PUB. 142

# SAILING DIRECTIONS (ENROUTE)

★

# IRELAND AND THE WEST COAST OF ENGLAND

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FOURTEENTH EDITION

## Preface

Pub. 142, Sailing Directions (Enroute) Ireland and the West Coast of England, Fourteenth Edition, 2015, is issued for use in conjunction with Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean and Adjacent Seas.

Companion volumes are Pubs. 141, 143, 145, 146, 147, and 148.

Digital Nautical Charts 19 and 20 provide electronic chart coverage for the area covered by this publication.

This publication has been corrected to 7 November 2015, including Notice to Mariners No. 45 of 2015. Subsequent updates have corrected this publication to 25 June 2016, including Notice to Mariners No. 26 of 2016.

## 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.

**Charts.—**Reference to charts made throughout this publication refer to both the paper chart and the Digital Nautical Chart (DNC).

**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.

**Corrective Information.—**Users should refer corrections, additions, and comments to NGA's Maritime Operations Desk, as follows:

1. Toll free: 1-800-362-6289
2. Commercial: 571-557-5455
3. DSN: 547-5455
4. DNC web site: http://msi.nga.mil/NGAPortal/DNC.portal
5. Maritime Domain web site: http://msi.nga.mil/NGAPortal/MSI.portal
6. E-mail: navsafety@nga.mil
7. Mailing address: Maritime Safety Office
   National Geospatial-Intelligence Agency
   Mail Stop N64-SFH
   7500 Geoint Drive
   Springfield VA 22150-7500

New editions of Sailing Directions are corrected through the date of the publication shown above. Important information to amend material in the publication is updated as needed and available as a downloadable corrected publication from the NGA Maritime Domain web site.

**NGA Maritime Domain Website**
http://msi.nga.mil/NGAPortal/MSI.portal

**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 meridianal 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.

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**International Maritime Organization Home Page**
http://www.imo.org

**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.

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**Maritime Administration (MARAD) Home Page**
http://www.marad.dot.gov/newsroom

**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 web site.

**Time.—**Time is normally expressed as local time unless specifically designated as Universal Coordinated Time (UTC).

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

## Reference List

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

British Hydrographic Department Sailing Directions.

Various port handbooks.

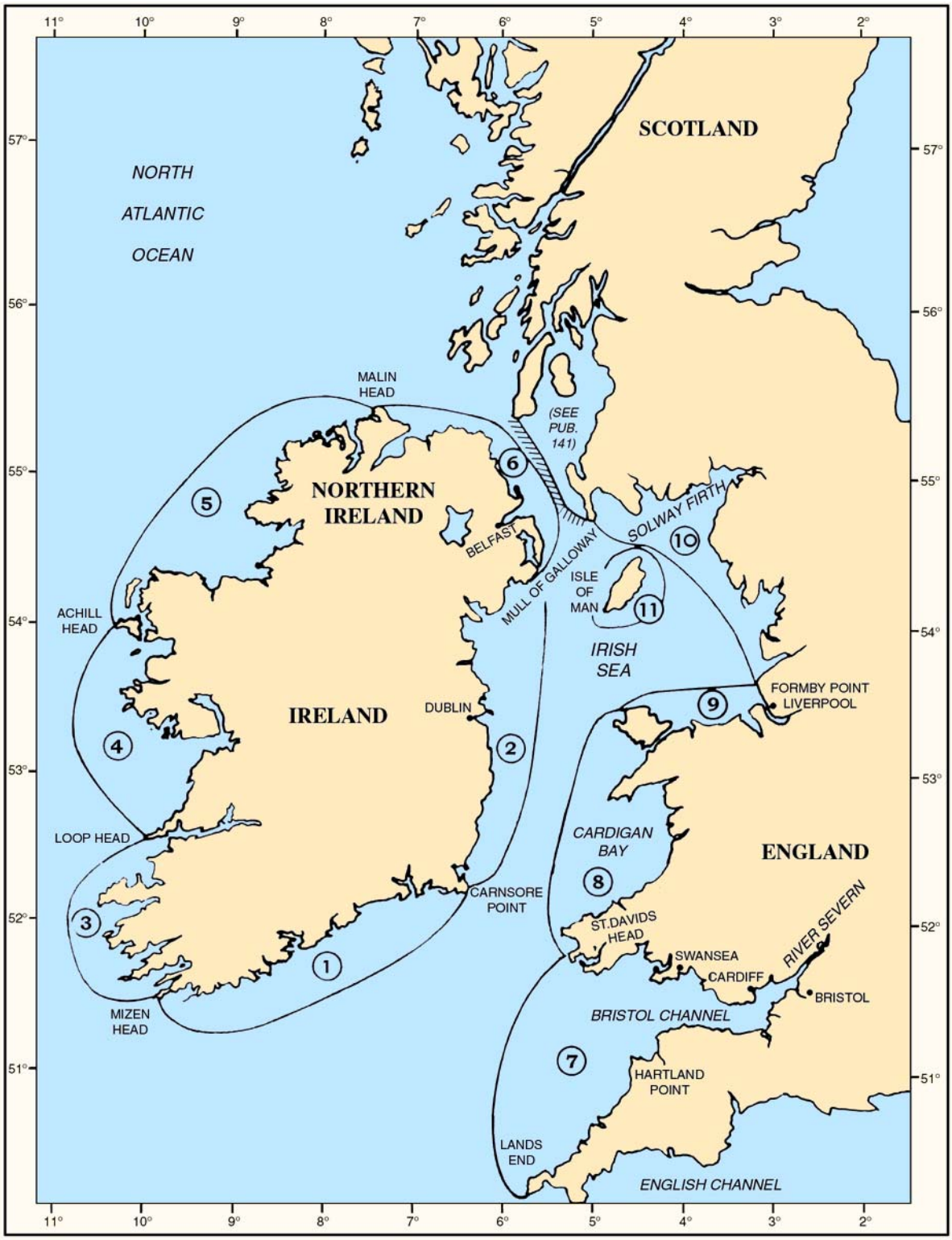
Reports from United States naval and merchant vessels and various shipping companies.

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

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

Internet Web Site, as follows:

1. Carter, Donald and Diana/Internet Public Library
   http://www.ipl.org/exhibit/light
2. Courtie, Liz
   http://www.isle-of-man.com/galleries/index.htm
3. Luxton, John
   http://www.merseyshipping.co.uk
4. Tourism and Leisure, Department of/Lily Publications (IOM) Ltd.
   http://www.gov.im/tourism
5. Tronicke, Jürgen
   http://home.t-online.de/home/trollo




SECTOR LIMITS—**PUB. 142**

## 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) |
| gt | gross tons | nrt | net registered tons |
| kHz | kilohertz | TEU | twenty-foot equivalent units |

**Directions**

| | | | |
|---|---|---|---|
| N | north | S | south |
| NNE | northnortheast | 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 | VLOC | Very Large Ore Carrier |
| Lo-lo | Lift-on Lift-off | FSO | Floating Storage and Offloading |
| NGL | Natural Gas Liquids | FSU | Floating Storage Unit |
| FSRU | Floating Storage and Regasification Unit | FPSO | Floating Production Storage and Offloading |

**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 | MF | medium frequency |
| R/T | radiotelephone | HF | high frequency |
| GMDSS | Global Maritime Distress and Safety System | VHF | very high frequency |
| LF | low frequency | UHF | ultra high frequency |

**Navigation**

| | | | |
|---|---|---|---|
| LANBY | Large Automatic Navigation Buoy | SBM | Single Buoy Mooring |
| NAVSAT | Navigation Satellite | SPM | Single Point Mooring |
| ODAS | Ocean Data Acquisition System | TSS | Traffic Separation Scheme |
| CBM | Conventional Buoy Mooring System | VTC | Vessel Traffic Center |
| MBM | Multi-Buoy Mooring System | VTS | Vessel Traffic Service |
| CALM | Catenary Anchor Leg Mooring | | |

The following abbreviations may be used in the text:

**Miscellaneous**

| | | | |
|---|---|---|---|
| AIS | Automatic Identification System | MMSI | Maritime Mobile Service Identity Code |
| COLREGS | Collision Regulations | No./Nos. | Number/Numbers |
| IALA | International Association of Lighthouse Authorities | PA | Position approximate |
| | | PD | Position doubtful |
| IHO | International Hydrographic Organization | Pub. | Publication |
| IMO | International Maritime Organization | SOLAS | International Convention for Safety of Life at Sea |
| IMDG | Intermational Maritime Dangerous Goods Code | | |
| LOA | length overall | St./Ste. | Saint/Sainte |
| UKC | Under keel clearance | ISPS | International Ship and Port facility Security |

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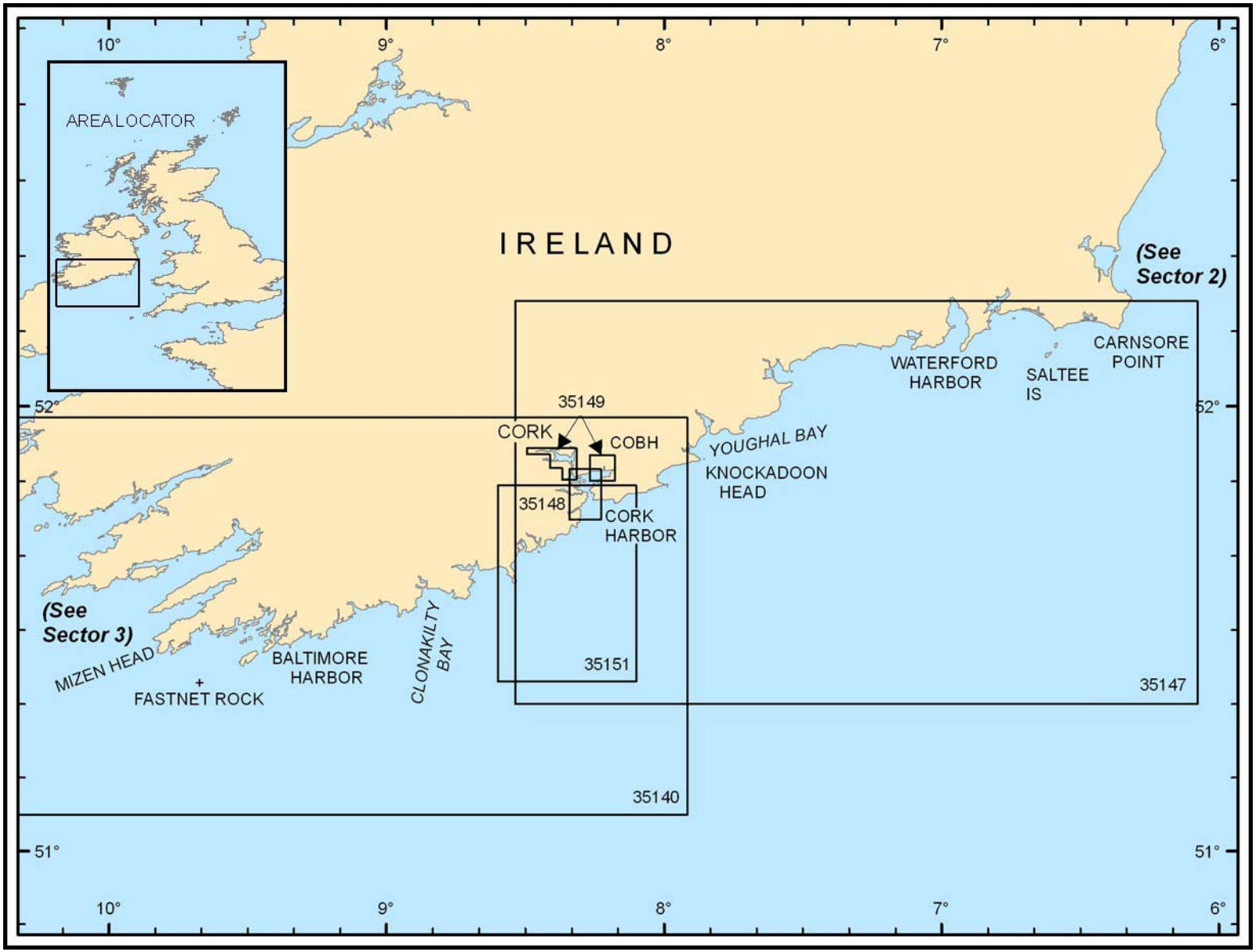
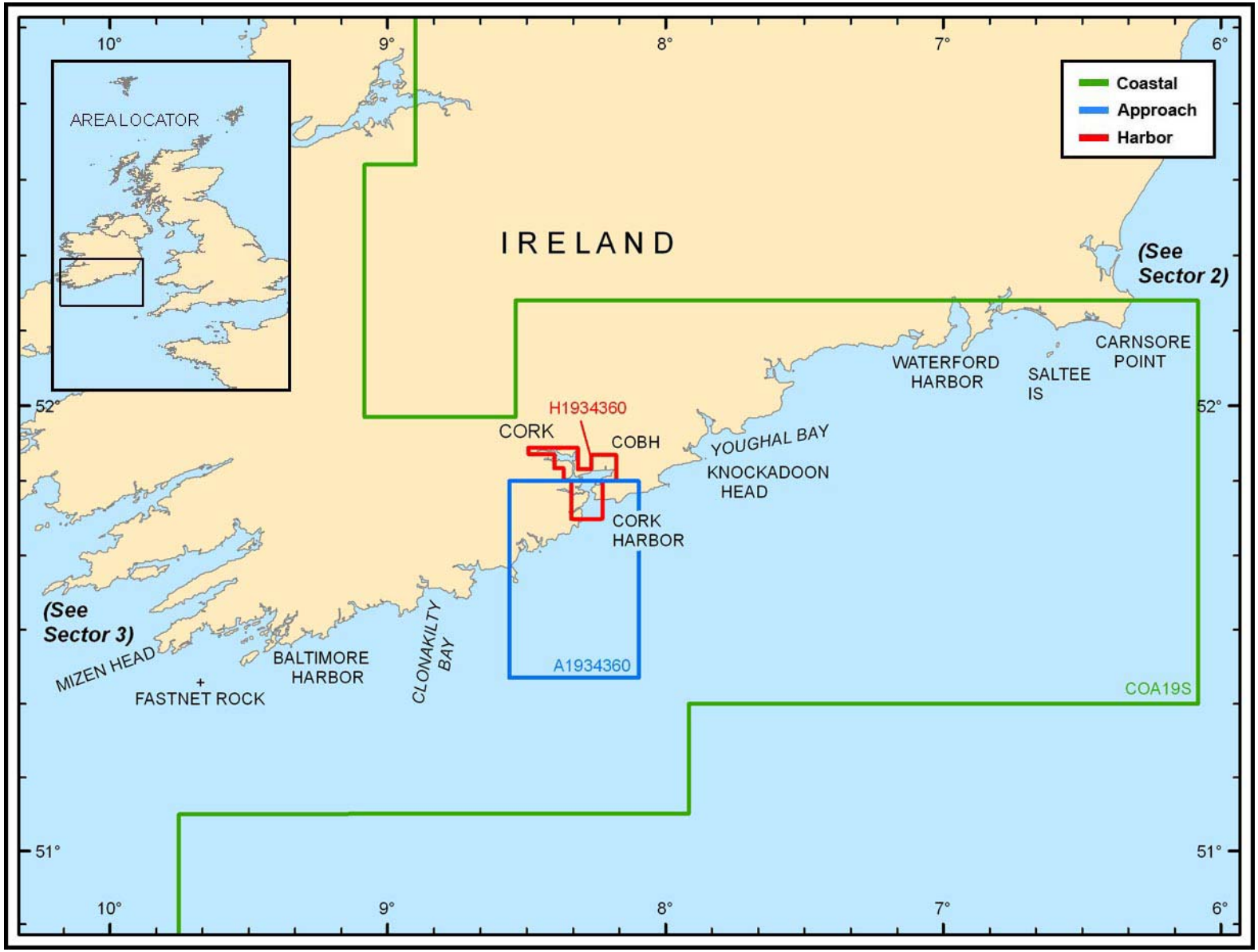



Additional chart coverage may be found in NGA/DLIS Catalog of Maps, Charts, and Related Products (Unlimited Distribution).

SECTOR 1 — CHART INFORMATION




Additional DNC library coverage may be found in NGA DNC 19 (Limited Distribution) disc within the README\GRAPHICS folder.

SECTOR 1 — DNC LIBRARY INFORMATION

# SECTOR 1

## SOUTH COAST OF IRELAND—MIZEN HEAD TO CARNSORE POINT

**Plan.—**This sector describes the S coast of Ireland from Mizen Head to Carnsore Point (52°10'N., 6°22'W.). The descriptive sequence is from W to E.

### General Remarks

**1.1** The S coast of Ireland between Mizen Head and Carnsore Point, 138 miles ENE, consists of predominately rocky, cliffy, and boulder-strewn indentations which in its W part, are interspersed by numerous headlands and peninsulas. The E part of this section of the coast is bordered by rather long stretches of sandy shore backed by lowlands. A few off-lying dangers lie seaward of the salient points.

The coast in the vicinity of Cape Clear (51°25'N., 9°31'W.) is high and bold, increasing in height to the N. This part of the coast is the ordinary landfall for vessels from the W. The most prominent objects in the vicinity are Mizen Peak, Cape Clear, Mount Gabriel, and Fastnet Rock. The W part of the coast is frequently obscured by haze, and during the winter months heavy gales and seas are common. Farther E, the seas are less turbulent. Cork Harbor, with the ports of Cork, Cobh, and Ringaskiddy within its confines, lies 63 miles ENE of Mizen Head and is an important commercial port.

**Winds—Weather.—**During the winter season, the prevailing winds are from the SW quadrant. Due to migratory cyclones, winds of force 3 may be expected from all quadrants. The wind direction is fairly well distributed around the compass in the spring, being of force 3 or less. In the summer season, the most frequent wind directions are from S through W to N, force 3 to 8.

Fog, which would reduce the visibility to 1 mile or less, is reported 1 to 5 per cent of the time in every month with the exception of May. About 10 to 15 per cent of the monthly observations have visibilities of less than 5 miles.

The mean air temperature ranges from 6°C in February to 17°C in August.

**Tides—Currents.—**Along the S coast of Ireland, the currents generally follow the direction of the coast in NE and SW directions at rates of 1 to 2.5 knots. Between Fastner Rock and Cork Harbor, the current setting E begins about 4 hours and 15 minutes before HW at Cobh and the opposite current about 1 hour and 45 minutes after HW at Cobh. Between Cork Harbor and Carnsore Point, the times at which the currents begin become gradually later. During certain times of the year, the currents set either E or W along the entire coast between Fastnet Rock and Carnsore Point. At other times, it sets E or W from Fastnet Rock to Cork Harbor, and in the opposite direction between Cork Harbor and Carnsore Point.

The offshore currents are not strong between Fastnet Rock and Cork Harbor, the spring rate of 1 to 1.5 knots being the maximum. Between Cork Harbor and Waterford Harbor, the currents are weak; between Waterford Harbor and Carnsore Point, the currents increase, with their rates at springs becoming as much as 2 to 2.5 knots about 5 to 6 miles SE of the point.

The wind has considerable effect on the duration and rate of the currents. A strong, prolonged W or SW wind will increase the current setting E and reduce the opposite set. A similar E wind will increase the current setting W and reduce the opposite set.

Nearer the land, the directions of the currents, their rates and the times at which they begin are affected by local conditions and may differ widely from the general conditions experienced offshore.

**Regulations.—**An IMO-adopted Traffic Separation Scheme (TSS), which is shown on the chart, is situated about 5 miles SE of Fastnet Rock.

**Caution.—**Numerous fishing vessels of all sizes may be encountered at all times of the year off the S coast of Ireland. All methods of fishing are employed in the activity—trawling, seining, and gill nets for salmon on and offshore, as well as lobster cages and crab potting inshore. A least distance of 0.1 mile should be kept away from any fishing gear.

Submarines exercise frequently in the waters off the S coast of Ireland. They may also be present in the North Channel and the Irish Sea. The Coast Guard stations at Brixham, Falmouth, Belfast, and Stornoway broadcast information concerning submarine activities and firing exercise areas.

Submarine cables and pipelines are shown on the charts, particularly in depths of less than 50m and near anchorage areas.

Ocean Data Acquisition System (ODAS) buoys may be encountered anywhere, some are moored temporarily and others float free; only the permanently-placed ODAS buoys are charted. These buoys have no navigational significance and they may be moved or withdrawn without notice.

The development of marine farming in and around the Irish coast is rapidly growing. Steel-jointed fish cages with tubular rubber sides, each measuring up to 32m in diameter, can be placed anywhere. Each cage is required to be marked by two yellow flashing lights and a radar reflector, since the structure is hardly visible.

**Discoveries of offshore oil and gas** fields have led to the construction of drilling rigs and fixed structures around the Irish coastal waters, especially in the Celtic Sea, an extensive area lying S of Ireland.

A depth of 18m was reported (2006) about 49 miles SSW of Fastnet Rock, in approximate position 50°38'N, 10°05'W.

### Mizen Head to Long Island Bay

**1.2** **Mizen Head** (51°27'N., 9°49'W.) is the SW extremity of Illaunbirrane, which is connected to the coast by a narrow neck of land. A ruined tower stands at an elevation of 129m about 0.5 mile NE of Mizen Head; about 0.5 mile NNE of the tower is Mizen Peak, 229m high, the highest hill in the vicinity. Mizen Head has been reported to be a good radar target at a distance of 17 miles. A light is shown from a structure on Mizen Head. A racon is situated at a white building with radio masts, 23m high, close to it, about 0.2 mile NNE of the light

structure.

Carrignagower Rock lies about 0.5 mile E of Mizen Head and is awash at HW.

Mount Gabriel, 404m in elevation, rises about 12 miles NE of Mizen Head and has conspicuous radar domes near the summit.

**Barley Cove** (51°27'N., 9°46'W.), entered about 1 mile E of Mizen Head, may be identified by the ruins of a tower on Brow Head, its E entrance point. Barley Rock, also known as Devil's Rock, which dries about 3.3m, lies near the middle of the cove.

**Tides—Currents.—**Close off Mizen Head, the tidal currents attain a maximum velocity of 4 knots at springs and cause a dangerous race, especially when the wind is opposed to the tidal current. The velocity of the tidal current decreases as the distance from Mizen Head increases. The spring velocity in both directions, 4 or 5 miles from the land, is 1.5 knots. Off Mizen Head, the E current sets S and the W current sets NW.

Between Mizen Head and Crookhaven, the currents set E and W in the direction of the coast. The spring velocity in both directions is 0.8 knot.

**Fastnet Rock** (51°23'N., 9°36'W.) lies about 9 miles ESE of Mizen Head. Close around the rock, the depths are shoal and the bottom is rocky; a flat rock, with a least depth of 3m, which often breaks, lies about 0.2 mile NNE. Fastnet Rock has been reported to be a good radar target at about 19 miles and is a very prominent isolated mark. A light is shown from a prominent gray granite tower, 49m high, erected on the rock; a racon transmits from the light.

