.12					
SAINT AUBIN	49	11 N	2	10 W	4.6					
SAINT AUBIN BAY	49	11 N	2	08 W	4.6					
SAINT BRELADE BAY	49	11 N	2	12 W	4.5					
SAINT CATHERINE BAY	49	13 N	2	01 W	4.11					
SAINT CATHERINES POINT	50	35 N	1	18 W	2.20					
SAINT HELIER	49	11 N	2	07 W	4.8					
SAINT MARTINS POINT	49	25 N	2	32 W	4.16					
SAINT OUEN BAY	49	13 N	2	15 W	4.4					
SAINT PETER PORT	49	27 N	2	32 W	4.20					
SAINT SAMPSON	49	29 N	2	31 W	4.19					
SAINT-MALO	48	39 N	2	01 W	3.32					
SAINT-QUAY-PORTRIEUX	48	39 N	2	50 W	3.26					
SAINT-VAAST-LA-HOUGUE	49	35 N	1	15 W	5.3					
SAINT-VALERY-EN-CAUX	49	52 N	0	43 E	6.9					
SAINT-VALERY-SUR-SOMME	50	11 N	1	39 E	6.16					
SALCOMBE HARBOUR	50	14 N	3	46 W	1.23					
SANDETTIE	51	15 N	2	00 E	6.3					
SANDETTIE LIGHTVESSEL	51	09 N	1	47 E	6.3					
SARK	49	26 N	2	22 W	4.21					
SCILLY ISLES	49	55 N	6	20 W	1.3					
SEINE, ESTUARY OF	49	30 N	0	01 W	5.10					
SELSEY BILL	50	43 N	0	47 W	2.29					
SEVEN STONES	50	02 N	6	07 W	1.5					
SEVEN STONES LIGHTFLOAT	50	04 N	6	04 W	1.5					
SHAMROCK KNOLL	48	11 N	7	34 W	1.2					
SHINGLE BANK	50	44 N	0	35 E	7.13					
SHINGLES	50	41 N	1	35 W	2.18					
SHOREHAM	50	50 N	0	15 W	7.17					
SKERRIES BANK	50	15 N	3	36 W	2.2					
SMALL DOWNS, THE	51	15 N	1	26 E	7.5					
SOLENT	50	47 N	1	17 W	2.21					
SOLENT BANK	50	44 N	1	26 W	2.22					
SOREL POINT	49	16 N	2	09 W	4.10					
SOUTH FALLS	51	23 N	1	47 E	6.3, 7.3					
SOUTH FALLS LT BUOY	51	14 N	1	44 E	6.3					
SOUTH FORELAND	51	08 N	1	22 E	7.5					
SOUTHAMPTON	50	54 N	1	24 W	2.27					
ST. ALDHELMS HEAD	50	35 N	2	03 W	2.16					
ST. CLEMENTS ISLE	50	05 N	5	32 W	1.8					
ST. GEORGES ISLAND	50	20 N	4	27 W	1.19					
ST. MARY'S	49	55 N	6	19 W	1.4					
ST. MICHAEL'S MOUNT	50	07 N	5	29 W	1.8					
STANSORE POINT	50	47 N	1	21 W	2.18					
START POINT	50	13 N	3	38 W	2.2					
STRAIGHT POINT	50	36 N	3	21 W	2.9					
SWINGE, THE	49	43 N	2	15 W	4.27					
					T					
TATER DU LIGHT	50	03 N	5	35 W	1.7					
TEIGNMOUTH HARBOUR	50	33 N	3	30 W	2.7					
THE BOA	49	58 N	5	17 W	1.10					
THE BRIDGE	50	38 N	1	39 W	2.19					
THE OWERS	50	42 N	0	44 W	2.29					
THE PARK	50	40 N	0	41 W	7.20					
THE SHAMBLES	50	30 N	2	22 W	2.12					
TOR BAY	50	26 N	3	28 W	2.4					
TORQUAY	50	28 N	3	32 W	2.6					
TREGUIER	48	47 N	3	14 W	3.15					
TRINITY BAY	51	12 N	1	30 E	7.5					
TROUVILLE-DEAUVILLE	49	22 N	0	05 E	5.11					
					U					
USHANT ISLAND	48	28 N	5	05 W	3.2					
					V					
VARNE LIGHTVESSEL	51	01 N	1	24 E	6.3					
VARNE, THE	50	58 N	1	20 E	6.3					
VERGOYER	50	33 N	0	58 E	6.3					
VERGOYER N LT BUOY	50	33 N	0	58 E	6.3					
					W					
WEYMOUTH HARBOUR	50	37 N	2	27 W	2.14					
WOLF ROCK	49	57 N	5	49 W	1.5					
WORBARROW BAY	50	37 N	2	12 W	2.15					
					Y					
YARMOUTH	50	42 N	1	30 W	2.19					
YEALM HEAD	50	18 N	4	04 W	1.22					
YPORT	49	44 N	0	19 E	6.7					
YPORT 4944N019E 6.7										