**Caution.—**A Traffic Separation Scheme has been established 5 miles SE of Fastnet Rock, with an inshore traffic zone between the westbound lane and Fastnet Rock, as best seen on the chart. This scheme is IMO approved; Rule 10 of COLREGS applies.

**1.3 Crookhaven** (51°28'N., 9°42'W.) is entered between Streek Head, 3 miles NE of Brow Head, and Sheemon Point, the E extremity of Rock Island, 0.5 mile N. It once was an important fishing port but lost its status from the 1980s. It affords anchorage for vessels with a draft of less than 4.5m and is primarily for small craft. A light is shown from a white tower standing on Rock Island.

The entrance is about 0.2 mile wide and has depths of l5m which decrease gradually to the head of the harbor. Alderman Rocks, 9.1m high, lie 0.2 to 0.3 mile NE of Streek Head, with Alderman Sound, a narrow channel nearly blocked by dangers, between.

Black Horse Rocks, which dry, extend about 135m N from Alderman Rocks. A lighted beacon stands on the N part of these rocks; sunken rocks extend more than 90m NE from the beacon.

There are no licensed pilots but fishermen will board vessels displaying the pilot signal.

**Caution.—**A submarine pipeline runs WSW across the harbor entrance close W of Crookhaven Light (51°28.6'N., 9°42.2'W.) to the shore E of the village.

**1.4 Ballydivlin Bay** (51°29'N., 9°41'W.) is entered between Sheemon Point and Ballyrisode Point, about 2 miles NE. Spanish Point, about 0.4 mile N of Sheemon Point, is fringed by foul ground extending, in places, 135m offshore.

**Fastnet Light**

Knocknamaddree, a conspicuous mountain, rises to a height of 311m about 2.5 miles NW of Sheemon Point; at the termination of its S slope, about 1 mile SE of the summit, is Callaros Oughter, a conspicuous cone, 156m high.

**Knockaphuca** (51°31'N., 9°42'W.), a conspicuous hill with a conspicuous cross on the summit and a steep fall W, rises to an elevation of 235m, about 1.5 miles NW of Ballyrisode Point.

Reenaveal Ledge consists of two detached ledges, with least depths of 7.3m and 8.2m, which lie about 0.5 mile NE of Sheemon Point and as far as 0.4 mile offshore. Amsterdam Reef, which dries, lies about 0.4 mile S of Ballyrisode Point; Amsterdam Rock lies between the two. Several detached 16.4m patches lie outside the 20m curve within the limits of the bay.

**Anchorage.—**Ballydivlin Bay is exposed to S and SE winds, but in offshore winds sheltered anchorage may be obtained, in depths of 20 to 27m.

**Directions.—**The W fall of Knockaphuca in range with Black Hole of Coosduff, an inlet on the N shore of the bay about 0.8 mile NNE of Spanish Point, bearing 345°, leads E of Reenaveal Ledge. The N extremity of Spanish Point in range with Castlemehigan, a hill, 147m high, bearing 247°, leads NW. The summit of Callaros Oughter in range with Spanish Point, and also in range with Cape View House, bearing 298°, leads SW of the ledge.

The S extremity of Sheemon Point, bearing 240°, leads SE of Amsterdam Reef, and the W fall of Knockaphuca in range with Ballydivlin House, bearing 324°, leads SW of Amsterdam Reef.

**1.5 Toormore Bay** (51°30'N., 9°39'W.) is entered between Ballyrisode Point and Castle Point, about 1.2 miles ESE. Castle Point may be identified by the ruins of a square castle on a hill, 12m high, about 275m E of the point. Tower Hill, round-topped, 107m high, and on which are the conspicuous ruins of Leamcon Tower, rises about 1.5 miles NE of Castle Point.

Duharrig, an islet, 5.2m high, lies 0.4 mile SW of Castle

Fastnet Light

Rock Island Light

Crookhaven

Point. Carthy's Ledge, the outermost danger in the S approach to Toormore Bay, has a least depth of 7.6m and lies 0.7 mile S of Duharrig. Several detached dangers lie in the S approach to Toormore Bay, which has general depths of 12.8 to 20.1m. The W fall of Knockaphuca in range with Ballydivlin House, bearing 324°, leads SW of these dangers.

**Anchorage.—**Toormore Bay affords good anchorage with offshore winds, in depths of 13 to 24m, sand and stiff clay, with Ballyrisode Point (51°30'N., 9°40'W.) bearing 240°, distant 0.7 mile.

**1.6 Barrel Sound** (51°29'N., 9°38'W.), a narrow channel with depths of 9.1 to 24m, but obstructed in mid-channel by a 4.6m rock, leads between Castle Point and Duharrig. This channel should not be used without local knowledge.

Goat Island, about 1.2 miles E of Castle Point, has rocky shores and rises to an elevation of 32m; Little Goat Island lies close off its S side from which it is separated by a narrow precipitous chasm. A conspicuous stone beacon, 4.9m high, stands on a hill near the S extremity of Little Goat Island.

Man of War Sound, which joins Lough Buidhe N of Goat Island, passes between that island and Turf Island, nearly 0.5 mile W. Man of War Sound, although deep in the fairway, has depths of less than 8.2m along its edges.

Lough Buidhe leads between Goat Island and the mainland N and has a least depth of 12m in the fairway.

## Long Island Bay

**1.7 Long Island Bay** (51°28'N., 9°35'W.) entered between the coast N of Goat Island and Cape Clear, about 5.2 miles SE, is encumbered with numerous islets, rocks and shoals, but there are several sheltered anchorages. The principal anchorages are Long Island Sound, Castle Island Sound, and Schull Harbor (Skull Harbor), on the N side of the bay, and Roaringwater Bay at the NE corner of Long Island Bay. There are marine farms established within the bay.

**Tides—Currents.—**The currents in the entrance of Long Island Bay set E and W from a position about 1 mile S of Alderman Rocks to 1 mile N of Fastnet Rock.

The E current begins about 5 hours before HW at Cobh while the W current begins about 1 hour 15 minutes after HW

at Cobh. The spring velocity in both directions is about 2.5 knots. The currents are stated to begin about 30 minutes later at springs and about 30 minutes earlier at neaps.

The currents decrease in strength from the entrance to the head of Long Island Bay. The E current sets SE and S through all the channels between the islands (except between Long Island and Castle Island), E to the Ilen River, and SE through Long Island to Baltimore Harbor. The W current sets in the opposite direction.

**Cape Clear**

**Caution.—Croa-Lea** (51°26'N., 9°37'W.), a rocky bank with a least depth of 27m, lies in the W approach to Long Island Bay, about 3.2 miles S of Little Goat Island; there is a considerable heave of the sea over it in heavy W gales.

**1.8** Long Island lies with Duff Point, its SW extremity, about 0.5 mile E of Goat Island. Duff Island lies close S of Duff Point. Long Island is 29m high near its center, where it slopes to Copper or Long Island Point, its low, shelving, NE extremity. A light is shown from a white round tower, 16m high, erected on **Copper Point** (51°30'N., 9°32'W.).

The S side of Long Island is clear of dangers outside a distance of 90m until within 0.8 mile of Copper Point. Geenwaun Rocks, above water, extend 0.1 mile offshore, about 0.7 mile SW of Copper Point, and Budalogh Shoal, a rocky shoal with a depth of 7m, lies about 0.2 mile offshore and about 0.6 mile SSW of Copper Point. Streek Head, bearing about 257°, and open S of Little Goat Island, leads S of these dangers, and the summit of Mount Gabriel in range with Copper Point, bearing 356°, leads E of them.

**Castle Island** (51°31'N., 9°30'W.) lies with its SW end about 0.8 mile E of Copper Point. Mweel Ledges, consisting of several rocks above water and rocks which dry, extend about 0.25 mile WSW of the W extremity of the island, and Castle Island Grounds, with a least depth of 5.5m, extend about 0.3 mile SSW of Mweel Ledges, terminating at Amelia Rock, over which there is a depth of 2.1m. A lighted buoy is moored about 275m SW of Amelia Rock.

Long Island Channel is the channel between Long Island and the mainland N; it affords sheltered anchorage for a number of vessels of shallow draft. There are three channels of approach to Long Island Sound; from the W, vessels must enter the channel via Man of War Sound, and transit Lough Buidhe; vessels can also enter Goat Island Sound from the W, passing between Goat Island and Long Island; and a third channel, E of Long Island, passes between Copper Point and Castle Island Grounds. Goat Island Sound is only 0.2 mile wide at its N end, but has a least depth of 20.7m. The W entrances lead over a bar, between the W end of Long Island and **Coney Island** (51°30'N., 9°34'W.), 11m high, N of it, over which there is a least depth of 5.1m.

Long Island Channel is entered from E between Copper Point and Skull Point, about 0.5 mile NNW, but the anchorage space is contracted by a shoal bank which fringes the N side of Long Island, and extends as far as 0.2 mile offshore at Cush Spit, a gravel bank, with a depth of 0.3m and steep-to, lying about 0.6 mile W of Copper Point. A buoy marks the N edge of Cush Spit.

The N shore of Long Island Channel is fringed by a bank, with depths of less than 5.5m, which extends as far as 0.3 mile offshore E of Coney Island. A 3.7m patch lies about 0.2 mile off the S shore, about 0.6 mile E of Coney Island and a shoal, with a least depth of 4.6m, lies in the fairway about 0.3 mile E of Coney Island.

The middle of Goat Island Sound is deep, but foul ground extends over 0.2 mile S of the E extremity of Goat Island. The Garillaun Islands, close SW of which is Sound Rock, which dries 1.8m, extend about 0.2 mile WNW from the SW end of Long Island, narrowing Goat Island Sound to about 0.2 mile.

**Tides—Currents.—**In Lough Buidhe, the E current has a spring velocity of 1 knot; the W current, attains a spring velocity of 0.8 knot. In Long Island Sound, the spring velocity in both directions is about 1.5 knots.

The tidal currents set through Lough Buidhe, Long Island Channel and Castle Island Sound. During the E current in these sounds, the currents set S through Man of War and Goat Island Sounds, but N between Long Island and Castle Island; during the W current, the directions are reversed.

**Anchorage.—**Anchorage may be obtained close within the E entrance of Long Island Channel, in about 11m, with the old lighthouse, about 1.5 miles ENE of Cape Clear, in range with Copper Point Light, bearing 156°, and the ruined tower on Brow Head in range with the S end of Coney Island, bearing about 248°.

The W anchorage is nearly in mid-channel, close E of the bar, about 0.2 mile SE of Coney Island, in depths of about 9.1m.

**Castle Island Channel** (51°31'N., 9°30'W.) is free of dangers, but is obstructed at its E end by Horse Ridge, which dries 0.6m. The sound is entered between the NW extremity of Mweel Ledges and Coosheen Point, about 0.5 mile NW. Joan Salter's Rocks lie close SW of Coosheen Point.

**Anchorage.—**The anchorage recommended is in depths of about 11m, in mid-channel, S of Capple Point, the latter lying on the N shore about 1 mile ENE of Coosheen Point.

**1.9** **Schull Harbor** (51°31'N., 9°32'W.), on the N shore,

**Schull Harbor**

**Schull Harbor**

is a small fishing port entered between Coosheen Point and Skull Point, 0.4 mile W, and extending N for about 1 mile to its head.

**Bull Rock** (51°31'N., 9°32'W.), marked by a beacon, lies about midway between Coosheen Point and Skull Point. There are no other dangers. The harbor affords sheltered anchorage to vessels of moderate draft, in depths of 6.4 to 7.3m, with good holding ground, for about 0.5 mile within the entrance. There are depths of 10m in the entrance, which decrease to 3m at the head of the harbor. There is a small pier with depths of 2 to 4m alongside. The harbor is used by fishing boats, small craft, and pleasure craft.

The village of Schull is situated on the W side near the head of the harbor; a conspicuous disused chimney stands on a hill on the E side of the harbor. Range lights on metal masts are shown from the head of the bay and indicate the entrance E of Bull Rock. The range lights are reported to be difficult to distinguish by day.

**Anchorage.—**The recommended anchorage is in a depth of 6.4m, 0.5 mile within the entrance, with the extremity of Coosheen Point, bearing 151°, and the chimney standing on the hill on the E side of the harbor, bearing 066°.

**1.10 Roaringwater Bay** (51°32'N., 9°26'W.), an extensive shallow inlet at the N corner of Long Island Bay, is entered between Horse Island, about 0.5 mile ENE of Castle Island, and West Skeam Island, about 0.6 mile SSE of Horse Island.

Carthy Island lies in the middle of the approach to Roaringwater Bay about 0.5 mile S of Castle Island; it is the outermost of a group of islets and rocks which extend ENE. Carthy Sound lies between the group and Castle Island. Moore's Rock lies about 1.5 miles ENE of Carthy Island.

Roaringwater Bay is approached between Castle Island and West Calf Island, about 1.5 miles S. Middle Island and East Calf Island extend NE. The channel between East Calf Island and Hare Island, about 1 mile NE, is obstructed in mid-channel by Anima Rock. Foul ground extends about 0.8 mile SW from Hare Island. The channel between Carthy Island and the Calf Islands is encumbered by numerous rocks.

In the inner part of Roaringwater Bay, Mannin Island, 16m high, lies close offshore at the head of the bay, about 1.7 miles NE of Cus Point, the E extremity of Horse Island.

Carrigviglash Rocks, about 2m high, lie at the S end of an extensive mudflat, about 0.5 mile S of Mannin Island.

**Tides—Currents.—**In the vicinity of the Calf Islands, the E tidal current sets toward the entrance of the Ilen River in the E corner of Long Island Bay, at a velocity of about 1 knot.

**Anchorage.—**Anchorage may be taken, in depths of 6.4 to 7.3m, between 0.3 and 0.5 mile E of Horse Island, with Cus Point bearing between 284° and 334°; better shelter may be taken about 0.5 mile farther NNE, in 4.9m, sand, with Knocktower Point and Keown Point, two projections on the mainland, about 0.6 mile W and NW; respectively, of Mannin Island, in range bearing 013°, and **Tober Point** (51°32'N., 9°24'W.), about 0.5 mile NE of Mannin Island, in range with the SE edge of Mannin Island, bearing 057°.

Sheltered anchorage may also be obtained in the inner part of the bay, in 4.9m, mud, with Kilcoe Castle, close NE of Mannin Island, bearing between 284° and 306°, distant about 0.4 mile, or S of Carrigviglash Rocks, in about 6.4m, with Kilcoe Castle bearing 000°, distant about 0.8 mile.

**1.11** The SE side of Long Island Bay is formed by the NW side of Clear Island and the NW side of Sherkin Island. The ruins of Doonanore Castle stand on the NW side of Clear Island, about 0.8 mile NNE of the Bill of Cape Clear, the SW extremity. Gascanane Sound, the channel between Cape Clear and Sherkin Island, is about 1 mile wide between Lahan Point, the E extremity of Clear Island, and Curra Point, the SW extremity of Sherkin Island. Lahan Point rises to Mount Lahan, 77m high, 1.5 miles SW. An old disused lighthouse stands on the cliffs, which rise precipitously to an elevation of 133m, about 1.2 miles SW of Lahan Point.

Clear Island is steep-to on all except its N side, from which a

group of islets and rocks extend about 0.5 mile offshore, terminating at Bullig Reef. The old telegraph tower E of Baltimore Harbor in range with the white chapel at Sherkin Island, bearing 082°, leads N of Bullig Reef.

**Gascanane Sound** (51°27'N., 9°27'W.) is divided into two channels by Carrigmore Rocks, a group of rocks 6.1m high, about 0.4 mile NE of Lahan Point, with Gascanane Rock, which dries 1.8m, lying nearly 180m W of the group. The better channel, which is deep, passes E of Carrigmore Rocks and W of Badger Island, lying about 0.1 mile W of Curra Point (51°27.0'N., 9°26.0'W.). Crab Rock lies about 0.1 mile N of Badger Island.

**Tides—Currents.—**Between the Bill of Cape Clear and Bream Point, near the coast, the currents are confused, but it is estimated that they set, as follows:

1. The E current divides off the Bill of Cape Clear, and sets NE along the N side of Clear Island, and S, with a heavy confused sea, along the coast to Bream Point. There is a large eddy E of Bream Point, which sets N toward the S side of Clear Island, then W and S along the coast to Bream Point.
2. The W current forms an eddy W of Bream Point, which sets N, then E toward the Bill of Cape Clear, and finally S along the coast to Bream Point. A race forms off Bream Point (51°25'N., 9°31'W.) during the strength of the currents in both directions.

The E tidal current sets SE, and the W current sets NW, in the directions of the channels through Gascanane Sound. The spring velocity in both directions is 3 knots. There are dangerous eddies near the rocks in the middle of the sound.

## Long Island Bay to Kinsale

**1.12 South Harbor** (51°26'N., 9°30'W.), an inlet located on the S coast of Clear Island, is used only by small craft and is subject to heavy swells.

Horseshoe Harbor, an inlet located on the SE side of Sherkin Island, affords anchorage to small craft, in depths of 5m, but has a very narrow entrance and rocks off the W shore.

**Barrack Point** (51°28'N., 9°24'W.) is located close N of Horseshoe Harbor on the E side of Sherkin Island. A light is shown from a structure, 8m high, standing close W of the point.

**Baltimore Harbor** (51°29'N., 9°22'W.) is a fishing port located N of Baltimore Bay in a position about 16 miles E of Mizen Head. The port consists of a fishing village and yachting basin within a small natural harbor which lies between Sherkin Island and the mainland to the E. Spanish Island and Ringarogy Island, about 1 mile N of the entrance, form the head of the harbor.

**Tides—Currents.—**Spring tides rise 2.9m; neap tides rise 1.5m.

The tidal currents enter and leave Baltimore Harbor both through the sound and through the entrance, N of Sherkin Island. The currents meet in the vicinity of Lousy Rocks, near the middle of the harbor, and set NE between Ringarogy Island and the E shore of the harbor; the ebbs set out of the harbor in the opposite direction. The incoming current starts about 5 hours and 45 minutes after HW at Cobh; the outgoing current starts about 30 minutes before HW at Cobh.

**Depths—Limitations.—**The harbor may be entered from Baltimore Bay or by the sound which is a narrow channel between Sherkin Island and Spanish Island. The sound is used mainly by small craft and fishing vessels and has a least charted depth of 6.2m.

The main entrance, about 0.2 mile wide, lies between Barrack Point and Beacon Point and has depths of 18m, decreasing to 4.2m in the vicinity of Lousy Rocks, about 0.5 mile N of the entrance. North and E of these rocks the depths are less than 3.6m. The entrance channel between the rocks and foul ground extending from Barrack Point and Beacon Point, is about 60m wide.

Vessels of up to 1,000 dwt, with drafts of up to 7.3m, have been accommodated at the anchorage within the harbor.

The North Pier has a depth of 1.3m on its S side, which is for fishing vessels only; the N side of the pier has depths of up to 2.1m and can accommodate small craft. The South Pier dries at its inner end, with depths increasing to 1.5m at the pier head.

**Aspect.—**The entrance is not easily distinguished, but a vessel approaching from E may identify a tower on a hill, 101m high, about l.2 miles E of Beacon Point. On a closer approach, Lot's Wife, a stone tower close within Beacon Point, and the conspicuous lighthouse on Barrack Point, may also be identified.

**Pilotage.—**There are two pilots available, but pilotage is not compulsory.

**Anchorage.—**Vessels of suitable size can find anchorage in the harbor according to their draft. Caution should be taken to avoid the telegraph cable between **Tramadroum** (51°29'N., 9°23'W.) and Abbey Strand, lying WSW on Sherkin Island.

The Ilen River discharges into the N part of Baltimore Harbor through the sound. **Turk Head** (51°30'N., 9°25'W.) is the N entrance point of the river. Anchorage may be taken, in depths of 9.1 to 16.5m, in a narrow reach which extends for about 0.2 mile E and W of Turk Head.

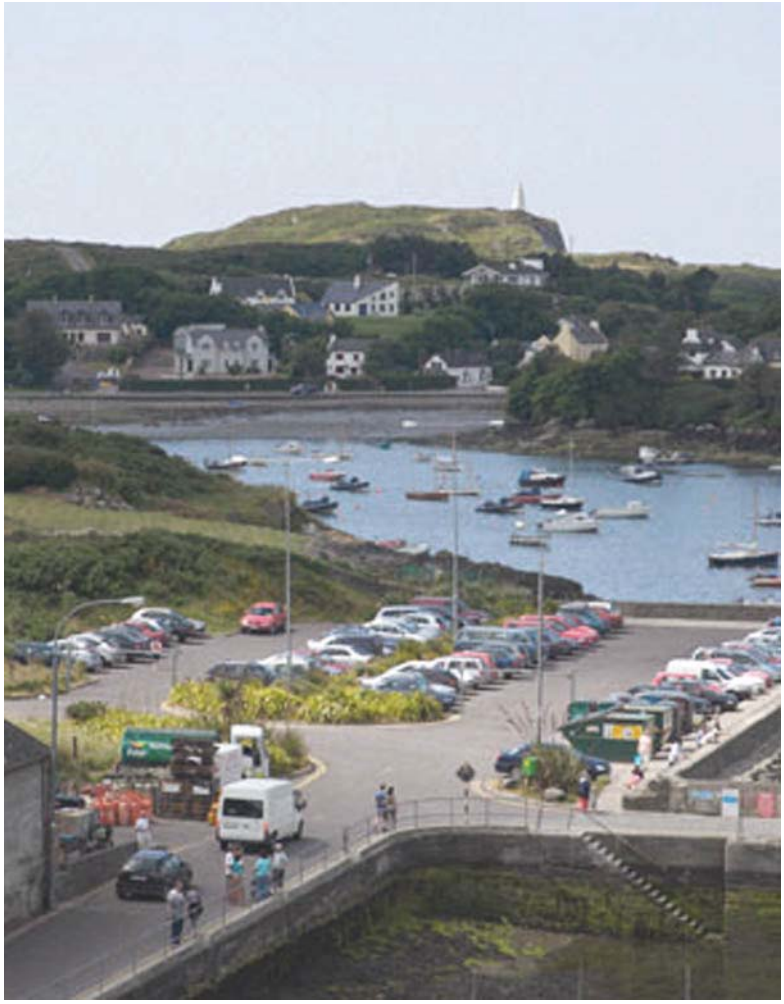
**Caution.—**Foul ground extends about 135m SE from the shore close SW of Barrack Point, the W entrance point; Wilson Rock, at the outer end, dries about 3.1m. A rocky ridge, with depths of 4 to 9.1m, extends 150m NE from Barrack Point, leaving a deep channel W of Loo Rock Buoy.

Foul ground also extends about 135m offshore between Beacon Point, the E entrance point, and Loo Point, 275m N. Loo Rock, with a least depth of 0.2m, lies at the outer end of this foul ground, about 135m WSW from Loo Point. It is marked on its SW side by a lighted buoy. Quarry Rock, 0.2 mile NNE of Loo Rock, has a depth of 1.5m, and is steep-to on its W side.

**1.13 Lousy Rocks** (51°29'N., 9°23'W.), near the middle of Baltimore Harbor and about 0.5 mile N of Loo Point, dry 0.2 to 2.8m; a beacon stands on the SE rock. Ransome Rock, with a depth of 2.3m, lies about 250m W of the beacon marking Lousy Rocks. Skipjack Rock, awash at low water, lies between Ransome Rock and the W shore. Globe Rocks lie about 0.15 mile from the W shore, about 0.1 mile N of Skipjack Rock.

**Wallis Rock** (51°29'N., 9°23'W.), with a depth of 1.6m, lies 0.2 mile ENE of the beacon marking Lousy Rocks; it is marked close on its S side by a lighted buoy.

Vessels should steer a mid-channel course through the entrance, favoring the W shore in order to avoid Loo Rock. When the church of Baltimore bears about 055° and is visible over



**Baltimore—Fishing Harbor**

**Baltimore Harbor—Lot's Wife**

the sandy beach at Tramadroum, about 0.5 mile NE of Barrack Point, course may be altered to the anchorage.

**1.14 Kedge Island** (51°28'N., 9°20'W.) lies about 2 miles ESE of Barrack Point and 0.3 mile S of the coast. It can be identified by its flat top. A tidal race occurs off the SW extremity of the island.

**Toe Head** (51°29'N., 9°14'W.), 29m high, is bluff and bold; it has been reported to be a good radar target at a distance of 13 miles. The coast between Toe Head and Kedge Island, about 4.5 miles WSW, is indented by a number of inlets and small bays. The Irish Coast Guard has a coastal unit at Toe Head.

**The Stags** (51°28'N., 9°13'W.) are a group of rugged precipitous rocks lying 0.6 mile S of Toe Head. The group, from W, resembles pinnacles. Stag Sound, about 0.5 mile wide, is deep and lies between the rocks and Toe Head.

A dangerous wreck, marked by a lighted buoy, lies about 0.2 mile S of The Stags.

The tidal currents between Baltimore Bay and Toe Head set in about the direction of the coast.

The tidal currents attain a rate of 2 to 2.5 knots at springs

**Glandore Harbor**

through Stag Sound.

**Castle Haven** (51°31'N., 9°11'W.), lying about 2.5 miles NE of Toe Head, is a small fishing harbor which affords good shelter to small craft. It is entered between **Horse Island** (51°30'N., 9°11'W.) and Skiddy Island, a conspicuous flat rock, about 0.5 mile NE. The inner entrance between Battery Point and Reen Point is free of dangers and has a least depth of 9.1m in the fairway, decreasing to 5.5m about 0.3 mile farther in.

A light is shown from Reen Point and a prominent ruined tower, 35m in elevation, stands on the E end of Horse Island. A conspicuous old tower stands on a hill about 0.8 mile NE of Toe Head.

The harbor is not suitable for vessels with a draft in excess of 3.5m. Vessels with a deeper draft anchor farther out, but are exposed to heavy swells. With S winds, heavy swells are felt well within the harbor. The currents within the harbor are negligible.

**1.15** The **High Islands** (51°31'N., 9°08'W.) consist of a group of islets and rocks lying about 2 miles E of the entrance to Castle Haven. High Island, the largest and outermost, is steep-to on its S side, but the rest of the group should not be approached too closely from any quarter. In fine weather, temporary anchorage can be taken, in depths of 12.8 to 16.4m, N of the group.

A rock, over which there is a depth of 12.8m, was reported (1978) to lie 2 miles SSE of High Island. A wreck, with a depth of 11.9m, lies about 1 mile NNE of the rock.

**Directions.—**To enter Castle Haven, steer a mid-channel course between Horse Island and Skiddy Island until The Stags appear between Horse Island and the mainland. Alter course N and proceed to the anchorage with The Stags in range 209° with **Flea Islet** (51°30'N., 9°11'W.), astern, which will lead W of the foul ground which extends from Reen Point.

**1.16 Sheela Point** (51°32'N., 9°07'W.) lies about 2.7 miles NE of the entrance to Castle Haven and is the W entrance point of Glandore Harbor.

Glandore Bay lies between Sheela Point and Galley Head, 5.8 miles E. The bay consists, in its W part, of steep barren cliffs rising to hills inland; the E part consists of two sandy beaches separated by the rugged cliffs of Cloghna Head. Cloghna Rock, a pinnacle with a depth of 0.9m, lies 0.5 mile from the shore about 1.5 mile NW of Galley Head.

**1.17 Glandore Harbor** (51°34'N., 9°07'W.) located at the W end of Glandore Bay, is used by fishing vessels and small craft. It is entered between Sheela Point and Goat's Head, about 1 mile NE. Although open S, it affords better shelter to small vessels than Castle Haven, as it is protected from the force of the sea by the islands and rocks in the entrance. Sheela Rock, which dries 1.2m, lies SE of Sheela Point. The tidal currents are very weak in the harbor.

Adam Island, 27m high, lies in the entrance about 03 mile E of Sheela Point. Eve Island, 7m high, lies about 0.7 mile N of Sheela Point and should be passed on its E side as sunken rocks lie some distance off the W shore of the harbor abreast Eve Island.

The Dangers, a chain of three rocky patches, lie in mid-channel from about 0.2 mile N of Eve Island for a distance of about 0.4 mile NNW; the rocks all dry except Sunk Rock, over which there is a depth of 1.8m and which is marked close N by a lighted buoy.

The S patch, which dries, is marked by beacons; the beacon marking the W end is a green mast surmounted by a cone topmark while the beacon at the E end is a red mast with a can topmark. The middle patch, which dries, is marked by a similar beacon, painted black and white in horizontal bands; the N patch, which dries, is marked by a similar pole, surmounted by two cones, bases together.

The rocks are all steep-to and there are channels with depths of not less than 5.5m in the fairway on either side of them. The recommended track is to the W of The Dangers. Small craft with local knowledge can pass E of The Dangers.

The least charted depth in the entrance fairway is 18.9m, decreasing gradually to 5m and less within 1.3 miles of the entrance.

**Anchorage.—**A good berth, where vessels lie safely in any weather, is in 4m, with the E extremity of Eve Island in range with the W extremity of Adam Island, bearing about 153°, and with Kilfinnan Castle, standing on the NE shore, about 0.7 mile N of Eve Island, bearing 045°.

**Directions.—**Vessels should steer a course of 295° for Eve Island passing about midway between Adam Island and the NE shore. Round the E side of Eve Island at a distance of about 100m and having cleared it, bring its E extremity in range 153°, astern, with the W extremity of Adam Island. This course will lead W of The Dangers and to the anchorage.

**1.18 Galley Head** (51°32'N., 8°57'W.) resembles an island when viewed from E or W. The beach between Galley Head and Greggane Point, about 3 miles NW, is conspicuous from the offing.

A light is shown from a prominent white tower, 53m high, standing on the extremity of the headland. A prominent ruined castle stands on the low isthmus connecting the head to the mainland.

Doolic Rock, with a sunken rock close S, lies about 0.5 mile SW of the head. Robber Bank, with a depth of 14.3m, lies about 2.2 miles SW of the head.

During favorable weather, small vessels can use the channel between Doolic Rock and Galley Head, but it is inadvisable with the wind against the tidal current when there can be heavy seas close to the head. Strong currents are experienced off Galley Head and Doolic Rock with the set off the head being toward the rock.

Clonakilty Bay is entered between Galley Head and Seven Heads, about 9.5 miles ENE. The bay has irregular depths in its outer part which almost break in S gales. Deep-draft vessels should keep in depths of more than 37m, or more than 55m in thick weather, when in the vicinity of the bay.

The currents in Clonakilty Bay are negligible. The currents in the vicinity of Seven Heads set in the direction of the coast; the spring velocity in both directions is about 2 knots.

Dirk Bay, on the W side of the entrance of Clonakilty Bay, affords anchorage during W winds to small vessels, in 5.5 to 7.3m, N of Bream Rock, a 7.3m patch on the W side of the bay between the entrance points. Dunnycove Bay, on the W side of Clonakilty Bay, affords sheltered anchorage, in depths of 9.1 to 12.8m, during offshore winds.

A conspicuous water tower stands 2.2 miles N of the shore of the bay about 7.2 miles NE of Galley Head.

**Seven Heads** (51°34'N., 8°43'W.) is a bold bluff headland. The offshore depths are irregular and rocky, and cause overfalls during the strength of the currents. A prominent old watchtower stands on the headland.

**1.19 Courtmacsherry Bay** (51°36'N., 8°37'W.) is entered between Seven Heads and Old Head of Kinsale, 7 miles ENE. Baun Bank, on which the sea breaks heavily during gales, has a least depth of 11m, and lies about 1 mile NE of Leganagh Point, the S extremity of Seven Heads. The bay is encumbered with numerous shoals and rocks. A harbor is formed by the estuary of a river which enters the bay about 4.5 miles NNE of Seven Heads. A light is shown from the W entrance point. The harbor is shallow and the sand banks on each side of the channel are constantly shifting. The depths over the bar are less than 3m.

The currents between Seven Heads and Old Head of Kinsale follow the direction of the coast. The spring velocity in both directions is about 1.5 knots. The current setting E begins about 4 hours 20 minutes before HW at Cobh; the opposite current about 2 hours after HW at Cobh. The currents in Courtmacsherry Bay are weak.

Seven Heads Bay, on the W side of Courtmacsherry Bay N of Leganagh Point, affords anchorage, during W winds, in depths of 11 to 14.6m, in its outer part. Broadstrand Bay, also on the W side of Courtmacsherry Bay, affords good anchorage, in depths of 5.5 to 7.3m, in its outer part.

**Directions.—**Vessels having passed Baun Bank should steer for Wood Point, bearing 346°. This course leads W of Carrigrour Rock. If entering the harbor, this course should be maintained, subsequently adjusting course to pass 300m E of Wood Point and S of Courtmacsherry Lighted Buoy.

A vessel from E, having rounded Old Head of Kinsale, should steer 278° for Lisle church (51°37'N., 8°43'W.) and open N of Horse Rock which leads S of Black Tom, Barrel Rock, and Blueboy. When the summit of Burren Hill, about 1 mile NW of Wood Point, is seen bearing 313° over Coos Cove, close S of Wood Point, it should be steered for on that bearing. This course leads SW of Black Tom and over the SW end of Coolmain Patch in a least depth of 7.3m.

The extremities of Wood Point and Coolmain Point in range 280° lead between the dangers in the N part of Courtmacsherry Bay, but this passage should be used only in an emergency.

**1.20 Old Head of Kinsale** (51°36'N., 8°32'W.) has been reported to be a good radar target at a distance of 17 miles. A light is shown from a conspicuous tower, 72m high, standing on the S extremity of the headland. A disused light structure stands about 0.5 mile N of the light.

About 5 miles S of Old Head of Kinsale, the E current sets from about 2 hours after HW at Dover and sets irregularly NE to ESE. Its strongest set is ENE. The W current starts about 4 hours before HW at Dover and sets irregularly SW to W. Off the headland, both currents set at a velocity of 2.5 knots at springs and cause a race which extends as far as 1 mile offshore.

Holeopen Bay East and Bullens Bay, located 0.7 mile and 2.2 miles N, respectively, of Old Head of Kinsale, afford temporary anchorage during W winds, in 9.1 to 14.6m.

**Caution.—**The wreck of the Lusitania is located 11 miles S of Old Head of Kinsale. This wreck is protected by a restricted area, best seen on the chart; disturbing the wreck or the sea bed in the vicinity is prohibited.

**1.21 Kinsale** (51°42'N., 8°31'W.) is situated 1.5 miles within the mouth of the Bandon River, about 5 miles NNE of Old Head of Kinsale and about 11 mines SW of Cork Harbor's entrance. The port consists of a fishing and resort town, with a

very small natural harbor which is easily identified by the river valley. It is entered between Shronecan Point and Preghane Point, about 0.6 mile ESE.

As a commercial port, Kinsale handles approximately 100 vessels per year. The majority of commercial shipping is involved in the importation of bulk animal foods. Kinsale is also home to a thriving fishing fleet.

**Port of Kinsale Home Page**

http://www.irelandwide.com/port/kharbour

**Tides—Currents.—**Spring tides rise 3.3m; neap tides rise 1.8m.

The currents within the harbor usually set in the direction of the channel. The flood begins about 6 hours before HW at Cobh and the ebb at about HW at Cobh. The spring velocity in both directions is about 1.5 knots in the bend above Blockhouse Point and off the town. Elsewhere, the velocity is about 1 knot.

Vessels generally sail on a flood tide but may sail on the ebb (neaps) if they have a bow thruster.

**Depths—Limitations.—**A sand and shingle bar lies across the channel about 0.3 mile S of the fort. There is a least depth of 3m on the bar.

A town quay, 60m in length, has depths alongside of 6.1m at MHWS and 2.7m at MLWN. Vessels lie partially aground at LW. The port can accommodate vessels up to 3,000 dwt with lengths of up to 90m and drafts of up to 5.3m at MHWS.

**Aspect.—**Ardbrack Church, on the E side of the harbor about 1 mile within the entrance, is white and conspicuous. Charles Fort is conspicuous and stands 0.5 mile S of the church. A light is shown from the fort. The channel in the vicinity of Blockhouse Point, about 1.2 miles N of Shronecan Point, is marked by lighted buoys.

**Pilotage.—**Pilotage is not compulsory, but advisable. Pilots are available Monday through Friday 0900-1730 local time. Pilots board at the Bulman Lighted Buoy. Vessels should forward their ETA 24 hours in advance and send an update 12 hours before arrival. The port working frequency is VHF channel 14.

**Contact Information.—**Kinsale Harbor can be contacted, as follows:

1. Telephone: 353-21-4772503
2. Facsimile: 353-21-4774695
3. E-mail: kharbour@iol.ie

**Anchorage.—**Although the inner and outer harbors provide good anchorages, anchorage within the harbor is limited to shallow draft vessels because of the depths on the bar and the narrowness of the channel. Anchor berths are located in the river near the town.

One or two vessels of not more than 5.5m draft may find safe temporary anchorage outside the bar, W of Lower Cove, about 0.6 mile N of Preghane Point, in a depth of 6.5m, with the Old Head of Kinsale in range approximately 195° with the point 0.3 mile NNW of Preghane Point. Although S gales send in a swell, vessels may ride there in safety.

Within the bar there is good, but confined anchorage W of **Summer Cove** (51°42'N., 8°30'W.), in 7.3 to 9.1m, sand and shells, about 0.1 mile from the E shore.

Between Blockhouse Point and the town there is also good, but confined anchorage, in depths of 11 to 14.6m, keeping on the town side to avoid the shoal off Blockhouse Point. For 0.5 mile above the town, vessels may ride in security, in from 5.5 to 9.1m.

**Caution.—**Bulman Rock, with a depth of 0.9m, and Frower Patch, with a depth of 7.9m, lie 0.2 mile S and 0.3 mile SE, respectively, of Preghane Point.

## Kinsale to Cork Harbor

**1.22** The coast between Kinsale Harbor and Roberts' Head, about 8 miles NE, is generally high, bold and rocky, backed by moderately high hills. There are a number of bays along the coast, but they are too exposed to offer shelter.

**Oyster Haven** (51°41'N., 8°27'W.) is a small sheltered inlet 2 miles E of Kinsale Harbor. It is entered between Ballymacus Point and a point about 0.7 mile ENE; about 0.2 mile SSE of the latter point is Little Sovereign, a rocky islet, and midway between them is Sovereign Patch, with a least depth of 2.7m.

Kimure Point lies on the E shore of Oyster Haven, about 0.6 mile NE of Ballymacus Point.

The only danger in the haven is Harbor Rock, with a depth of 1.2m, about 0.5 mile within the entrance and midway between Ferry Point and the E shore. The best channel is W of the rock.

The anchorage is NE of Ferry Point, at the entrance of the W arm of the haven, in 4.6 to 6.1m. The anchorage is very confined, and is exposed to a heavy sea with SW winds.

Big Sovereign is an islet lying about 0.5 mile S of the entrance to Oyster Haven. It is precipitous and inaccessible and is divided into two parts by a cleft.

**Reanies Point** (51°43'N., 8°20'W.), about 4.5 miles ENE of Oyster Haven, is bold and precipitous, rising perpendicularly to an elevation of about 43m, and is remarkable for the number of gateposts or pillars on it. These are more conspicuous when approaching from E. About 0.5 mile E of Reanies Head is a small rocky patch having a depth of 6.6m; Cork Head, bearing 025°, well open of Roberts' Head, leads E of it.

**Roberts' Head** (51°44'N., 8°19'W.) is a bluff headland located about 1.5 miles NE of Reanies Point. It can be easily identified. A prominent ruined tower stands on a hill about 0.5 mile N of the head.

**1.23** **Daunt Rock** (51°44'N., 8°18'W.), with a depth of 3.5m, lies on the W side of the approach to Cork Harbor, about 0.7 mile SE of Roberts' Head. It is marked on the E side by a lighted buoy. During S gales, the lighted buoy is often broken adrift.

There is a clear passage between Daunt Rock and Roberts' Head, with depths of 12 to 18.3m, of which coasting vessels from the W may take advantage in moderate weather. In unsettled weather it should not be attempted, as the sea sometimes breaks across the passage from the rock to the head. Large vessels should invariably pass to seaward of Daunt Rock.

**Tides—Currents.—**The tidal current in the vicinity of Cork Sea Buoy (51°43'N., 8°16'W.) is rotary and clockwise. The E current sets N, NE, and finally E. The W current sets S, SW, and finally W. The E current starts about 5 hours 15 minutes before HW at Cobh, and the W current starts about 1 hour 15 minutes after HW at Cobh. The NE and SW sets are the strongest, attaining a velocity of 0.8 knot at springs and 0.5 knot at

neaps. These velocities are affected by the force and direction of the wind.

On the E side of the approach to Cork Harbor between Power Head and Roche's Point, the currents are weak and barely perceptible.

## Cork Harbor (51°51'N., 8°16'W.)

World Port Index No. 34360

**1.24** Cork Harbor is a large sheltered port formed by the lower reaches of the River Lee. It is the principal port on the S coast of Ireland, being a natural sheltered deep-water harbor, and favored with an ideal location close to the main shipping lanes to northern Europe

The city of Cork is situated on both sides of the river about 15 miles above the entrance. The Port of Cork, under the authority of Port of Cork Company, extends for a distance of 12 miles from the quays of Cork City to the harbor's entrance at Roches Point. The port of Cobh (51°51'N., 8°18'W.) (World Port Index No. 34350) is situated within Cork Harbor. Cork incorporates the areas of Cobh, Witegate, and Ringaskiddy.

The port of Cork is Ireland's leading industrial deep-water harbor catering for a great mix of industry, from oil refining to steel mills, chemicals, fertilizers, etc. It can accommodate fully-laden tankers of up to 120,000 dwt and all other vessels up to 60,000 dwt. In addition, the port has facilities for ship repair and building, including a graving dock, and functions as a base for craft serving the offshore oil-exploration industry.

**Port of Cork Home Page**

http://www.portofcork.ie

The port has good cargo-handling facilities. There are excellent road and rail connections between the port and the rest of Ireland. Extremely large vessels can be accommodated at Ringaskiddy, which is Ireland's only free port.

**Tides—Currents.—**The currents in the harbor entrance between Fort Meagher and Fort Davis set in the direction of the channel at a velocity of 1 to 1.5 knots, increasing to 2 knots at springs. The flood begins about 5 hours 45 minutes before HW at Cobh; the ebb begins shortly after HW.

Within the harbor, the currents in both directions generally follow the direction of the channel at velocities of up to 2 knots at springs. In the narrowest part of the river, the velocity is about 3 knots.

The flood at Monkstown, about 1 mile above Haulbowline Island, begins about 5 hours before HW at Cobh while the ebb begins about 30 minutes after HW.

In the harbor entrance and harbor, and to a lesser extent in the river, the currents are affected by the winds. South winds increase the flood and decrease the ebb; N winds have an opposite effect.

After a prolonged rainfall, the flood current within the river, and to a lesser extent in the harbor and entrance, is decreased and the ebb increased.

The tidal rise at the city of Cork ranges from 2m at neaps to 3.9m at springs. Tides in the Lower Harbor range from 1.9m at neaps to 3.7m at springs.

**Cork—Cobh**

**Cork Harbor Entrance**

**Cork—Lower Harbor**

**Cork—Ringaskiddy**

**Cork—Tivoli Container Terminal**

**Depths—Limitations.—**The controlling depth in the entrance is 12.9m. An inner bar at Spit Bank Lt near Cobh is dredged to a depth of 11.2m, then from Lough Mahon to Tivoli there is a least depth of 6.2m. From Tivoli to the City Docks the least depth is 5.2m.

The entrance to Cork Harbor is 0.7 mile wide between Roche's Point Light, on the E side of The Sound, and Weaver's Point, to the W. It is divided into E and W approach channels by Harbor Rock, with a least depth of 5.2m, located 0.3 mile WNW of Roche's Point. Both channels are well marked. The E channel is the main channel and was dredged to a depth of 12.8m over a width of 152m.

The Upper Harbor comprises all the quays fronting the city of Cork and those serving the Tivoli industrial estate lying E of the city.

The Lower Harbor comprises the anchorages and berths lying S of Great Island, including Whitegate Marine Terminal, serving the oil refinery, on the E side and the deep-water berths at Ringaskiddy.

ADM Jetty, W of Haulbowline Island, serves the chemical plant at Ballybricken. The berth is 260m in length between dolphins and has a dredged depth of 9.6 alongside; vessels are limited to a draft of 10.8m on all tides.

Ringaskiddy Basin, close S of ADM Jetty, includes two ro-ro/ferry terminals and a deep-water berth.

Marino Point Chemical Jetty, at the N end of West Passage,

Whitegate Marine Terminal, situated on the E side of the harbor about 2.5 miles above the entrance, handles LPG and petroleum products. The terminal consists of a T-headed pier extending 760m NW from Corkbeg Island. Coastal tankers use the inside berth.

Several yacht marinas are situated within the harbor. For further berthing information refer to the Table titled **Port of Cork—Berth Information.**

**Aspect.—**The approaches to Cork Harbor lie between **Cork Head** (51°45'N., 8°18'W.) on the W side and Power Head to The land on each side of the entrance to the harbor is comparatively low. The entrance to the harbor lies between Roche's Point and Weaver's Point about 0.8 mile WNW. Entrance channels pass both sides of Harbor Rock, which lies in the middle of the entrance.

The harbor is divided by Great Island into Lower Harbor and Upper Harbor. The town of Cobh stands on the S side of Great Island. Cork Approach Lighted Buoy, equipped with a racon, is moored about 4.2 miles S of the harbor entrance.

A light is shown from Roche's Point. The entrance channels are marked by lighted buoys and indicated by ranges which can be seen on the chart.

The most conspicuous objects in the approach to Cork Harbor are the high bluffs of Dogsnose, on the E side of the entrance, and Ram's Head, about 0.6 mile N of Weaver's Point, on its W side. On the summit of the former is Fort Davis, close E of which is a conspicuous double wall, extending down the face of the hill to the sea.

On the summit of Ram's Head is Fort Meagher, on which is a flagstaff. The ruins of Templebreedy Church, which has a spire, stand on high land about 1 mile SSW of Fort Meagher. There is a conspicuous water tower, with a radio mast close N of it, standing 0.3 mile WSW of Templebreedy Church. Roche's Point Light, the disused signal towers, and Roche's

**Tivoli Harbor**

**Cobh Catheral**

Tower, about 410m E, are also conspicuous.

A conspicuous gas flare is occasionally emitted from the Whitegate refinery chimney, 71m high, standing about 0.7 mile ENE of Fort Davis, but it is not visible from the S. There are many other chimneys at the refinery. A conspicuous chimney, 152m high, stands at Aghada power station close E of the refinery berth.

Within the entrance Spike Island, the conspicuous spire of

Cohh Cathedral (51°51.1'N., 8°17.6'W.), the oil tanks on Corkbeg Island, and the town of Cobh, with a conspicuous water tower NE, may readily be identified.

**Pilotage.—**Pilotage is compulsory for all vessels exceeding a length of 130m entering the harbor within an arc with a radius of 2.5 miles centered on Roche's Point. Pilotage is compulsory for all vessels, regardless of length, W of Spit Bank Light (51°50.7'N., 8°16.5'W.). Vessels should send an ETA 24 hours in advance, with any amendments sent up to 2 hours in advance. Pilots can be contacted on VHF channels 6, 12, and 16.

**Port of Cork—Berth Information**

| Berth | Length | Depth | Maximum Vessel | | | Remarks |
|---|---|---|---|---|---|---|
| | | | LOA | Draft | Beam | |
| **City Quays South Side** | | | | | | |
| Albert Quay | 135m | 5.6m | — | — | — | General cargo . |
| South Jetties | 411m | 8.8m | — | — | — | Grain. |
| South Deep water Quay | 195m | 6.0m | — | — | — | Grain. |
| Lapps Quay | 100m | — | — | — | — | — |
| **City Quays North Side** | | | | | | |
| Penrose Quay | 146m | 3.6m | — | — | — | General. |
| Hogans Wharf | 205m | 8.8m | — | — | — | General. |
| **City Quay Custom House Area** | | | | | | |
| Customs House Quay N | 176m | 7.3m | — | — | — | General. |
| **Trivoli Industrial** | | | | | | |
| Ro-Ro Terminal | 125m | 5.0m | 137m | — | — | — |
| Container Terminal | 155m | 8.8m | — | — | — | Container. |
| Ore | 170m | 8.8m | — | — | — | General and bulk. |
| Bulk Liquid | 115m | 6.0m | — | — | — | Chemicals and oil. |
| **Rinkaskiddy** | | | | | | |
| No. 1 Ramp | 180m | 19.9m | — | — | — | — |
| No. 2 Ramp | 150m | 14.5m | — | — | — | — |
| ADM Jetty | 259m | 11.6m | — | — | — | — |
| Cobh Cruise Terminal (Deepwater Quay) | 183m | 6.4m | 340m | — | — | Cruise Liner Terminal. |
| **Whitegate** | | | | | | |
| Passage W | 274m | 9.0m | — | — | — | General and scrap metal. |
| **Haulbowline** | | | | | | |
| Spencer Jetty | 131m | 5.0m | — | — | — | Naval use. |
| Basin | 152m | 5.2m | — | — | — | Naval use. |
| Bunkering | 76m | 7.1m | — | — | — | Naval use. |
| **Ringaskiddy** | | | | | | |
| Deepwater Terminal | 485m | 13.4m | 250m | 11.5m | — | Multipurpose. Accommodates vessels up to 60,000 dwt. |

| Port of Cork—Berth Information | | | | | | |
|---|---|---|---|---|---|---|
| Berth | Length | Depth | Maximum Vessel | | | Remarks |
| | | | LOA | Draft | Beam | |
| **City Quays South Side** | | | | | | |
| Fords Wharf | 347m | 4.5m | — | — | — | Chemical and general. |
| ESB Wharf | 152m | 4.0m | — | — | — | General and oil. |
| **Tivoli Industrial** | | | | | | |
| Bulk Liquid | 115m | 6.0m | — | — | — | Chemicals and oil. |
| **Haulbowline (Marino Point)** | | | | | | |
| Marino Point | 375m | 10.0m | — | — | — | Bulk and liquid. |
| **Rushbrook (Cork Dockyard)** | | | | | | |
| South Jetty | 237m | 5.6m | — | — | — | — |
| West Jetty | 174m | 3.2-4.9m | — | — | — | — |
| Graving Dock | 165m | 8.2 | — | — | — | Width of 21.3m. |
| Floating Dock | 99m | — | — | — | — | — |
| **Whitegate Tanker Berths** | | | | | | |
| No. 1 Oil Jetty | 365m | 13.1m | 259m | 12.5m | — | Oil. Accommodates tankers up to 110,000 dwt. |
| No. 2 Oil Jetty | 106m | 10.2m | 85m | 4.8m | — | Clean products. Accommodates tankers up to 4,000 dwt. |

Pilots board. as follows:

1. Loaded crude tankers—in a position 4 miles S of Roche's Point Light.
2. Vessels over 130m in length except crude tankers—2.5 miles S of Roche's Point Light.
3. Vessels less than 130m in length—0.5 mile WNW of Spit Bank Light.

Within the area, a continuous listening watch should be maintained on the frequency designated by Cork Harbor Radio.

Vessels about to leave a berth should contact port operations to obtain the latest river and channel information.

Pilot launches, painted black and orange, are stationed at the boat harbor, which lies 0.5 mile E of Cobh Cathedral. The pilot launches are also fitted with VHF radio.

Whitegate Marine Terminal may be contacted by VHF for berthing instructions.

**Regulations.—**Vessels carrying chemicals in bulk; vessels carrying LPG, Class 1 petroleum in bulk, or Class 2 petroleum in bulk; and vessels having discharged a cargo of LPG, Class 1 petroleum in bulk, or Class 2 petroleum in bulk which have not been gas-freed are subject to the following:

1. Vessels must have an IMO Certificate of Fitness or a certificate issued by a recognized classification society for the carrying of gas, chemical, or petroleum cargo.
2. Vessels must be capable of communicating on VHF (including VHF channel 12) at all times while underway.
3. Vessels must contact Pilot and Port Operations, as follows:
   a. Before entering the ports limits, vessels must request and obtain permission to enter.
   b. Before departing a berth, vessels must request and obtain permission to depart.
   c. All inbound and outbound vessels are required to report via VHF channel 12 when passing Lighted Buoy No. 5. Outbound vessels must indicate which channel they intend to use for departure (East Channel or West Channel).
   d. On clearing the port limits.
4. During the day, vessels should only navigate in good visibility; at night, navigation will be subject to:
   a. Good visibility.
   b. No opposing traffic movements between **Lighted Bouy R2** (51°52.7'N., 8°20.4'W.) and the upper port limits.
5. Vessels shall display the International Code flag B, by day, and an all round red light, at night, while within the port limits.
6. Vessels must inform the harbormaster whenever there is deterioration in the status of machinery (main engines, mooring and anchoring equipment, cargo-handling equipment, steering gear, etc.) or navigational equipment.
7. Vessels shall not anchor inside Roche's Point except in the special anchorage for vessels with hazardous cargo designated below.
8. Large crude tankers are advised to approach the harbor entrance from **Cork Lighted Buoy** (51°42.9'N., 8°15.6'W.) on the range lights. Such vessels should embark the pilot at least 2.5 miles S of Roche's Point Light and should not approach closer than this distance unless a pilot is on board.

In connection with item 4 above, priority of movement will

**Spit Bank Light**

be given to passenger vessels, vessels depending on the state of the tide, and vessels using tugs. Normally, vessels carrying hazardous cargo will be the ones to suffer delays providing these are of reasonable duration.

Normally, vessels carrying hazardous cargo will be required to remain outside the harbor until such time as they proceed to berth. An exception to this requirement will be that smaller vessels, up to 115m in length, may anchor in a specially designated anchorage (51°50.05'N., 8°16.23'E.) W of Lighted Buoy No. 12 and Lighted Buoy No. 14. Any vessel other than one carrying a hazardous cargo is prohibited from anchoring in this designated anchorage.

In addition, all vessels carrying dangerous or polluting goods should comply with the Merchant Shipping (Reporting Requirements for Vessels Carrying Dangerous or Polluting Goods) of 1995.

Vessels within the area should maintain a constant listening watch on the VHF frequency designated by Cork Harbor Radio, usually VHF channel 12.

Vessels about to leave a berth should contact Port Operations to obtain the latest river and channel information.

**Signals.—**Copies of by-laws governing navigation, pilotage, regulation of goods on quays, and the carriage of petroleum and calcium carbide, are obtainable from the General Manager and Secretary of the Cork Harbor Commissioners. Masters of vessels carrying petroleum or calcium carbide are bound to give due notice to the Harbormaster's Office on Custom House Street, Cork.

**Traffic.—**A white signal mast stands on the NW knuckle of Haulbowline Basin Entrance. A red flag, by day, or a red light, at night, shown from the yard of the mast, indicates that naval vessels are about to enter or leave the basin. Vessels in the basin should remain alongside, and vessels shaping for the entrance should stand off, until the signal is hauled down to indicate that the entrance is clear.

**Contact Information.—**Cork Pilot and Port Operations can be contacted, as follows:

1. VHF: VHF channels 12, 14 and 16.
2. Telephone: 353-21-4811380
3. E-mail: cobh@portofcork.ie

**Anchorage.—**If it should be necessary to anchor outside the harbor with a N wind, a convenient berth, with the harbor open, will be found with Roche's Point Light bearing 034°, and Templebreedy Church bearing 309°, in about 18m, sand.

Small vessels may anchor W of a line between Lighted Buoy No. 14 and Lighted Buoy No. 16.

Small vessels, up to 107m in length, carrying hazardous cargo, may be allowed to anchor in the designated area W of Lighted Buoy No. 12 and Lighted Buoy No. 14. The anchorage berth has a depth of 6m.

**Caution.—**A submarine gas pipeline extends in a S direction from a point on the shore about 2.5 miles E of Roches Point.

Submarine pipelines and cables lie across the harbor within Cobh Roads and West Passage and may be seen on the chart.

A power cable with a vertical clearance of 53m crosses West Passage. A power cable with a vertical clearance of 24m crosses East Passage.

Harbour Rock, in the middle of the entrance, WNW of Roche's Point, is a rocky head, with a least depth of 4.4m.

Chicago Knoll, with depths of 5.7 to 7m, rock, is the extremity of a sunken ledge extending 0.3 mile from the E shore close N of Roche's Point.

Turbot Bank is a sandy bank over which there is a least depth of 10.4m, located about 0.5 mile NW of Roche's Point. A bank, having depths of between 4.6 and 9.3m at its outer end, extends about 0.3 mile NE of Weaver's Point.

Ram's Head Bank, with depths of less than 3m, extends about 0.3 mile from the W shore between Weaver's Point and Ram's Head; from it a spit extends 320m further E, with a least depth of 5m. A spit with depths of 9.4m at its outer end, extends about 0.4 mile W from the shore in White Bay. Dogsnose Bank, with depths of 5.4m and less, extends about 0.2 mile NW from Dogsnose, N of Fort Davis. Spit Bank, which dries 2.4m in places, extends nearly 1 mile E from Haulbowline Island.

The Bar extends NE across the main channel from the NE extremity of Spit Bank.

## Cork Harbor to Waterford

**1.25 Power Head** (51°47'N., 8°10'W.) lies about 3 miles ESE of the entrance to Cork Harbor. A conspicuous old signal station stands on the head and a conspicuous radio tower, 125m in elevation, stands about 1.2 miles N of it.

Pollock Rock, with a depth of 7.3m, lies about 1.8 miles SE of Power Head and is marked by a lighted buoy. Vessels of

*Courtesy of Donald W. Carter*

**Ballycotton Light**

moderate draft may pass N of the rock, in depths of 9.5 to 12.8m, but must take care to avoid the shoals and rocks lying close off Power Head. Gas pipelines from Kinsale Head Gas Field land at Powerhead Bay W of Power Head; mariners are cautioned to keep away from the vicinity.

**Ballycotton Island** (51°50'N., 7°59'W.) lies close E of a point about 7.5 miles ENE of Power Head. The coast between is high, precipitous, and foul for some distance offshore. Vessels are advised to remain in depths of over 20m.

A light is shown from a structure, 15m high, standing on the summit of Ballycotton Island.

The Smiths, consisting of three drying rocks, lies about 0.8 mile offshore, 1.5 miles SW of Ballycotton Island.

**1.26 Ballycotton Bay** (51°50'N., 8°00'W.) is entered between Ballycotton Island and Knockadoon Head about 5.5 miles E. An old tower stands on Knockadoon Head and is prominent. Capel Island lies about 0.5 mile E of the head; a white tower, 37m high, stands on the summit of the island.

The bay affords good shelter in W and SW winds. The holding ground is good, the bottom being sand over mud and clay. Very little sea comes in between Ballycotton Island and the mainland, even at HW when W winds may prevail, but with the wind E of S, a heavy sea rolls in.

A small fishing boat harbor is situated on the N side of the point close W of Ballycotton Island. It is protected by a breakwater and has a depth of 3.7m in the entrance, which is 25m wide. A pier, 150m long, has a depth of 2.4m alongside.

Anchorage may be taken, in a depth of 12.8m, with Ballycotton Island Light bearing 176°, distant 0.5 mile, where vessels are sheltered from the sea by the island, or closer to the harbor, according to draft.

**Caution.—**A submarine power cable runs from Ballycotton Harbor to a position 0.2 mile N of Ballycotton Island; it then turns ESE and lands at the NW point of the island.

The currents near the coast and within Ballycotton Bay are weak and barely perceptible, but set with some strength between Ballycotton Island and the land and between Capel Island and Knockadoon Head.

**Kinsale Head Gas Field** (51°22'N., 8°00'W.), consisting of two production platforms about 3 miles apart, lies 28 miles S of Ballycotton Island Light. A submarine gas pipeline extends from the field in a NNW direction to a point on the coast close W of Power Head.

Ballycotton Gas Field (51°27'N., 8°07'W.) connects with pipeline to Kinsale B-West and Kinsale A-East production platforms, as seen on the chart.

**1.27 Youghal Bay** (51°55'N., 7°50'W.) is entered between Knockadoon Head and Ram Head, about 7 miles NE. An old tower stands on Ram Head.

Youghal Harbor is situated at the head of the bay in the mouth of the River Blackwater. The approach to the harbor is encumbered by rocks, which are marked by buoys, and a bar. A light is shown from the W side of the harbor entrance.

The entrance is easily recognized in daytime by the opening between its high, bluff shores. Two channels cross the bar. The E channel is the deeper, with a least charted depth of 2.8m. A depth of 1.7m lies 0.2 mile SW of the E point, just S of the charted channel. Tides rise 3.6 at springs, 1.9m at neaps. Pilotage is not compulsory, but advisable. There are no licensed pilots, but local fishermen offer their services. A number of quays, which dry at LW, front the town.

Vessels with drafts of up to 3m can berth alongside. Vessels of up to 1,200 dwt, with lengths of up to 82m, have been accommodated in the harbor.

Surveys carried out in 1990 indicated shoal areas of 5.6m

and 3.6m lying about 0.4 mile SE and 0.1 mile E, respectively, of the clocktower and a drying bank centered about 0.2 mile NNE of the same tower.

It was reported (1991) that depths off the berth were 3m, shoaling to 1.3m at the N end.

**Anchorage.—**Temporary anchorage in moderate weather and with offshore winds may be obtained in the W part of Youghal Bay, in 9.1 to 12.8m, sand and mud, with Capel Island bearing between 194° and 234°, distant 0.3 to 0.5 mile. In N winds, temporary anchorage may be obtained off Whiting Bay, on the N shore of Youghal Bay, but in unsettled weather and with onshore winds, vessels should keep underway.

About 19 miles NNW of **Ram Head** (51°57'N., 7°43'W.) are the sharp peaks of the Knockmealdown Mountains. About 10 and 12 miles E, respectively, of these mountains are the long ridges of the Monavullagh Mountains and the Comeragh Mountains; they are visible everywhere in the offing between Cork and Waterford.

**1.28 Ardmore Bay** (51°57'N., 7°43'W.), entered close N of Ram Head, offers temporary anchorage, in 14.6m, during fine weather. A conspicuous tower stands on the slope of a hill near the village at the head of the bay.

Dangerous wrecks lie about 1.5 miles SSW, 1.5 miles ENE, and 3 miles ENE of Ram Head.

**Mine Head** (51°58'N., 7°38'W.), about 5.5 miles ENE of Ram Head, is a bold precipitous headland. An above-water rock lies close E of the headland. A light is shown from a prominent structure, 87m high, standing near the edge of the cliff on the head.

Currents between Ram Head and Helvick Head about 9 miles NE, generally follow the direction of the coast. The current setting E begins about 2 hours 15 minutes before HW at Cobh; the opposite current begins about 2 hours 30 minutes after HW at Cobh. The spring velocity of both currents off Mine Head is a little more than 1 knot and less in the bays on either side. The currents are weak and irregular about 10 miles S of the head.

**Helvick Head** (52°03'N., 7°32'W.), about 4 miles NE of Mine Head, is a steep bluff, 76m high, on which stands a white watch house. On the N side of the head are some conspicuous whitewashed cottages, with a building resembling a tower at their E extremity. A very small fishing harbor, protected by a breakwater, is situated about 0.2 mile W of the head. The harbor has depths of 1.2m in the entrance and is liable to silt.

**Ballynacourty Point** (52°05'N., 7°33'W.) lies about 1.5 miles N of Helvick Head. A light is shown from the point.

**1.29 Dungarvan Harbor** (52°05'N., 7°37'W.) is entered between Ballynacourty Point and Helvick Head. It consists of an extensive bay, mostly shallow and encumbered with dangers. A narrow channel with a least depth of 0.5m over the bar, leads to the town about 2.2 miles W of the entrance to the bay. Several mooring buoys are moored abreast the town and are used by fishing vessels and the port is closed to commercial vessels.

Anchorage can be taken, in 7.3 to 9.1m, S of Ballynacourty Point with a castle 1.5 miles NNE bearing about 012°. The castle is conspicuous from the offing. Southwesterly gales raise a heavy sea.

Ballyvoyle Head lies about 2.7 miles NE of Ballynacourty Point. A tower in ruins stands close N of Ballyvoyle Head.

Bunmahon Village is situated about 5 miles ENE of Ballyvoyle Head. The buildings and tall stacks in the village are conspicuous from the offing.

**Great Newtown Head** (52°08'N., 7°10'W.) can be identified by the three conspicuous white towers on its summit. The colossal figure of a man with his arm extended E stands on one of the towers.

**Tramore Bay** (52°08'N., 7°10'W.) is entered between Great Newtown Head and Brownstown Head to the E. Two conspicuous black towers stand on Brownstown Head. The sandy beach at the head of the bay, fronting a large area of sunken land, gives it the appearance of an estuary in hazy weather. The spire of the church at Tramore on the NW side of the bay is conspicuous.

**Swines Head** (52°08'N., 7°02'W.), the W entrance point of Waterford Harbor, lies about 5 miles E of Great Newtown Head. A rock, which dries, lies about 0.2 mile S of the head.

Currents 1.5 miles outside Tramore Bay are negligible from about 3 hours 30 minutes after HW at Cobh until about 3 hours 15 minutes before HW at Cobh. It then begins to set N toward Great Newtown Head and along the W shore of the bay at a velocity of about 1 knot at springs. The direction gradually shifts E at a decreased velocity and by 45 minutes before HW at Cobh it sets E. It continues its rotary movement, ending in a S direction, where it remains until about 30 minutes after HW at Cobh.

**1.30 Dunmore East Harbor** (52°09'N., 7°00'W.) lies within Dunmore Bay, at the W side of the entrance, about 2 miles NE of Swines Head; it has an entrance, 75m wide, with depths of about 2.6m, and is used by fishing vessels, small craft, and yachts.

Navigation is restricted about 4 miles within the entrance by the outer bar. The fairway then follows the deep channel for 6 miles to Cheek Point. Vessels bound for Waterford continue through Queens Channel up the River Suir.

Duncannon Bar is an extensive tract of sand and gravel lying between Creadan Head and Duncannon Point, about 2.5 miles NNE, with a least depth of 6.5m in the fairway. After a prevalence of N winds with dry weather, there is a depth of 0.3m less over the bar, but with S winds a contrary effect is produced.

Cheek Point Bar, with a dredged depth in the fairway of 6m, extends across the entrance of the River Suir between **Cheek Point** (52°16'N., 6°59'W.) and Drumdowney Point, the W entrance point of the River Barrow, 0.7 mile NW.

Another bar, with a dredged depth of 6m, lies SW of Snowhill Point, about 0.4 mile SW of Drumdowney Point.

Queens Channel, N of **Little Island** (52°15'N., 7°03'W.) is dredged to a depth of 5.2m in the fairway.

City Reach extends NW and is 0.75 mile long. A flat, with a depth of 3.3m, extends from the shore fronting the quays to near mid-channel. There are depths of 6.4 to 7.3m between it and the N shore. In mid-channel, NW of the flat, there are depths of 11 to 14.6m.

*Courtesy of Donald W. Carter*

**Mine Head Light**

*Courtesy of Donald W. Carter*

**Hook Head Light**

## Waterford (52°08'N., 6°57'W.)

World Port Index No. 34400

**1.31** The port of Waterford is formed by the estuaries of the River Suir and the River Barrow, which join in a position about 10 miles above the common entrance between Swines Head and Hook Head, 4 miles ESE. Waterford consists of a port and city situated on the River Suir about 5 miles W of the junction with the River Barrow. New Ross, a small port, lies on the River Barrow about 9 miles above its entrance.

**Port of Waterford Home Page**

http://www.portofwaterford.com

**Waterford Container Terminal**

**Aerial view of Waterford**

**Waterford**

**Tides—Currents.—**The rise of tide at Waterford is about 4.3m at springs and 3.4m at neaps.

The E current off the entrance of Waterford Harbor begins about 1 hour 15 minutes before HW at Cobh; the W current be-

gins about 4 hours 45 minutes after HW at Cobh. The spring velocity in both directions does not exceed 1 knot. Inside the entrance, the flood begins about 4 hours 30 minutes before HW at Cobh and the ebb about 45 minutes after. The spring velocity in both directions varies from 2.5 to 3 knots. The flood sets toward the W shore and the ebb toward the E. About 3.5 miles within the harbor, the currents follow the general direction of the river.

When the ebb is setting at maximum strength out of the harbor, a W current begins off Hook Head. The junction of these two currents is well marked by rips which extend toward Swines Head. When the W current S of Hook Head is setting at maximum strength, a turbulent sea known as "Tower Race" is created. This condition is intensified by opposing winds and gales.

**Depths—Limitations.—**The entrance to Waterford Harbor, 2.5 miles wide, is deep and clear of dangers in the fairway as far as **Creadan Head** (52°11'N., 6°57'W.). Across Duncannon Bar the channel has a maintained least depth of 6.5m.

In recent years commercial port activity has migrated 3 miles down river to the Belview Terminal and O'Brien's Quay. O'Brien's Quay, located 0.1 mile upriver of Belview is privately operated and has facilities for bulk vessels.

There are quays on both sides of the river at Waterford which extend a considerable distance along the river bank. In addition, there are pontoons for facilitating the working of cargo.

The size of vessels able to berth at Waterford is restricted to about 170m in length with drafts of 8.5 to 9.3m due to the depth over the bars and the sharp bends in the River Suir. Vessels of up to 32,000 dwt have been accommodated at Waterford. Vessels of 170 to 200m may be accommodated by special arrangement with the port. For further berthing information refer to the Table titled **Port of Waterford—Berth Information**.

**Aspect.—**The W side of the entrance can be identified by the high shore terminating at Creadan Head, 4 miles NE of Swines Head. The E side is formed by a low peninsula of which Hook Head is the S extremity.

A light is shown from Hook Head. A racon is situated at the light.

In the approach to Waterford Harbor, the mountains inland are conspicuous in clear weather. The Comeragh Mountains, about 20 miles WNW of Swines Head, are readily identified; E of them, and more distant, is Slieveanaman, 720m high. Nearer the coast is the remarkable peak of Tory Hill, 290m high, rising about 13.5 miles N of Swines Head, and the flat-topped Slieve Coiltia, 267m high, about 13 miles N of Hook Head. Farther E is the rugged hill of Carrick Byrne, rising about 5.5 miles ENE of Slieve Coiltia, and Forth Mountain, 232m high, rising about 13.5 miles E of the same mountain. As the land is approached, the high W shore of the entrance will be seen.

The light structure at Hook Head is prominent; a conspicuous large square building stands about 1.7 miles NNE of it. A white lookout tower, close S of Dunmore East Harbor, is conspicuous.

**Port of Waterford—Berth Information.**

| Berth | Length | Depth | Maximum Vessel | |
|---|---|---|---|---|
| | | | LOA | Draft |
| **City Berths** | | | | |
| Berth No. 1 N Wharf | 106m | 6.9m | — | — |
| Berth No. 2 | 71m | 6.9m | — | — |
| Berth No. 3 | 121m | 6.9m | — | — |
| Berth No. 4 | 139m | 7.8m | — | — |
| Berth No. 5 | 103m | 8.6m | — | — |
| Halls Wharf | 79m | 7.6m | — | — |
| Frank Cassin Wharf | 278m | 6.8m | — | — |
| **Belview** | | | | |
| Container Terminal | 450m | 8.5m | — | — |
| Bulk Berth | 390m | 8.5m | — | — |
| Obriens Wharf | 120m | 8.0m | — | — |
| **Tanker Berths** | | | | |
| ESB Great Island | — | — | 242m | 9.5m |
| Morris Oil | 69m | — | — | — |

**Note**: The inner city berths of Waterford have discontinued commercial berthing and have relocated commercial traffic to Belview. All future port development will be at Belview.

**Pilotage.—**Pilotage is compulsory for all vessels over 100 gt., or as determined by the harbormaster. Pilots board about 0.5 mile E of Dunmore East Outer Pier (52°8.98'N, 6°58.55'W). In the case of bas weather the pilot boarding will be in position 52°14.45'N, 6°58.09'W.

Vessels should send an ETA 24 hours in advance. ETA can be confirmed with the pilots on CHF channel 14 when within VHF range which is about 20 miles.

Vessels carrying dangerous cargo, explosives, or petroleum products should inform the harbormaster before entering the harbor.

**Contact Information.—**Waterford Pilots can be contacted, as follows:

1. Call Sign: Waterford Pilots
2. VHF: VHF channels 14.
3. Telephone: 353-51-383-119
4. E-mail: shipping@portofwaterford.com

Waterford Port can be contacted, as follows:

1. VHF: VHF channels 10, 13, and 14.
2. Telephone: 353-51-874907
3. Facsimile: 353-51-874908
4. E-mail: info@portofwaterford.com

**Anchorage.—**Dunmore Bay affords temporary anchorage with N winds, in 7.3 to 9.1m, mud, about 275m NNE of the light on the outer pier head.

The best anchorage is off Passage, where vessels may anchor, in 9.1 to 11m, good holding ground, sheltered from all winds and sea.

Vessels of more than 90m in length are recommended to anchor with the front range light on Snowhill Quay bearing about 273°, and just open N of the N extremity of Cheek Point, and the light on the SE extremity of Cheek Point bearing about 220°, in 10.7m, mud.

Shorter vessels arriving at Waterford will find a convenient berth abreast the Abbey Church, in 6.4 to 11m, or above the church, in the bight on the N side, in 6.4 to 9.1m.

There is room for a number of vessels, in depths of 7.3 to 11m, clear of the vessels at the quays, in the reach below the city, below Cromwell Rock, close to the W shore.

**Caution.—**Vessels are cautioned not to anchor in the vicinity of the submarine cables off Duncannon Point, nor in the vicinity of the ferry crossing at Passage.

Creadan Bank, with a least depth of 5.2m, lies about 0.5 mile S of Creadan Head.

A detached shoal, with a least depth of 3.4m, gravel, lies on the bar in a position about 1 mile N of Creadan Head. A buoy is moored on the E side of the shoal and marks the W side of the bar channel.

A buoy is moored W of the S extremity of Ballistraw Flat and marks the E side of the bar channel.

**1.32** **New Ross** (52°23'N., 6°57'W.) (World Port Index No. 34390), a tidal port, lies 20 miles inland on the River Barrow. It has facilities for containers, ro-ro, liquid, and bulk cargo; there is 310m of available wharfage.

**Port of New Ross Home Page**

http://www.imdo.ie/new-ross-port.htm

**Depths—Limitations.—**There are quays on both sides of the River Barrow at New Ross. Depths alongside the berths are 5.2 to 7.6m. Vessels are restricted in size by the width of the bridge opening and the sharpness of the bends in the river.

Vessels of up to 6,500 dwt, with lengths of up to 105m, beams of up to 17.5m, and drafts of up to 6m at springs and 5.2m at neaps, can be accommodated at New Ross. For vessels of maximum dimensions, navigation is generally restricted to the period between 2 hours before and after HW in daylight only.

Vessels bound for New Ross enter the River Barrow through a swing bridge about 0.8 mile NW of Cheek Point. The swing bridge provides two openings, each 24m wide. The vertical clearance below the bridge when closed is 7.1m. Above the bridge, a fairway passes over a bar with a least charted depth of 2.3m.

**Pilotage.—**Pilots for New Ross and the River Barrow board off Cheek Point.

## Waterford to Carnsore Point

**1.33** Brecaun Bridge is a reef lying about 2 miles NE of **Hook Head** (52°07'N., 6°56'W.) which extends over 0.3 mile offshore, with a depth of 1.2m at its extremity. **Forth Mountain** (52°19'N., 6°34'W.), bearing 047° and open SE of Baginbun Point, leads SE of this danger.

Baginbun Point, about 5 miles NE of Hook Head, is marked by a martello tower and a conspicuous church stands about 2 miles within the point.

**Ingard Point** (52°11'N., 6°49'W.) lies about 1 mile N of Baginbun Point and may be identified by a mill on its extremity. Between the two points there is a bight, in which temporary anchorage in W winds may be obtained, in 8.2 to 11m, fine sand, with Baginbun Point bearing between 183° and 206°, distant 0.8 mile.

A very small harbor, which dries, lies close within Ingard Point. Bannow Bay, located close NE of Ingard Point, affords anchorage for small craft with local knowledge.

Ballyteige Bay lies between the entrance to Bannow Bay and Crossfarnoge Point, about 8.5 miles ESE. It is unsuitable for anchorage and is foul with shoals and rocks.

**Crossfarnoge Point** (52°10'N., 6°35'W.) lies 13 miles ENE of Hook Head. A light is shown from the point. Ballyteige Castle, nearly 1 mile NNE of the extremity of Crossfarnoge Point, a chapel with a belfry about 0.4 mile within the same point, and the tower of a chapel at Carrick, 6.5 miles NW of the point, are conspicuous. Forth Mountain, 8.7 miles N of Crossfarnoge Point, is visible in clear weather from all parts of Ballyteige Bay.

Small vessels may obtain anchorage in E winds, in 11 to 12.8m, sand and stones, with Crossfarnoge Point bearing between 094° and 116°, distant 0.5 to 1 mile.

Kilmore Quay is a small fishing harbor, which dries, lying close E of the point. Kilmore Quay Safe Water Mark Lighted Buoy is moored seasonally in position 52°09.2'N, 6°35.2'W.

The Saltee Islands consists of two islands, Great Saltee (52°07'N., 6°37'W.) and Little Saltee (52°08'N., 6°35'W.), which lie within 4 miles S of Crossfarnoge Point. Both islands are fronted by numerous rocks and shoals. A prominent beacon, consisting of a cairn of stones, stands near the S extremity

of Little Saltee. Two passages lead through the islands; local knowledge is required. St. Patrick's Bridge, the shallower passage, leads N of Little Saltee and is used by fishing vessels. Saltee Sound leads between the two islands and has depths in the fairway of 8 to 10m. The fairway is reduced to a width of about 0.3 mile between the foul ground extending from the islands.

**Anchorage.—**Anchorage may be obtained, in a depth of 7.9m, about 0.6 mile NW of the N extremity of Great Saltee.

Temporary anchorage may be obtained during E winds leeward of the islands, out of the strength of the tidal currents, avoiding the dangers.

On the E side, anchorage may be obtained, in depths of 14 to 15m, 0.6 mile NE of the beacon on Little Saltee.

**1.34 The Brandies** (52°06'N., 6°35'W.) are two drying rocks lying 1.7 miles SE of the S extremity of Great Saltee Island. The tidal current sets past these rocks with considerable strength and causes overfalls when they are covered.

Coningmore Rocks, about 1.5 miles S of Great Saltee Island, are three rocks, the largest, 4m high, can easily be recognized. Red Bank, with a depth of 7.9m, lies 1.5 miles W of Coningmore Rocks. The tidal current over the bank and the uneven ground to the S of it causes considerable overfalls. Coningbeg Rock lies 2.7 miles SSW of the S extremity of Great Saltee Island and its position is usually indicated by the wash of the sea over it.

Coningbeg Lighted Buoy (52°03.2'N., 6°38.6'W.) is moored about 1.7 miles SSW of Coningbeg Rock; it has a red hull with the name painted in white letters on each side. A racon is situated at the lighted buoy. Large vessels should pass to the S of the lighted buoy.

**1.35 Carnsore Point** (52°10'N., 6°22'W.), 8.5 miles E of Crossfarnage Point, is 16m high and rocky. A prominent hut and flagstaff stand on the point. The coast between the points is low and fronted by offshore dangers.

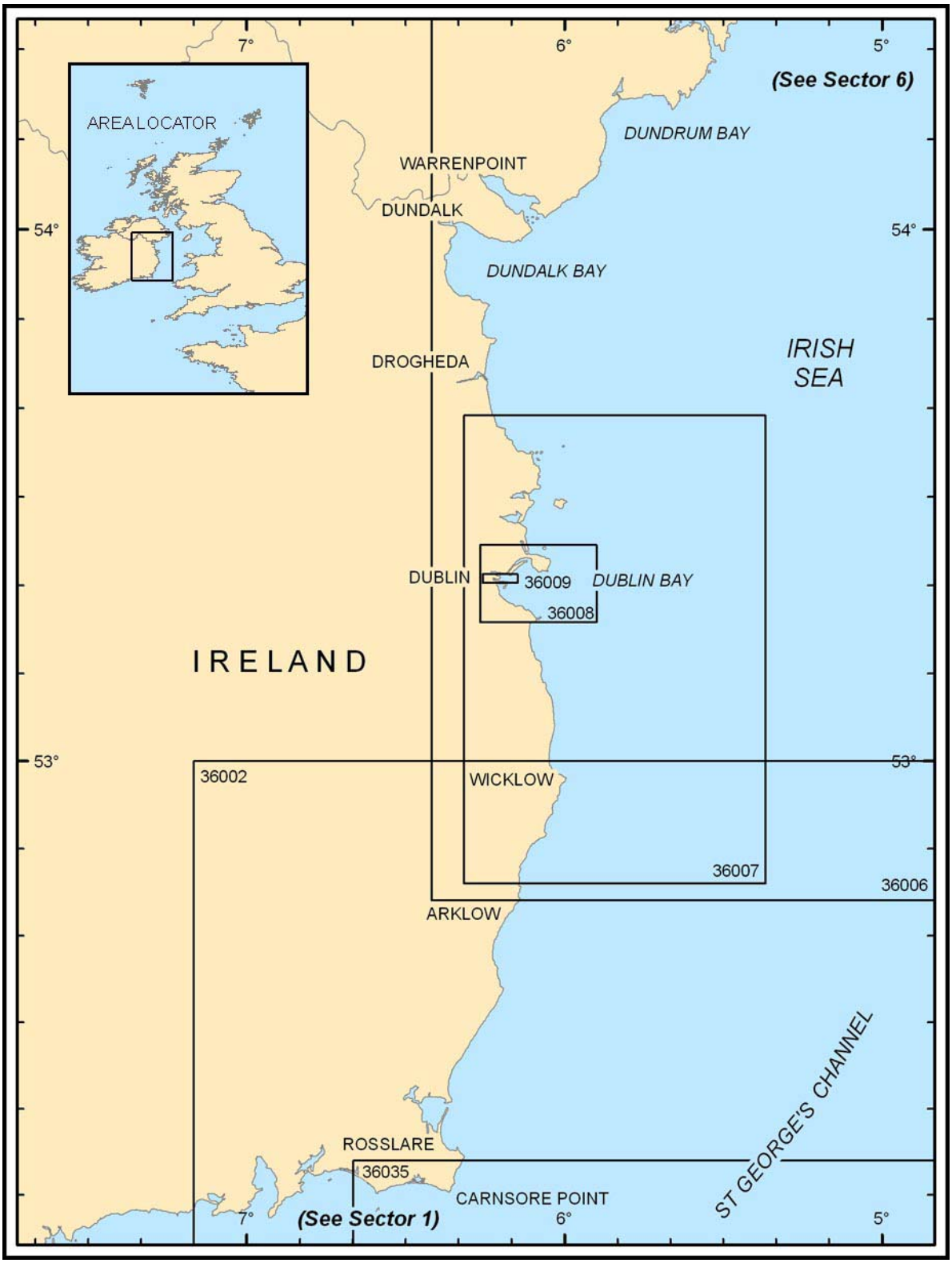
The Bore is a rock with a depth of 5.5m lying about 4 miles SSE of Crossfarnoge Point. Long Bohur, with a depth of 4m, lies 1.2 miles N of The Bore.

Black Rock, 2m high, stands about 2.2 miles SW of Carnsore Point. A drying rock and a dangerous wreck are located 0.2 and 0.4 mile, respectively, N of Black Rock.

Barrels Rocks, which dry, lie about 1.8 miles SSW of Carnsore Point. A shoal with a depth of 5m over it, lies 0.5 mile NNW of the rocks. A lighted buoy is moored about 2 miles S of Carnsore Point.

**Tides—Currents.—**The tidal currents set roughly E and W from S of Hook Head to S of the Saltee Islands. The currents are weak S of Hook Head, but increase E to a velocity of about 2 knots, in both directions, S of Great Saltee. The tidal currents decrease in strength N, but weak currents set along the coast between Hook Head and Crossfarnoge Point.

The currents around the Saltee Islands and rocks are very variable and affected by eddies.The currents at Coningbeg Lighted Buoy are more or less rotary in a clockwise direction. The direction and velocity of the currents at this lightfloat are often irregular. The currents between Great Saltee and Carnsore Point set in an ENE-WSW direction at a velocity of about 2.5 knots. East of Carnsore Point, the currents set in a N-S direction along the E coast of Ireland.

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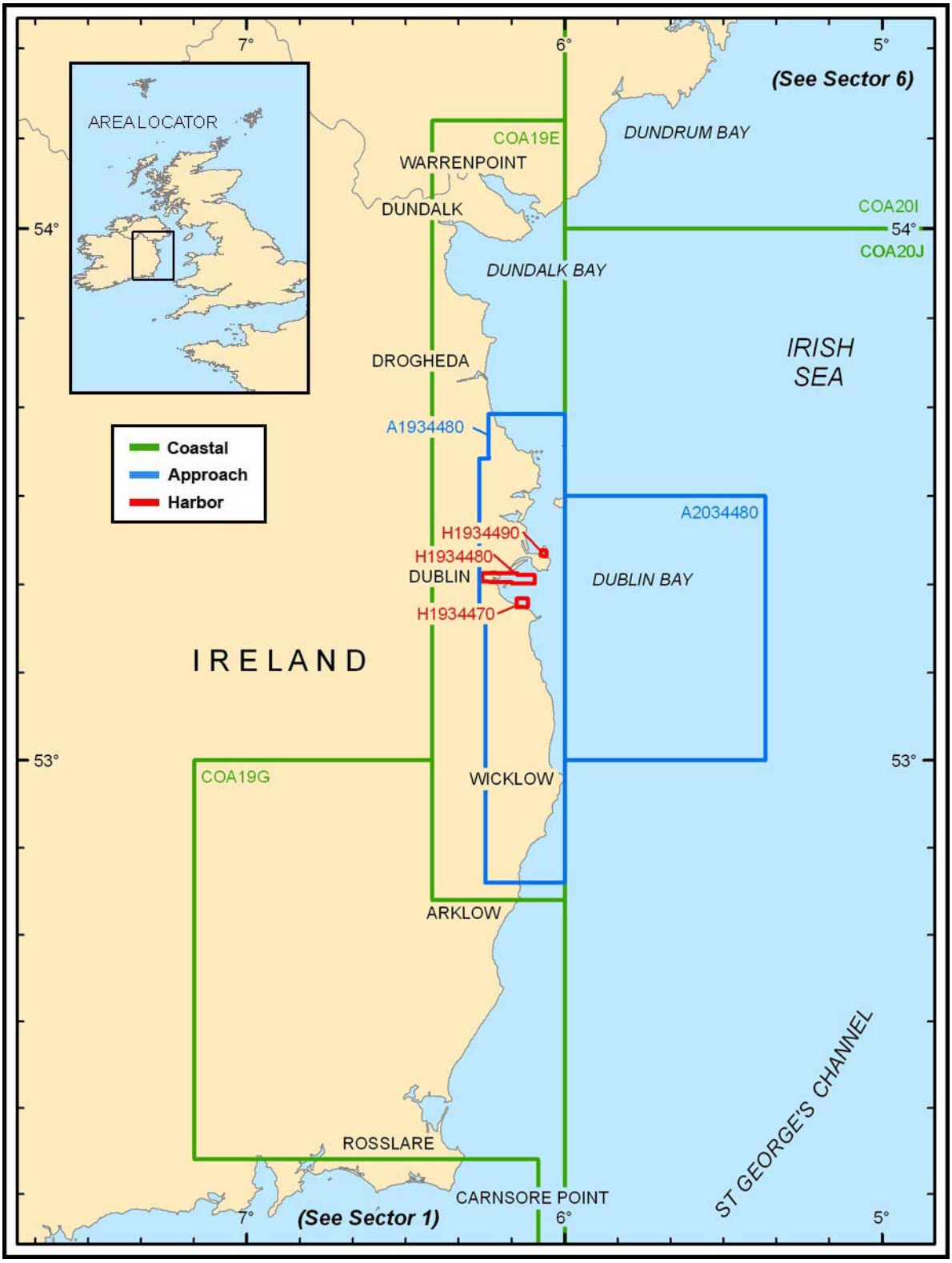
SECTOR **2** — CHART INFORMATION

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SECTOR 2 — DNC LIBRARY INFORMATION

# SECTOR 2

## EAST COAST OF IRELAND—CARNSORE POINT TO STRANGFORD LOUGH

**Plan.—**This sector describes the E coast of Ireland between Carnsore Point and Strangford Lough, 129 miles N, and includes Dublin Bay. The sequence of description is from S to N.

### General Remarks

**2.1** Between Carnsore Point (52°10'N., 6°22'W.), the SE extremity of Ireland, and Sorrento Point, on the S side of Dublin Bay 66 miles N, the coast is moderately low, but hilly in places and bordered several miles inland by a chain of fairly high rugged mountains rising to elevations in excess of 305m. The Wicklow Mountains, the N extension of this chain, rise to an elevation in excess of 920m at **Lugnaquillia** (52°58'N., 6°28'W.), the highest peak, about 17 miles W of Wicklow Head. Except for cliffs, bluffs, and rocky stretches of shore fronting such promontories as Carnsore Point, Cahore Point, **Wicklow Head** (52°58'N., 6°00'W.), and Bray Head the greater part of the coast is fringed by long stretches of sandy beach.

Between Dublin Bay and Strangford Lough, about 60 miles NNE, the land is fairly low as far N as Dundalk Bay, but predominantly mountainous in the vicinity of Carlingford Lough. **Carlingford Mountain** (54°03'N., 6°13'W.), on the S side of the lough, rises to a 585m high peak about 4.5 miles inland. The Mourne Mountains, forming the N side of the lough, extend about 15 miles NE and terminate abruptly at the head of Dundrum Bay. Several of the peaks have elevations in excess of 610m. **Slieve Donard** (54°11'N., 5°55'W.), the highest, rises to a height of 847m on the E slope of the range bordering the W side of Dundrum Bay. The peak is conspicuous from the offing.

Between Dundrum Bay and the entrance of Strangford Lough to the NE, the coast is of moderate elevation with few conspicuous features.

**St. George's Channel** (52°20'N., 6°00'W.) is a deep and wide channel between the SE extremity of Ireland and the coast of Wales, leading to the Irish Sea. The channel is entered between Carnsore Point and Saint David's Head, about 42 miles ESE.

**Winds—Weather.—**The climate on the E coast of Ireland and in the Irish Sea is rather mild, equable, and humid. The summers are usually cloudy and wet and the winters are windy with frequent rain. Snow is quite rare. The annual rainfall is generally heavy and well-distributed. Although winds from any direction may be expected in any month, the winds are usually from the SW and W, and occasionally from the NW. From March to May however, NE winds become frequent and N winds are not uncommon. Gales may occur in any month and are fairly common from October to March. Coastal fog is most frequent on autumn and winter mornings.

**Tides—Currents.—**The tidal currents set almost simultaneously into and out of the Irish Sea through Saint George's Channel and North Channel. Both currents divide into an E and W branch. The W branches meet S of the channel between the Isle of Man and Ireland; the E branch of the Saint George's Channel current sets E between the Isle of Man and Anglesey toward Morecampe and Liverpool Bays.

The incoming current begins in both Saint George's Channel and North Channel 6 hours after HW at Dover. The current begins a little earlier at the S end of Saint George's Channel, and a little later at its N end. The incoming current through Saint George's Channel changes direction from N of a line between South Stack and the Nose of Howth to E of a line between the Skerries (off Holyhead) and Calf of Man, but from the line between South Stack and Nose of Howth, the N current also continues toward the channel between the Isle of Man and Ireland.

The outgoing current sets in directions about opposite to those of the incoming current and commences on an average at about the time of HW at Dover.

The currents are fairly strong and set at a rate of about 2.5 knots at springs in mid-channel.

**Regulations.—**An IMO-adopted traffic separation scheme is established within 11 miles SE of Tuskar Rock; Rule 10 of COLREGS applies.

Vessels proceeding N enter St. George's Channel through the outer lane and vessels proceeding S leave the channel through the inner lane. Northbound vessels should be aware that vessels, which are outbound from ports on the E side of the Irish Sea, generally head across St. George's Channel in order to enter the S and inner traffic lane.

**Directions.—**In thick or hazy weather, Saint George's Channel should be approached with extreme caution and the navigator should be sure of the vessel's position before attempting to enter the channel.

A vessel from W having arrived in the vicinity of the Saltee Islands and not having sighted Coningbeg Lighted Buoy, must stay in depths of not less than 56m until certain that the vessel is E of the meridian of Tuskar Rock before turning N.

As the vessel progresses E, the depths will increase to 111m, indicating that The Smalls are being approached; course should then be altered N and caution observed until the position is ascertained.

Between Coningbeg Lighted Buoy and Tuskar Rock, the E current sets somewhat toward the land and must be allowed for.

**Caution.—**Vessels using the inshore coastal channels W of the main banks may encounter numerous fishing craft.

Visibility offshore of less than 5 miles occurs frequently during the summer months in the vicinity of the SE coast of Ireland.

Several ferries and other high-speed craft cross the Irish Sea and St. George's Channel from ports on the E coast of Ireland.

Submarines exercise frequently in the Irish Sea.

### Off-lying Dangers—Carnsore Point to Dublin Bay

**2.2** The offshore approaches are partly obstructed by a long but discontinuous belt of detached shoals which lie parallel to the coast. This chain of shoals includes such dangers as

Tuskar Rock, Blackwater Bank, Arklow Bank, Kish and Bray Banks, and many smaller obstructions. This chain lies from less than 2 miles to about 9.5 miles offshore. Some of these large banks are over 5 miles long and contain scattered wrecks, shoal patches, and other dangers to navigation. Depths of less than 1.8m are common on Arklow Bank, and Blackwater Bank has patches that uncover. Because of the length and depth of these banks, large vessels should navigate with caution in their vicinity.

Navigable channels separate the larger banks and provide access to still larger channels that lie between the banks and the coast. A coastal inshore route between Carnsore Point and Dublin Bay leads inside of the offshore banks. The passage is marked by buoys and lighted buoys and presents no difficulty for power-driven vessels. The route has depths generally greater than 20m. Vessels without good local knowledge of the coast are advised to stay E of Blackwater Bank.

**Tuskar Rock** (52°12'N., 6°12'W.), the outermost danger, lies 6 miles ENE of Carnsore Point. It is 5m high and located on a rocky bank with depths of less than 3m around it, except on the E side which is steep-to.

A light is shown from a conspicuous structure, 33m high, standing on the rock. A racon is situated at the light. A lighted buoy, fitted with AIS is moored 1.5 miles S of the rock.

On the W side of the rock, the deep-water channel is 1.5 miles wide between the dangers W of the rock and The Bailies bank.

**2.3 The Bailies** (52°12'N., 6°17'W.) is a bank of rocks and coarse ground lying midway between Tuskar Rock and the coast. Heavy overfalls may be present due to current passing over the bank. Depths over the bank are generally in excess of 10m but isolated patches, with depths as little as 5.8m are present. These patches are best seen on the chart. Deep-draft vessels are advised to avoid crossing the bank due to these lesser depths.

Holden's Bed, Long Bank, New Ground, and Lucifer Bank lie in the NE approaches to Rosslare Harbor. The banks consist of fine sand which is constantly shifting and the depths over them are subject to frequent change. Passages through the banks are marked by lighted buoys.

Blackwater Bank, with Money-weights Bank at its N end, lies between 3 and 5 miles offshore between **Blackwater Head** (52°26'N., 6°19'W.) and Morris Castle, about 6 miles NE. Rips usually mark the steep-to W side. Shoaling has been reported N of Blackwater and Money-weights Banks, extending into the E side of Rusk Channel. The banks are marked by lighted buoys.

Barham Shoals, with depths of 8.2m, lies about 4.2 miles SE of Blackwater Head.

Rusk Bank lies about 0.5 mile W of the N end of Money-weights Bank.

Arklow Bank lies between 4.2 and 7.3 miles offshore and extends about 12 miles N from a position 13 miles NNE of Money-weights Bank. The depths are subject to change and the bank is marked by overfalls. The N, S, and seaward sides of the bank are marked by lighted buoys. There are seven wind turbines, each 72.8m tall at the hub, situated on the bank; each is marked with a light with the extreme N and S turbines fitted with AIS transmitters. In thick weather, Arklow Bank should not be approached in depths of less than 55m.

*Courtesy of Blair Kelly*

**Tuskar Rock Light**

Arklow Lighted Buoy (52°40.2'N., 5°58.9'W.) is moored about 2.5 miles SSE of the S extremity of Arklow Bank. It is equipped with a racon.

Glassgorman Banks extend about 6 miles S from a position about 1.5 miles E of Kilmichael Point (52°44'N., 6°08'W.) and are marked on the E side by lighted buoys.

India Bank lies with its S extremity about 5 miles NE of **Wicklow Head** (52°58'N., 6°00'W.) and extends N for about 2.2 miles. It is marked at the N and S extremities by lighted buoys.

**2.4 Codling Bank** (53°07'N., 5°51'W.) is centered about 11 miles NNE of Wicklow Head. The bank lies between 4.5 and 9 miles off the coast and extends in part about 2.5 miles S. It is marked on the E, W, and S sides by lighted buoys. Heavy overfalls occur on the bank during the strength of the current.

Codling Lighted Buoy (53°03'N., 5°41'W.) is moored about 12.5 miles ENE of Wicklow Head. It is equipped with a racon.

Bray Bank and Kish Bank together form one continuous long, narrow, and steep-to shoal that extends about 9.5 miles N

from a position close N of the W end of Codling Bank. The tidal currents disturb and carry large quantities of sand from these and the neighboring banks, especially at springs and during gales. The N extremity and E side of Kish Bank are marked by lighted buoys.

Kish Bank Light (53°19'N., 5°56'W.) is erected about 0.5 mile ENE of the N extremity of Kish Bank. The light is shown from a prominent concrete tower 29m in height; a racon transmits from the light.

Bennet Bank, a narrow ridge of sand and shells, lies about 3.5 miles E of the **Howth Peninsula** (53°23'N., 6°04'W.). A lighted buoy, moored about 1.5 miles N of Kish Bank Light, marks the S extremity of the bank.

Burford Bank, a narrow ridge of hard sand, extends N for 2 miles from a position about 3.5 miles W of Kish Bank Light. It is marked at the N and S extremities by lighted buoys. The bank lies across the entrance to Dublin Bay and the sea breaks heavily over it during E gales.

## Off-lying Dangers—Dublin Bay to Strangford Lough

**2.5** Between Dublin Bay and the entrance of Strangford Lough, comparatively few dangers are to be found E of a line joining the points of the bays and inlets which indent the coast. The 10m curve follows the direction of the coast between the salient points and nowhere lies more than 3.8 miles seaward of a line joining these points. Rockabill is the only off-lying danger seaward of the 10m curve.

**Lambay Island** (53°29'N., 6°01'W.) lies about 2.5 miles off the coast, 7 miles NNE of the Howth Peninsula. The Nose, the E extremity of Lambay Island, is 55m high, and Knockbane, the summit, is 123m high. The W side of the island is low and rocky with several off-lying dangers. The channel between Lambay Island and the mainland has a least depth of 9.7m except for Burge Bar, with a least depth of 7.6m, about 0.8 mile W of the W extremity of the island. The channel is safe for vessels of moderate draft provided they keep in the fairway.

**Anchorage.—**Small vessels may obtain anchorage in Swallow Cove, on the N side of Lambay Island, in 7.3 to 9.1m, in moderate weather with S winds. The anchorage is sheltered from W, through S, to ESE. With E winds, the best roadstead is on the W side of the island abreast a boat harbor, 0.2 mile offshore, in a depth of 9.1m.

In fine weather, vessels may anchor temporarily anywhere between **Howth** (53°23'N., 6°04'W.) and Lambay Island.

**2.6** Rockabill consists of two steep-to granite rocks rising abruptly from the sea to an elevation of 9m, about 6 miles N of Lambay Island. A light is shown from a prominent tower, 32m high, standing on the S rock. The storehouses and dwellings at the base of the tower are also prominent.

Ardglass Bank, on which lies a wreck with a depth of 14.6m, is located 2.5 miles off the coast, about 5 miles S of the W entrance point of Strangford Lough.

Numerous wrecks lie in the vicinity of the banks and may be seen on the chart.

**Fundale Rock** (52°11'N., 6°20'W.), about 1 mile NE of Carnsore Point, dries and is marked by a lighted buoy close ESE.

## Carnsore Point to Rosslare

**2.7** Crossfintan Point lies about 1.2 miles NNE of Carnsore Point. Collough Rock, with a depth of 0.9m and steep-to, lies about 0.6 mile E of Crossfintan Point. Whilkeen Rock, which dries about 2.5m, lies at the outer end of a reef which partly dries, extending 0.4 mile offshore from a position 1 mile N of Crossfintan Point. Foul ground extends 0.2 mile NE and E of Collough Rock.

**Anchorage.—**Good anchorage may be obtained by small vessels in Saint Margaret's Bay, between Collough Rock and Whilkeen Rock, with the latter bearing 012°, distant 0.2 to 0.3 mile, in 5.5 to 7.3m, sand. With the wind S of W, a heavy swell rolls in.

Anchorage may be obtained, in 9.1 to 11m, in Ballytrent Bay, which indents the coast close N of Whilkeen Rock, sheltered from winds from N, through W to SW.

**Greenore Point** (52°14'N., 6°19'W.), about 3.2 miles NNE of Crossfintan Point, may be distinguished from Carnsore Point by its clay cliffs, 18m high, and by a ruined windmill and other buildings on the point. Splaugh Rock lies about 0.7 mile ESE of the point. A boat harbor, protected by a short pier, lies 0.7 mile SSW of the point. Carrick Rock, marked by a perch, lies about 0.3 mile ENE of the point. There are heavy overfalls off the point caused by the rocky uneven bottom in the vicinity.

## Rosslare (52°15'N., 6°20'W.)

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**2.8** Rosslare, about 5 miles N of Carnsore Point, is a small artificial harbor on the S side of Rosslare Bay which is formed by a breakwater connected to the shore by an open viaduct.

The port is the W terminus of the ro-ro ferries which run to Wales and France.

**Port of Rosslare Home Page**

http://www.rosslare-europort.ie

**Tides—Currents.—**A considerable scend is felt at HWS during SE gales. The range of tide is about 1.6m at springs.

In South Shear Channel, the currents set in about the directions of the channel. The NW current commences about 6 hours after HW at Dun Laoghaire and sets for about 3 hours at a velocity of 1 knot. The SE current begins about 3 hours 30 minutes before HW at Dun Laoghaire and sets for about 9 hours 30 minutes at a velocity of 2 knots.

Outside Rosslare Bay, the currents set in a general N-S direction at velocities of 2.5 to 3 knots. An eddy sets within the bay and in South Shear Channel during the latter half of the N current. Within the bay, the currents are weak.

**Depths—Limitations.—**Rosslare Harbor is entered through South Shear Channel and North Shear Channel. South Shear Channel passes S of the extensive shoal which contains Holden's Bed and Long Bank; North Shear Channel passes N and W of it.

South Shear Channel has a controlling depth of 6.7m at the entrance decreasing to 3.9 to 4.5m off the head of the breakwater. North Shear Channel has depths in excess of 11m to within 1.8 miles of the breakwater.

The least depth in the harbor is 4m. The deepest alongside depth at the berths is 10m. The ro-ro berths are situated on the inner side of the breakwater and at a ferry pier at the SW corner of the harbor. Vessels of up to 215m in length, with drafts of up to 5.2m, can be accommodated in the port.

**Aspect.—**The shores of Rosslare Bay are cliffy to about 2 miles NW of Rosslare Harbor, then gradually slope down to a strip of sandhills which form the E side of Wexford Harbor. A large flat-roofed hotel building, with a tower close SSE, stands about 2 miles NW of the harbor and is conspicuous.

The approach channels are marked by lighted buoys; a light is shown from the breakwater head. Range lights lead to the ro-ro berths in the harbor.

**Pilotage.—**Pilotage for Rosslare Harbor is not compulsory. A pilot can be obtained locally. Vessels should request pilot services 24 hours in advance.

**Regulations.—**Regularly scheduled ferry traffic has priority over other vessels.

The ETA for passing Breakwater Light should be sent to Rosslare Harbor on VHF channel 12 about 1.5 hours prior to arrival. Vessels should not approach within 0.5 mile of the breakwater light when awaiting clearance to proceed to the berth.

All vessels passing abeam of Tuskar Rock Light should report to Rosslare Harbor on VHF channel 12.

When approaching the port, all vessels should maintain a continuous listening watch on VHF channel 12 and contact Rosslare Harbor on VHF channel 12 prior to entering the port.

For landing explosives, the harbor authorities must be consulted with regard to the Explosives Act.

**Contact Information.—**Rosslare Harbour can be contacted, as follows:

1. Call sign: Rosslare Harbor
2. VHF: VHF channel 12
3. Telephone: 353-53-9157920
4. Facsimile: 353-53-8860564
5. E-mail: rosslare@irishrail.ie

**Anchorage.—**Rosslare Bay affords good shelter in all W winds from S, through W, to N, but with onshore winds it is an unsafe anchorage, though the sea is somewhat broken by the off-lying banks.

Good anchorage may be obtained by small vessels, in 7.3m, sand over clay, with the light on the end of the breakwater bearing about 180° and the old Coast Guard tower bearing 270°, or in a greater depth near Holden's Bed about 1 mile E.

Vessels are not permitted to anchor on the line of Rosslare Harbor breakwater (52°15'N., 6°20'W.) out to a distance of 0.45 mile NW, and also SE, as it interferes with ferry traffic. The area extends 0.2 mile to either side of the breakwater.

Anchorage is not permitted inside the breakwater.

**Directions.—**From a position about 1.7 miles N of Tuskar Rock, a WNW course leads to the fairway through South Shear Channel which is marked on either side by lighted buoys.

Approach from the N may be made by passing through Rusk Channel W of Blackwater Bank or passing between the N end of Lucifer Bank and the S end of Blackwater Bank. A course then steered for the light structure on the head of the breakwater bearing 195°, leads through North Shear Channel to the harbor.

**Caution.—**Shoals, with depths of less than 4.5m, extend about 0.5 mile ESE from the head of the breakwater; a 4.9m patch lies 0.3 mile ENE of the head of the breakwater.

A shoal, with a depth of 5.5m, extends 165m N of the breakwater; an extensive stony flat, with depths of 4 to 5.5m, lies about 0.3 mile farther NW. Several patches, with depths of 5.5 to 5.8m, lie between the flat and the shoal.

## Rosslare to Dublin Bay

**2.9 Wexford Harbor** (52°20'N., 6°27'W.), formed by the estuary of the River Slaney, is fronted by a bar and is almost silted up. Because of silting no vessels other than fishing vessels and small craft now use the harbor. The least depth over the bar was reported (1982) to be about 1.5m. Wharves front the town and two conspicuous church spires stand on the W bank of the river.

**Raven Point** (52°21'N., 6°21'W.) lies about 7 miles NNW of Greenore Point. North Bay lies immediately N of Raven Point, the bottom being sand, shoaling gradually toward the shore. Vessels may obtain anchorage in the bay, in 8.2m, about 1 mile offshore.

**Blackwater Head** (52°26'N., 6°19'W.), about 5 miles NNE of Raven Point, may easily be identified by the abrupt SW termination of clay cliffs and the ruins of a house on its summit. Between Raven Point and Blackwater Head, the coast is backed by undulating hills. Ballyrevan, 99m in elevation, stands about 2.5 miles SW of the head and is most prominent.

Morris Castle, 5.7 miles NNE of Blackwater Head, is identified by a conspicuous group of white houses.

**Cahore Point** (52°34'N., 6°12'W.) has a conspicuous white house on its summit. Ballygarret Roman Catholic Chapel, about 1.5 miles NW of the point, is also easy to identify. Anchorage can be taken, in a depth, of 10m about 0.5 mile N of Cahore Point with the point bearing 183°.

Currents between Raven Point and Cahore Point follow the direction of the coast, setting NNE and SSW. The current setting NNE begins about 4 hours before HW at Dun Laoghaire; the opposite begins current about 4 hours 30 minutes after HW at Dun Laoghaire. The former current attains a velocity of about 2 knots and the latter about 1.7 knots. The offshore currents commence later and set across the banks at a velocity of 3.5 knots, creating rips and overfalls.

The Ram is a spit extending S from Cahore Point. The Sluice is a small channel between the extremity of The Ram and the N end of Rusk Bank. There is a least charted depth of 4.7m in the small channel, but less water was reported in 1980.

**2.10 Rusk Channel** (52°30'N., 6°10'W.), about 0.5 mile wide, lies between the E side of Rusk Bank and the W side of Money-weights Bank. It is marked by buoys and has depths of 12.8 to 14.6m. The channel is part of the inshore coastal route.

Polduff Harbor is a small boat harbor protected by a pier maintained primarily for small craft. The harbor lies about 0.5 mile NW of Cahore Point.

Roney Point lies about 2.5 miles N of Cahore Point. In SW gales, the best sheltered anchorage will be found off Roney

Point and N of Roney Rock, which lies close off the point, in depths of 7.3 to 9.1m, about 0.5 mile offshore.

Courtown Harbor, about 5 miles N of Cahore Point, nearly dries. Vessels may obtain anchorage off Courtown, about 1 mile offshore, in depths of 9.4 to 11m, sand.

Kilmichael Point, low and rocky, lies about l0 miles NNE of Cahore Point. The coast between is moderately high. Tara Hill rises abruptly to an elevation of 251m about 3.5 miles SW of Kilmichael Point, and is very prominent.

An inshore channel runs between the W side of Glassgorman Banks and the coastal bank off Kilmichael Point.

A depth of 3.6m was reported (1986) to lie about 0.8 mile SSE of the point.

Arklow Head is located 2.2 miles N of Kilmichael Point. Arklow Rock, a conspicuous hill, 123m high, rises close SW of the head. The hill is being reduced by quarrying.

**2.11 Arklow** (52°48'N., 6°09'W.) is a small port on the S bank of the Avoca River about 1.2 miles N of Arklow Head. A large fishing fleet is based in the port.

**Port of Arklow Home Page**

http://www.arklow.ie

**Tides—Currents.—**The average rise of tide is about 0.8m.

**Depths—Limitations.—**The least depth charted in the entrance channel was 3.2m (1982). The harbor is liable to silt, particularly after a continuous SW wind and dry weather. The entrance is maintained by dredging. There are berths on the N and S sides of the river; the deepest berth has a depth of 3.5m alongside, the total working length for the N side is 300m.

Vessels of up to 2,600 dwt, 82m in length, and 4.3m draft can be accommodated in the harbor.

Roadstone Jetty, protected by a breakwater close S, extends about 230m from the coast about 1 mile S of the harbor entrance. It is a private jetty used for the loading of stone from nearby quarries. Vessels up to 3,500 dwt can be accommodated alongside. Lights are shown from the breakwater and the jetty.

**Aspect.—**The harbor is entered between two parallel piers about 55m apart. A turning basin, 122m long and 107m wide, is situated 0.3 mile above the entrance and the river shoals immediately NW of it.

A factory, with a 44m high chimney, is situated close NW of the entrance. A light is shown from a framework tower on the S pier head.

**Pilotage.—**Pilotage is not compulsory, but is recommended as local knowledge is required to enter the harbor. The pilot can be contacted on VHF channels 14 and 16. The pilot boards about 0.5 mile E of the harbor entrance.

**Contact Information.—**Arklow Harbour can be contacted, as follows:

1. VHF: VHF channel 16
2. Telephone: 353-402-32466
3. Facsimile: 353-402-31068
4. E-mail: arklowharbour@eircom.net

**Anchorage.—**Anchorage may be taken, in depths of 11 to 12.8m, 0.5 mile offshore, SE of Arklow. There is no shelter with onshore winds, and it is advisable to leave when the wind is S of SW.

**Caution.—**A submarine cable extends about l0 miles from the coast at a point about 0.2 mile N of the harbor entrance.

**2.12 Wicklow Head** (52°58'N., 6°00'W.), about 12 miles NNE of Arklow, is a bold projecting headland, 78m high. It may easily be identified by two old lighthouses on its summit, and by the white walls and buildings on the seaward slope near the present lighthouse. Wicklow Head has been reported to be a good radar target at a distance of 22 miles. A light is shown from a prominent white tower.

Off Wicklow Head, the bottom is foul, with depths of 7.6 to 9.1m, lying within 1.2 miles of it. Bray Head, bearing 345°and open E of the land S of it, leads E of the dangers.

Horseshoe is a bank of gravel and stone with depths of less than lm. The bank extends about 1.5 miles S from the head and is marked at its S end by a lighted buoy.

Wolf Rock, which dries and has foul ground in the vicinity, lies about 0.5 mile offshore, 3 miles SSW of Wicklow Head.

The currents inshore between Cahore Point and Wicklow Head set parallel with the coast. The N current commences about 3 hours 45 minutes after HW at Dun Laoghaire and has a spring velocity of about 3 knots. The opposite current commences about 1 hour 15 minutes before HW and has a velocity of 1 knot. Close inshore off Arklow, the current has a velocity of about l knot. The offshore currents are stronger and begin later.

The currents set strongly off Wicklow Head at a velocity of about 4 knots in both directions. The N current off the headland forms a weak countercurrent between the headland and Wicklow Harbor.

**2.13 Wicklow Harbor** (52°59'N., 6°02'W.) is a small port lying at the mouth of the Leitrim River about 0.5 mile NW of Wicklow Head.

**Port of Wicklow Home Page**

http://www.wicklowport.com

**Depths—Limitations.—**The maximum depths alongside the berths are 4.7 to 5.2m at HW. Vessels can lie safely aground at LW on sand and mud bottom. The least charted depth in the entrance channel is 3.2m, however silting may be present. Vessels of up to 6,275 dwt, 110m in length, and 5.2m draft can be accommodated in the harbor.

**Aspect.—**The harbor is protected by two piers which form an entrance 120m wide. A dredged channel leads into the harbor.

**Pilotage.—**Pilotage is compulsory for vessels of 100 gross tons and above. Pilots board 0.4 mile E of East Pier Light. Pilots may be requested through the local agent or the harbormaster. A notice of ETA is required prior to entry.

Wicklow Pilots can be contacted by telephone (353-404-69214 or 353-404-67652).

**Contact Information.—**Wicklow Port can be contacted, as follows:

1. VHF: VHF channels 12, 14, and 16
2. Telephone: 353-404-67455 (daytime only)
3. Facsimile: 353-404-67455

4. E-mail: wiklowport@eircom.net

**Anchorage.—**Application may be made for a mooring in the inner harbor, or craft can berth temporarily alongside East Pier or Packet Quay, but should not be left unattended. Fertilizer often blows off the quays.

It is recommended by the harbor authority that anchorage be obtained about 0.2 mile NE of East Pier head, in depths of 7.5m.

**Caution.—**A heavy swell runs into the harbor when NE and E gales occur.

An outfall pipeline has been laid extending NE for about 0.7 mile from a position that may best be seen from the chart.

**2.14 The Breaches** (53°05'N., 6°02'W.), about 6.5 miles N of Wicklow, are several openings in the coast leading to a tidal inlet. A conspicuous dark red railway bridge spans the openings.

Breaches Shoal, with a depth of 5m, lies about 1.5 miles ENE of The Breaches and is marked by a lighted buoy.

Greystones, about 4 miles WNW of The Breaches, is a resort town fronted by a shallow boat harbor.Moulditch Bank, with a least depth of 3.8m, lies about l.2 miles SE of Greystones and is marked by a lighted buoy.

**Bray Head** (53°11'N., 6°05'W.), about 2.5 miles N of Greystones, is a remarkable headland, 236m high, fronted by bold precipitous cliffs along the face of which runs a railway. The resort town of Bray, fronted by a small boat harbor which dries, is situated about 1.2 miles NNW of the head. The terraces and buildings of the town are prominent from seaward.

Great Sugar Loaf, with a conical peak 497m high, and Carrickgollogan, 272m high, with a chimney 0.5 mile NNW of the summit, are conspicuous and are located in the vicinity of Bray Head.

**Caution.—**A submarine pipeline extends about 1 mile E from a point on the shore 3.5 miles NNW of Bray Head. The seaward end of the pipeline is marked by a lighted buoy.

## Dublin Bay

**2.15** Dublin Bay is entered between Sorrento Point, about 5 miles N of Bray Head, and Baily, the SE extremity of the Ben of Howth peninsula, 5.8 miles NNE.

The port of Dun Laoghaire lies on the S side of the bay about 2 miles NW of Sorrento Point. The River Liffey flows into the head of the bay and the city and port of Dublin are situated at the mouth of the river.

Burford Bank, previously described in paragraph 2.4, lies across the approaches to the bay.

On the S side of the bay, the coast is comparatively low and backed by hills which rise to a height of 500m within 5 miles of the shore.

**Dalkey Island** (53°16'N., 6°05'W.), 24m high, lies 0.2 mile E of Sorrento Point. Foul ground, drying rocks, and shoals extend up to about 0.5 mile NNW of the island. A channel, about 230m wide, leads between the island and the mainland. The least depth in the channel is 8m; it is used by small craft.

Muglins, a rock, 6m high, lies about 0.3 mile NE of Dalkey Island. A light is shown from the rock. A channel, about 270m wide between the dangers on each side, runs between the rock and Dalkey Island. When the tidal current is strong through the channel between Dalkey Island and the mainland, small craft may use this outer channel.

Frazer Bank, with a least depth of 5.3m, extends S about 1 mile from a position 0.5 mile S of Muglins.

Bullock Harbor, 1 mile NW of Sorrento Point, is a small boat harbor which dries and is used by yachts.

Ben of Howth is a peninsula dominating the NE side of the bay. Baily, the SE extremity of the peninsula, is a bold projecting point with steep sides. A light is shown from Baily.

Rosbeg Bank, with depths of less than 5m, lies about 0.7 mile SSW of Baily. The edge of the bank is marked by a lighted buoy moored 1.5 miles SSW of Baily.

**Tides—Currents.—**The currents set N at a maximum velocity of 3.2 knots just outside of Dublin Bay from about 6 hours before HW at Dun Laoghaire to the time of HW at that place, and S at a similar velocity from about HW to 6 hours after HW.

The N current sets around Dalkey Island, circles the bay, and flows N between Rosbeg Bank and Ben of Howth. The S current sets past Ben of Howth and forms an eddy in the N part of Dublin Bay. This current also sets across the bay toward Dun Laoghaire and SE along the shore to Dalkey Island.

In the S part of Dublin Bay, the NW current begins about 6 hours after HW at Dun Laoghaire; the SE current begins about 30 minutes before HW. In the N part of the bay, and between Rosbeg Bank and Ben of Howth, the NE current begins about 3 hours after HW at Dun Laoghaire and sets for about 9 hours 30 minutes. The SW current begins at about HW at Dun Laoghaire and sets for 3 hours. There is very little current in the middle of the bay.

The currents set N and S across the entrance of the River Liffey. The currents are not strong, but the ebb may attain a velocity of 3.5 knots at springs between Poolbeg and North Bull Light.

The currents in Dublin Harbor are weak, but the freshets after heavy rains may overcome the flood currents.

**Aspect.—**The Mapas Obelisk and a ruined signal tower, 0.8 mile WSW and 0.5 mile W, respectively, of Sorrento Point; the martello tower on Dalkey Island are conspicuous on the S side of the bay.

Black Linn, 167m high, is the summit of Ben of Howth and is conspicuous from the N side of the bay.

Baily Light, a granite tower, 13m high, is also conspicuous from the SE point of the Howth Peninsula.

**Pilotage.—**Pilotage is compulsory within the Dublin pilotage district for all vessels except:

1. Pleasure craft and sail training ships.
2. Vessels with a Passenger Certificate not more than 24m loa.
3. Vessels less than 70m loa.
4. Fishing vessels less than 70m loa.
5. Vessels less than 95m loa departing for sea.

All vessels carrying hazardous cargo in bulk or ships that are not gas free are required to take a pilot.

The limits of the Dublin pilotage district are the waters of the River Liffey below the Matt Talbot Memorial Bridge (53°21'N., 6°15'W.) and the sea W of the meridian 6°W that lies between the parallels passing through Baily Light, on the N, and through Sorrento Point on the S, including all bays, creeks, harbors, and tidal and closed docks within such area.

**Baily Light**

Pilots board incoming vessels, for the ports within Dublin Bay, as follows:

1. Eastern Approach—1 mile ENE of Dublin Bay Lighted Buoy.
2. Southeastern Approach—1 mile SE of Dublin Bay Lighted Buoy.

The station and pilot boats are equipped with VHF. Vessels should make contact on VHF channel 12 when approaching the port. The vessel's ETA should be sent 12 hours before arrival and corrections may be made up to 2 hours before the time originally given. The 12-hour message should contain the following information:

1. Vessel name, call sign, and nationality.
2. Date and time of arrival and departure.
3. Last port of call.
4. Cargo (use International Maritime Dangerous Goods Code).
5. Draft.
6. Any defects.

Outbound vessels or vessels shifting berth should give at least 2 hours notice of their time of sailing to ensure the services of a pilot. The pilot station is situated on Dublin East Breakwater.

Dublin and Dun Laoghaire Pilots can be contacted on VHF Channel 12 or by telephone (353-1-8876059).

**Vessel Traffic Service (VTS).—**A Vessel Traffic Service and a Traffic Separation Scheme have been established in Dublin Bay along the E limits of the Dublin Pilotage District. Although the scheme is not IMO-adopted, Rule 10 of 72 COLREGS applies within the area.

A traffic circle has been established centered on Dublin Bay Lighted Buoy.

Radio reporting points, for contacting VTS Dublin on VHF channel 12, are established in the following positions:

1. Inbound Reporting Point A (53°17'48.0"N., 6°01'18.0"W.)—at the SE end of the inbound traffic lane of the SE approach.
2. Outbound Reporting Point B (53°17'36.0"N., 6°01'54.0"W.)—at the SE end of the outbound traffic lane of the SE approach.
3. Inbound Reporting Point C (53°21'08.4"N., 6° 01'13.2"W.)—at the E end of the inbound traffic lane of the NE approach.
4. Outbound Reporting Point D—at the E end of the outbound traffic lane of the NE approach.
5. Reporting Point I (53°20'18.0'N., 6°06'00.0"W.)—for inbound and outbound traffic approaching the E end of the dredged channel to the port.

An inshore traffic zone is established between Baily Point and the N limit of the N Traffic Separation Scheme. The S inshore traffic zone lies between Dalkey Island and the S limit of the S Traffic Separation Scheme.

An Area to Be Avoided is established in the vicinity and direction of Burford Bank and lies between the N and S Traffic Separation Schemes.

A circular anchorage area lies centered on position 53°18.8'N, 6°04.9'W with a radius of 0.5 mile. The four quadrants of the anchorage are designated No. 1 in the NW sector, No. 2 in the NE sector, No. 3 in the SW sector, and No. 4 in the SE sector.

**Directions.—**For vessels arriving from the N, the recommended track to the N pilot boarding position leads SSW, passing E of Ben of Howth and Baily Light, W of North Burford Lighted Buoy, and E of Rosberg East Lighted Buoy.

For vessels arriving from the E, or via the offshore route from the S, the recommended track to the N pilot boarding position leads WNW, passing N of Kish Bank Light, S of Bennett Bank Lighted Buoy, and N of North Burford Lighted Buoy. The track then leads WSW to the pilot boarding position, passing SE of Rosberg East Lighted Buoy.

For vessels arriving from the S, from a position E of Dalkey Island, the recommended track to the S pilot boarding position leads N, passing E of Muglins, and W of South Burford Lighted Buoy and Burford Bank.

**Contact Information.—**Dublin VTS can be contacted, as follows:

1. VHF: VHF channels 12, 13, and 16
2. Telephone: 353-1-8876070
3. E-mail: vts@dublinport.ie

## Dun Laoghaire (53°18'N., 6°08'W.)

World Port Index No. 34470

**2.16** The port of Dun Laoghaire on the S side of Dublin Bay is the Irish terminal for vehicle ferries from Holyhead, Wales. It is also a major yachting center and is used by fishing boats.

**Port of Dun Laoghaire Home Page**

http://www.dlharbour.ie

**Tides—Currents.—**Spring tides rise about 3.3m; neap tides rise about 1.9m.

**Depths—Limitations.—**The harbor is protected by two breakwaters which form an entrance 232m wide, with depths of 6 to 8m. Fairway No. 1, dredged to a depth of 5m, extends from the entrance to the ferry and ro-ro terminals in the SE part of the harbor. The ferry berth is dredged to a depth of 5.8m. St. Michael's Pier (car ferry pier) can accommodate vessels of up to 120m in length and 17m beam. Carlisle Pier is no longer in use.

Fairway No. 2 extends from the entrance to the Old Quay and Trader's Wharf, situated in the SW part of the harbor. The berths have depths of 1.5 to 2.4m alongside and are used mainly by small craft and fishing vessels.

**Aspect.—**The spires of St. Michael's Church and Mariner's Church, situated in the town, are conspicuous.

Dun Laoghaire East Breakwater Light, a granite tower, 12m high, is also conspicuous.

**Contact Information.—**Dun Laoghaire Harbour Office can be contacted, as follows:

1. Telephone: 353-1-2801130
2. Facsimile: 353-1-2808062
3. E-mail: info@dlharbour.ie

**Anchorage.—**Vessels of such deep draft as cannot enter the harbor may anchor in fine weather, in depths of 12 to 18m, about 1.5 miles ENE of the harbor entrance. The bottom, which is stiff marl with a covering of sand, affords excellent holding ground, but it is a very exposed anchorage.

*Courtesy of Donald W. Carter*

**Dun Laoghaire—West Breakwater Light**

Vessels are recommended not to anchor here except in cases of necessity, and must be prepared to leave on the first appearance of a change of wind E.

In order to stay clear of the numerous yacht moorings, vessels may anchor in the harbor only within the designated triangular area which lies about 0.3 mile SW of the entrance and may be seen on the chart.

**Caution.—**Vessels must keep clear of the entrance and Fairway No. 1 when ferries are entering the port. The International Code of Signals flag hoist "MB3" is flown from St. Michael's Pier flagstaff and a high intensity quick flashing white light, situated on the roof of a red turret on the pier close to the flagstaff, is activated when ferry traffic is imminent.

Ferries normally leave their berths stern first and turn to face seaward in Fairway No. 1; three short blasts from the vessel's whistle are sounded when getting underway. Vessels leaving berth bow first are required to sound one prolonged blast when getting underway. Power driven vessels, other than fishing or pleasure craft, are required to sound one prolonged blast when approaching the harbor entrance on arrival and departure.

From April to October, numerous yacht racing marker buoys

**Dublin—City Quay**

are moored in the vicinity of the approaches to the harbor.

From 2011 through 2014 a harbor development project will see the construction of new berthing and the demolition of the ferry terminal.

## Dublin (53°21'N., 6°15'W.)

World Port Index No. 34480

**2.17** The major seaport of Dublin lies along both banks of the River Liffey at the head of Dublin Bay. The river is navigable by ocean-going vessels up to about 3.5 miles W of the entrance. Dublin is the capital and largest city in the Irish Republic.

The port is a terminal for vehicle and passenger ferries from United Kingdom ports. There are facilities for tanker, bulk, container, and ro-ro vessels, as well as repair services, including a graving dock.

**Port of Dublin Home Page**

http://www.dublinport.ie

**Tides—Currents.—**Tides rise about 3.4m at springs and 1.9m at neaps. Strong S winds of long duration raise the water level in Dublin Bay and the River Liffey; N winds have an opposite effect.

**Depths—Limitations.—**The approach channel to Dublin is dredged to a depth of 7.8m at LW.

The harbor is protected by two breakwaters. An approach channel leads from the pilot boarding area over the bar and through the entrance. The channel, which is about 215m wide and dredged to a depth of 7.8m, follows the river for 3.5 miles within the harbor entrance.

The Ringsend Toll Bridge spans the Liffey river approximately 2.75 miles within the harbor entrance. This lifting bridge has a central lifting span of 30m in length with a 2.2m vertical clearance when closed and unrestricted vertical clearance limit when open. A 20-minute notice is required via VHF channel 12 or 13 as the bridge is not permanently manned. Bridge openings between 0700-0930 and 1600-1900 should be avoided. A 4-knot speed limit applies in all basins throughout the port and in the river W of the Port Operations Center, Eastern Breakwater.

Above the Ringsend Toll Bridge, there are general berths along both banks of the river, with dredged depths of 4.5 to 6.5m alongside.

Below the bridge, the principal berths on the N side of the river include Western Oil Jetty and Eastern Oil Jetty.

Vessels of up to 264m have been accepted in the port. Draft restrictions vary with the state of tide; drafts between 10.2 to 10.5m are subject to the harbormaster's approval. Vessels with drafts of up to 7m can enter at any state of the tide.

Tankers approaching maximum draft are advised to arrive off Dublin harbor about 1 hour before HW. For berthing information refer to the table titled **Port of Dublin—Berth Information.**

**Aspect.—**Two conspicuous chimneys, 210m high, stand close together in the vicinity of the electricity generating station on the S bank about 1.5 miles above the harbor

*Courtesy of USCGC CAMPBELL*

**North Bull Light**

*Courtesy of USCGC CAMPBELL*

**Poolbeg Light**

entrance. Red aeronautical lights are shown from the top of the chimneys at a height of 85m.

A gasometer tank, 70m high, may be seen on the S bank about 3.2 miles above the harbor entrance.

Two chimneys, 78m high, are conspicuous in the vicinity of the power station on the S bank, about 2 miles above the harbor entrance.

North Bull Light, 15m high, standing at the head of the N breakwater, is conspicuous.

Poolbeg Light, 20m high, stands at the head of the S breakwater.

The container transporter cranes situated at the container terminal on the N side of the channel, about 1.2 miles above the entrance, are conspicuous.

North Bank Light, marking the N side of the channel, is situated 0.9 mile W of the entrance. The approach channel is marked by lighted buoys.

**Port of Dublin—Berth Information**

| Berth No. | Length | Depth | Maximum Vessel | | | Remarks |
|---|---|---|---|---|---|---|
| | | | LOA | Draft | Beam | |
| **Alexandra Quays West** | | | | | | |
| 29, 30, and 31 | — | 9.8-10.2m | — | — | — | Continuous length of 382m. Breakbulk. |
| 38 and 39 | — | 10.0m | — | — | — | Continuous length of 153m. |
| 40 | 148m | 10.0m | — | — | — | Continuous. |
| **Dublin Ferry port Terminal** | | | | | | |
| 50 | 380m | 9.0-11.0m | — | — | — | Ro-ro and passenger. |
| 50a | 180m | 11.0m | — | — | — | Ro-ro and passenger. |
| **MTL Container Terminal** | | | | | | |
| 41 | 160m | 8.5-11.0m | — | — | — | General. |
| 42, 43 and 44 | — | 8.5-11.0m | — | — | — | Continuous length of 318m. Containers. |
| 45 | 197m | 8.5-11.0m | — | — | — | Containers. |
| **Ocean Pier** | | | | | | |
| E36 and 37 | — | 9.7m | 137m | — | — | Continuous length of 318m. Breakbulk. |
| S35 | 134m | 9.5m | — | — | — | Breakbulk |
| W32 | — | 9.5m | — | — | — | Continuous length of 406m. Containers. |

| Port of Dublin—Berth Information | | | | | | |
|---|---|---|---|---|---|---|
| Berth No. | Length | Depth | Maximum Vessel | | | Remarks |
| | | | LOA | Draft | Beam | |
| W33 | — | 9.5m | — | — | — | Continuous length of 406m. Containers and cruise . |
| W34 | — | 9.5 | — | — | — | Continuous length of 406m. Breakbulk. |
| **South Bank Quay** | | | | | | |
| 46 and 47 | — | 11.0m | — | — | — | Continuous length of 366m. Scrap metal and bulk. |
| **Terminal 1** | | | | | | |
| 49 | 215m | 11.0m | — | — | — | Ro-ro and passenger. |
| **Terminal 2** | | | | | | |
| 51 | 193m | 8.0m | — | — | — | Ro-ro and passenger. |
| 51a | 175m | 8.0m | — | — | — | Ro-ro and passenger. |
| **Terminal 3** | | | | | | |
| 18, 19, and 20 | — | 7.0m | 250m | 11.5m | — | Continuous length of 308m. Ro-ro and passenger. |
| 21 and 22 | — | 7.0m | — | — | — | Continuous length of 235m. Ro-ro and passenger. |
| 24 and 25 | — | 7.0m | — | — | — | Continuous length of 281m. Ro-ro and passenger. |
| **Terminal 5** | | | | | | |
| 52 | 96m | 7.0m | — | — | — | Ro-ro, passenger, and fast ferries. |
| 53 | 135m | 7.0m | — | — | — | Ro-ro, passenger, and fast ferries. |
| **Tanker Berths** | | | | | | |
| **Dublin Liquid Storage Terminal** | | | | | | |
| No. 1 Oil Jetty W | 206m | 9.3m | 190m | — | 28m | Aviation fuel, clean products, and dirty products. |
| No. 2 Oil Jetty E | 220m | 9.7m | 190m | — | 28m | Aviation fuel, clean products, and dirty products. |
| No. 3 Oil | 210m | 9.8m | 170m | 9.5m | 28m | Aviation fuel, LPG, clean products, and dirty products. |
| No. 4 Oil | 162m | 6.5m | 100m | 16m | 6.0m | Aviation fuel, LPG, clean products, and dirty products. |
| **ESB Poolbeg Power Station** | | | | | | |
| 48 | 317m | 10.6 | — | — | — | Closed. |

**Pilotage.—**Pilot requests should be made between 0900-1700 Monday through Friday, as early as possible. Ordering pilots outside this time period should be made through the Dublin VTS (see paragraph 2.15 for VTS contact information).

**Contact Information.—**Dublin Pilots can be contacted, as follows:

1. Call sign: Dublin Pilots
2. VHF: VHF channel 12
3. Telephone: 353-1-887-6059

**Regulations.—**All vessels navigating in the dredged channel across the bar between Poolbeg Light and Buoy No. 1 should exercise special care to avoid a passing situation between Buoy No. 3 and Buoy No. 4. Vessels approaching from opposite directions should establish the point at which they are likely to pass, in order that action appropriate to the circumstances might be taken to avoid a passing situation between Buoy No.

*Courtesy of USCGC CAMPBELL*

**Dublin—Port Radio/Radar Station**

3 and Buoy No. 4.

**Anchorage.—**The outer anchorage, 1 mile in diameter, is centered in position 53°18.8'N, 6°04.9W, in depths of 9 to 17m, E of Dun Laoghaire harbor entrance, but this anchorage is directly exposed to E winds.

**Directions.—**See paragraph 2.15, Dublin Bay—Directions, for further information.

**Caution.—**The channel inside the breakwaters can accommodate only one larger vessel at a time. Due to silting, buoys are adjusted periodically to mark the position of the channel and may not match the charted positions.

Many yacht racing buoys, which are small and difficult to see, are located near the harbor entrance.

Visibility in the harbor may be decreased by morning or evening fog.

## Dublin to Carlingford Lough

**2.18 Ireland's Eye** (53°24'N., 6°04'W.) is a conspicuous small reef-fringed island lying about 1 mile N of the N coast of Ben of Howth. The island rises steeply on its N side to an elevation of 65m and has a high rock lying off its NE extremity.

A prominent martello tower stands at the NW extremity of the island.

Anchorage can be taken by small vessels during offshore winds, off the NW end of Ireland's Eye, in 7.3m, with the martello tower bearing about 148°.

**Howth Harbor** (53°23'N., 6°04'W.), situated on the N side of Ben of Howth peninsula, is a fishing port protected by breakwaters. There are also extensive facilities for small craft and yachts. There are depths of 3.9 to 4.8m alongside the berths and a depth of 2.6m in the marina area.

The harbor can be approached from E by a passage lying between the N coast of Ben of Howth and the shoals extending S from Ireland's Eye, or from N through Howth Sound which lies between the W side of Ireland's Eye and a spit extending from the mainland. The shoals extending S from Ireland's Eye are marked by lighted buoys. There is a least charted depth of 4m in the entrance and 3.4m in the harbor. The harbor monitors VHF channels 11 and 16.

The coast between Howth Harbor and Shenicks Point, about 10 miles N, is of moderate elevation fronted by sand dunes and a sandy beach broken by the entrances to several inlets.

Baldoyle Creek, Malahide Inlet, Rogerstown Inlet, and Rush Harbor are located about 2 miles W, 4 miles NW, 7 miles NNW, and 8 miles N, respectively, of Howth Harbor, are all used by small craft and yachts.

A conspicuous hotel building stands on the S side of Malahide Inlet. A prominent chapel spire, 50m high, stands close W of the hotel and a square towered castle and the red roofs of several houses closeby, stands about 0.7 mile SE of the hotel.

A conspicuous hospital, consisting of a group of red buildings with an illuminated clock tower, stands on the S side of Rogerstown Inlet. A prominent tower, 34m high, stands at an elevation of 60m close E of the hospital.

Several martello towers stand along the coast and are shown on the chart.

An aeronautical light situated at the airport about 4.5 miles

*Courtesy of USCGC CAMPBELL*

**Dublin—Ringsend Toll Bridge**

*Courtesy of Donald W. Carter*

**Howth Breakwater Light**

WSW of the entrance to Malahide Inlet is visible from seaward.

Lambay Deep lies with its S end in the position (53°26'N., 5°48'W.). By continuous sounding, this deep might give warning of approach to the coast, the depths W being less than 50m.

**Red Island** (53°35'N., 6°06'W.), a former islet now joined to

the mainland, is located 1.7 miles NNW of Shenicks Point. A small boat harbor formed by a pier, lies on the W side of Red Island.

**2.19** The **Skerries Islands** (54°14'N., 4°42'W.) consists of three islets. Colt Island, 11m high, St. Patrick's Island, 14m high, and Shenick's Island, 10m high, lie about 0.5 mile E, 1 mile E, and 1 mile SE respectively, of Red Island. There is a narrow passage between St. Patrick's Island and Colt Island which is used by small craft and has a least depth of 3m. The prominent ruins of a church stand near the SW end of St. Patrick's Island. Foul ground lies between Shenick's Island and the mainland.

Lambay Island and Rockabill are described with off-lying dangers in paragraph 2.5 and paragraph 2.6, respectively.

The currents in the vicinity of the Skerries Islands are irregular, but follow the directions of the channel between Saint Patrick's Island and Rockabill. The current setting NNW begins about 6 hours 15 minutes after HW at Dun Laoghaire and the opposite current at about the time of HW. The spring velocity in both directions varies from 1 knot to 1.5 knots.

The currents between the Skerries Islands and Carlingford Lough, about 25 miles N, follow the direction of the coast, but are weak, especially in Dundalk Bay, although a velocity of about 1 knot may be attained off the salient points. The times at which they begin probably vary considerably, but in general, the current starts to set from the Skerries Islands toward Carlingford Lough about 1 hour after HW at Dun Laoghaire and in the opposite direction about 15 minutes before HW at Dun Laoghaire.

The coast N of the Skerries Islands is of moderate elevation and must be approached with caution. Deep-draft vessels should not approach in depths of less than 18m in clear weather or 47m in poor visibility.

**Balbriggan Harbor** (53°37'N., 6°11'W.), about 3.2 miles NW of Red Island, is a small fishing boat and small craft harbor. Cardy Rocks, which dry, are located 0.5 mile offshore about 1.2 miles N of Balbriggan and are marked by a beacon.

A conspicuous water tower on pillars stands on the S side of the River Nanny, about 4.2 miles NNW of Balbriggan.

An aeronautical light is shown from a chimney, 107m high, standing about 8.5 miles NW of Balbriggan.

**2.20** **Drogheda Harbor** (53°43'N., 6°21'W.) is a small port situated on the River Boyne about 3 miles above the mouth.

**Port of Drogheda Home Page**

http://www.droghedaport.ie

**Tides—Currents.—**At Drogheda, spring tides rise 4m and neap tides rise 2.3m. North winds decrease predicted heights while S winds increase them.

The currents in the river are weak, but the ebb may set fairly strongly after heavy rains.

**Depths—Limitations.—**There are depths of 1.4 to 2.4m alongside the town berths at MLWS. All vessels ground on soft level mud at LW. There is a dolphin petroleum berth situated on the S bank of the river, 0.4 mile E of Boyne Viaduct.

Vessels of up to 3,200 dwt, with a maximum length of 95m, can enter the River Boyne at spring tides. Vessels over 100m in length must obtain port approval prior to entry.

Tom Roe's Terminal, located 1.2 miles E of the Boyne Viaduct is the port's deep water berth. Located on the N bank, it has a single berth, 160m long with depths alongside of 6m. There is a turning basin for vessels up to 130m close W of Tom Roe's Terminal.

The depth over the bar on the leading line is dredged to 2.2m.

**Aspect.—**The river is entered over a bar between North Bull and South Bull which are drying sand banks extending seaward. The channel is about 0.1 mile wide, but narrows to almost half that width about 0.5 mile within the entrance.

A conspicuous castellated tower, known as Maiden Tower, stands on the S side of the river. A small obelisk known as Lady's Finger stands close W of the tower. Two conspicuous chimneys, 78m high, stand at a cement factory on the N side of the river about 0.5 mile E of the town. Smoke from the chimneys is often visible from a considerable distance seaward.

Range lights, situated on the S side of the river, indicate the approach over the bar to the entrance. The channel in the river is marked by lighted beacons and perches. The Boyne viaduct has a railway over the river near the E end of the Drogheda. The viaduct has a vertical clearance of 24m and a clearance of one meter should be allowed when calculating the air draft.

**Pilotage.—**Pilotage is compulsory. A lookout is kept at the pilot station near North Light, when vessels are expected, from 3 hours before until 1 hour after HW. The pilot can be contacted on VHF channels 11 and 16. Pilots board 1 mile ENE of Aleria Light, in position 53°43.5'N, 6°11.8'W.

Inbound vessels report, as follows:

1. Position 53°43'17"N, 6°14'15"W.
2. Position 53°43'32"N, 6°16'54"W.

Outbound vessels report, as follows:

1. Position 53°43'06"N, 6°19'29"W.
2. Position 53°43'32"N, 6°16'54"W.

The vessel's ETA should be sent 24 hours and 12 hours in advance, with any amendments being forwarded up to 2 hours before ETA.

Drogheda Pilots can be contacted by telephone (353-41-9826520 or 353-41-6852165).

**Signals.—**Three shapes by day or three red lights at night, displayed vertically, indicate it is unsafe to cross the bar and the port is closed.

**Contact Information.—**Drogheda Harbormaster can be contacted, as follows:

1. Telephone: 353-41-9838378
   353-41-9838385 (after hours)
   353-86-2547827 (mobile)
2. E-mail: harbourmaster@droghedaport.ie

**Anchorage.—**Vessels awaiting the tide will find good anchorage, in depths of 7 to 9m, blue clay, about 1.5 miles seaward of the bar.

**Caution.—**Vessels are cautioned against approaching the shore in the vicinity of Aleria Light closer than 1.5 miles, particularly in weather conditions involving onshore winds.

**2.21** **Clogher Head** (53°48'N., 6°13'W.) is a bold rocky promontory. Two Coast Guard huts are prominent E of Clogher

Head.

**Port Oriel** (53°48'N., 6°13'W.) is a small cove, which dries, and is protected by a breakwater lying on the N side of Clogher Head. It is used by fishing boats and small craft.

**Dunany Point** (53°52'N., 6°15'W.), about 4 miles N of Clogher Head, is of moderate height, and a small lookout hut at the top of the cliff above the point is conspicuous from seaward. An isolated tower 2 miles inland, about midway between Clogher Head and the point, is conspicuous. Prominent landmarks include a spire surrounded by trees about 1.7 miles NE of the tower and a church on the summit of the rising ground, about 0.7 mile WSW of the point.

A drying rock lies about 0.5 miles ENE of the point. Dunany Shoals, with a least depth of 1.8m, lies N of the point and extends to Dundalk Patch, which is marked by a lighted buoy moored about 3.5 miles NE of the point.

Dundalk Bay is entered between Dunany Point and Cooley Point about 8 miles NE. It is mostly foul and shallow with an irregular bottom. Several rocks lie off Cooley Point including a pinnacle with a depth of 0.3m, which is marked by a lighted buoy moored 1.7 miles SE of the point.

The S and W sides of the bay are flat, but the N side rises to heights of over 600m close inland.

**2.22 Dundalk** (54°00'N., 6°24'W.) is a small port lying on the Castletown River at the head of Dundalk Bay. The quays are situated on the S bank of the river.

**Tides—Currents.—**Spring tides rise about 4.5m while neap tides rise about 2.6m.

**Depths—Limitations.—**The channel through the river is confined for most of its distance by training walls which cover at HW. A stretch of the channel close E of the town is only 60m wide and has charted depths in places of 0.2m. Navigation is restricted to the period around HW and vessels lie alongside the quays partly waterborne at LW.

Vessels of up to 3,200 dwt, with lengths of up to 120m and drafts of up to 5m, can be accommodated in the port at springs; vessels with drafts of up to 4m may enter the port at neaps.

**Aspect.—**The tall spire of Dundalk Church is conspicuous.

Pile Light is shown from a prominent structure consisting of a white house on red piles at the entrance to the river on the E side. Leading marks for the entrance to the river are displayed from the superstructure.

The entrance to the river and channel are marked by lighted buoys, lighted beacons, and beacons.

**Pilotage.—**Pilotage is compulsory. The pilot boards about 1.5 miles SSE of Pile Light.

**Contact Information.—**Dundalk Pilots and Port can be contacted, as follows:

1. Telephone: 353-42-9334096
2. Facsimile: 353-42-9335481
3. E-mail: dundalkport@eircom.net

**Anchorage.—**Anchorage may be taken, in depths of 7 to 8m, about 2 miles SE of Pile Light.

## Carlingford Lough

**2.23 Carlingford Lough** (54°03'N., 6°08'W.) is located about 5 miles N of Dundalk Bay and extends inland for about 8 miles. It is entered between **Ballagan Point** (54°00'N., 6°06'W.) and Cranfield Point, 2 miles NE. In clear weather, the lough can be easily identified by its low entrance framed between mountains on each side.

The entrance is almost entirely blocked by rocks and shoals extending across the mouth of the lough.

**Hellyhunter Rock** (54°01'N., 6°02'W.), with a least depth of 1.4m, lies about 1.2 miles SE of Cranfield Point and on the outer part of the foul ground which extends from that point. These dangers are marked by a lighted buoy moored about 1.5 miles SE of Cranfield Point.

Ballagan Spit, most of which dries, extends about 1 mile E from Ballagan Point.

Limestone Rocks extend about 1.2 miles NE from the W shore of the lough about 0.5 mile within the entrance. Some of the rocks dry 2.1m and others at LW, forming a natural breakwater to the anchorage N of them.

**Haulbowline Rocks** (54°01'N., 6°05'W.), which dry nearly 1.2m, form the W side of the entrance channel and lie about 0.5 mile WSW of Cranfield Point. A light is shown from a granite tower on the E rock.

The Breast, with a least depth of 1.8m, and Morgan Pladdy, with a depth of 1.3m, lie on an extensive shoal in the middle of the entrance, about 0.6 mile and 0.3 mile, respectively, SSE of Haulbowline Rock Light.

Block House Island, with a ruined house on it, lies on an extensive rocky flat which dries, about 0.3 mile WNW of Haulbowline Rocks.

**Soldiers Point** (54°02'N., 6°05'W.) is located about 0.7 mile NW of Cranfield Point. A gravel spit, which dries, extends about 0.3 mile SE from the point.

**2.24 Greencastle Point** (54°02'N., 6°06'W.) is located about 1 mile NW of Soldiers Point. The shore between is fronted by a flat which dries out to a distance of about 0.3 mile and is steep-to. A prominent ruined castle stands at the point.

New England Rock, with a depth of 2.3m, and Vidal Rock, with a depth of 1.7m, lie about 0.2 mile S and 0.4 mile SW of Soldiers Point.

Green Island, 2.7m high, lies about 90m within the S extremity of some rocky ledges, which dry in places, lying up to 0.5 mile S of Green Castle Point. The island is a bird sanctuary, with dense colonies of terns in the mating season.

Carlingford Cut, the main entrance channel, lies between the foul ground off Cranfield Point and the shoals surrounding Limestone Rocks. A fairway through the cut is dredged to a depth of 6.3m. It is marked by lighted buoys on each side and indicated by range lights. A lighted buoy, moored about 3 miles SSE of Cranfield Point, marks the approach to the cut.

It is reported that the leading marks are not easily visible from seaward until Hellyhunter Lighted Buoy has been passed.

Hoskyn Channel is entered about 1 mile SW of Carlingford Cut between Ballagan Spit and The Breast. The channel then leads between Haulbowline Rocks and Morgan Pladdy and joins the main entrance fairway. The fairway through Hoskyn Channel is 0.1 mile wide at its narrowest part and has a least depth of 5.6m. This channel is not buoyed and is used only by small craft.

Greenore Point is located about 2.5 miles NW of Ballagan Point. The tower of a disused light, 12m high, is prominent.

The channel within the lough passes through deep water for

**Carlingford—King John's Castle and the Thomond Bridge**

about 1 mile from the inner entrance of Carlingford Cut to the outer entrance of a fairway which leads past Greenore Point. This fairway passes over a bar between numerous rocks and shoals and is marked by lighted buoys; it is reportedly (2006) dredged to a depth of 5.6m over a width of 80m and is tortuous. From the inner end of the fairway, about 1 mile NW of Greenore Point, the channel continues NW for about 2 miles through deep water between the sandbanks extending from both shores to the outer entrance of the dredged fairway leading to Warrenpoint.

**Winds—Weather.—**The mountains in the vicinity of Carlingford Lough subject the lough to sudden gusts of wind, especially those from between W and NW.

**Tides—Currents.—**At Cranfield Point, the tide rises about 4.8m at MHWS and 4.3m at MHWN.

The currents are barely perceptible about 1 mile outside the entrance of the lough. In the entrance, the flood begins about 5 hours 30 minutes before HW at Dun Laoghaire and the ebb shortly before HW at Dun Laoghaire. The spring velocity in both directions in Carlingford Cut is about 3.5 knots.

The spring velocity in the entrance and outer part of Hoskyn Channel is about 2.5 knots in both directions, increasing to about 4.5 knots S of Haulbowline Rocks. This latter velocity is also attained E of Haulbowline Rocks above the junction of Hoskyn Channel and Carlingford Cut.

The currents follow the direction of Carlingford Cut, but set across Hoskyn Channel.

The currents off Greenore Point begin at about the same times as those in the entrance, but become gradually later farther N in the lough. The currents attain a velocity of 5 knots off Greenore Point decreasing to about 1.5 knots off Carlingford and 1 knot at the head of the lough.

**Pilotage.—**Pilotage is compulsory in Carlingford Lough. Vessels should send a request for pilotage 24 hours in advance. Vessels bound for Warrenpoint should report on passing Hellyhunter Lighted Buoy and Buoy No. 23. Pilots maintain a listening watch on VHF channel 12. Pilots board at Hellyhunter Lighted Buoy. This station also supplies pilots for Greenore.

**Anchorage.—**About 1.5 miles within the entrance of Carlingford Lough, and NW of Sheep Rock, protected from the effects of S gales by Limestone Rocks, is a clear open space affording secure anchorage to large vessels. The tidal currents here are weak, running at a velocity of about 1.5 knots. The holding ground is good, and although with S gales a little swell may be experienced at HW, it quickly subsides with the falling tide.

A good berth is with Block House Island in range with Haulbowline Light, bearing 110°, and Green Island in range with Greencastle Point, bearing 002°, in about 12.8m, sand and shells; or nearer Greenore Point, in Firemount Road, in 18.3 to 21.9m, but here a vessel would tend to obstruct vessels passing in or out. This is the quarantine anchorage.

Small vessels can obtain good anchorage, in a depth of 6.4m, about 0.1 mile offshore in the narrow channel between the ledges N of Green Island and Greencastle Point. As there are several dangers in the approach to this anchorage, it should only be used by those with local knowledge.

Anchorage for small vessels lies NNW of Greenore Point, in 7.3 to 11m, with Greenore Light bearing about 160°, and Green Island showing between Carlingford Cut range lights, bearing about 104°. The bottom is rocky and foul, and the tide rips keep a vessel continually swinging at anchor.

Vessels that can ground without injury may anchor anywhere in Rostrevor Bay, or off Warren Point, and lie on a bottom of soft mud, partly waterborne.

In the deep channel of the lough extending up to Killowen Point, there is room for a large number of vessels to lie at anchor, in 7.3 to 21.8m, with excellent holding ground. Vessels of moderate draft can only get here near the time of HW, having to pass over the bar between Watson Rocks and Stalka Rock.

**Directions.—**In clear weather, Carlingford Lough can be readily recognized by the mountains in the vicinity and by Haulbowline Light situated prominently in the entrance. It is

recommended that vessels from seaward approach by way of the sea buoy. In poor visibility, vessels should not approach within a depth of 25m until certain of their position.

From the vicinity of the sea buoy, a range on the NE side of the entrance to the lough leads through Carlingford Cut. On entering the red turning sector of Haulbowline Light, the fairway leads WNW between the lighted buoys and into the inner channel.

**2.25 Greenore Harbor** (54°02'N., 6°08'W.) (World Port Index No. 34560) lies on the S side of the lough, close W of Greenore Point. A regular container ferry service uses the port. The port is privately owned and can be contacted by VHF on channels 12 or 16.

The harbor consists of a quay facing NW protected by a detached breakwater lying about 105m NW of it. There are two berths which can accommodate vessels of up to 3,000 dwt. Larger vessels may be accommodated, grounding as necessary. The minimum charted depth alongside the quay is 4.3m.

Pilotage is compulsory. The pilot boards at Hellyhunter Lighted Buoy.

**2.26 Carlingford** (54°02'N., 6°11'W.) is situated on the SW side of the lough about 2 miles NW of Greenore Point. It is approached from N over Carlingford Bank. The ruins of an old castle at the N end of town are prominent. The port is currently closed to commercial operations.

The harbor, which is enclosed by piers forming an entrance 180m wide, dries and is mainly used by small craft and pleasure boats. Depths alongside the quays are 2.7 to 3.4m at MHWS. A marina lies 0.5 mile NNW of the harbor. King John's Castle (ruins) is situated close W of Carlington Quay.

**2.27 Warrenpoint** (54°06'N., 6°15'W.) is a small port situated at the mouth of the Newry River at the head of Carlingford Lough. The entrance channel, which is marked by lighted buoys and indicated by a range, is dredged to a depth of 5.4m. A least depth of 4.8m has been found in the channel.

**Port of Warrenpoint Home Page**

http://www.warrenpointharbour.co.uk

The mean spring range is 4.4m; the mean neap range is 2.4m. The harbor is subject to sudden gusts of wind when there are strong winds from WNW owing to the effect of mountains on each side of the upper lough.

There is a total of 750m of berthing space at the quays at the New Port. There are seven berths, with four general cargo berths, dredged to a depth of 5.4m alongside; a ro-ro berth, dredged to a depth of 5.4m alongside; and two container berths, dredged to a depth of 7.5m alongside.

The port can be contacted by VHF.

## Carlinford Lough to Strangford Lough

**2.28** The coast between Cranfield Point and Dundrum Bay about 13 miles NE, should not be approached within 2 miles or into depths of less than 15m. It is backed by the imposing summits of the Mourne Mountains; Eagle Mountain, 631m high, is prominent and rises about 7 miles N of Cranfield Point. Slieve Donard, 848m high, is the highest and most conspicuous peak and stands about 6.7 miles ENE of Eagle Mountain.

A radio mast, 482m high, on the summit of Slievemartin, about 6.5 miles NW of Cranfield Point, is reported to be conspicuous from seaward. A television mast on Aughrin Hill, 0.7 mile NE of Knockree, is reported to be prominent.

**Kilkeel Harbor** (54°04'N., 5°59'W.) is a small fishing port lying 3.2 miles NE of Cranfield Point. The harbor is protected by breakwaters which form an entrance about 400m wide, with a dredged depth of 1.0m.

Tides rise about 5.3m at MHWS. The harbor has facilities for fishing vessels and affords excellent shelter for small craft, but is liable to silt.

A light is shown from the head of the S breakwater; a tower standing on the E side of the harbor about 240m NW of the light is prominent from seaward.

**Annalong** (54°06'N., 5°54'W.), about 4.5 miles NE of Kilkeel, is a small harbor protected by a breakwater. The harbor dries and is used by small craft and fishing boats. A light is shown from the head of the E breakwater.

Dundrum Bay lies about 6 miles NE of Annalong. The W side of the bay is bordered by steep slopes which rise to a height of over 800m within l.5 miles of the coast. **Slieve Croob** (54°20'N., 5°58'W.), 531m in elevation, is prominent from all parts of the bay.

**Newcastle** (54°12'N., 5°53'W.), lying on the W side of the bay, is a small harbor which dries and is protected by breakwaters; it is used by only small craft. A hotel building in the town is conspicuous.

**Dundrum** (54°15'N., 5°50'W.) is a small tidal harbor lying at the head of the bay. It is reported (1988) that the port is no longer used commercially.

**Caution.—**The transshipment of cargo between petroleum vessels occasionally takes place in the bay. Vessels engaged in transfer of cargo operations may be at anchor, however a wide berth should be given.

Ballykinlar firing range area, marked by buoys, is situated in the N part of the bay.

**2.29 Saint John's Point** (54°13'N., 5°40'W.), a low promontory, is the E entrance point of Dumdrum Bay. A light is shown from a prominent tower, 40m high, standing on the SE side of the point.

A wreck, with a depth of 14.6m, lies about 3 miles ENE of Saint John's Point on the N part of Ardglass Bank.

Killough Bay lies about 1.5 miles NE of Saint John's Point. The former fishing harbor of Killough, now derelict, lies in the bay. A prominent conical hill, on which stands a tower, is located on the promontory between Killough Bay and Ardglass Harbor, about 1.5 miles NE.

**2.30 Ardglass Harbor** (54°16'N., 5°37'W.), a busy fishing port, is situated about 3 miles NE of Saint John's Point. The harbor is situated in a rocky inlet, sheltered by South Pier, a breakwater which extends NE from the S entrance point and has a high wall and quays on its inner side.

**Depths—Limitations.—**The entrance, about 100m wide, with a controlling depth of 1.9m, lies between the head of the breakwater and the foul ground marked by a beacon extending

SW from Phennick Point. North Pier, a broad quay, extends from the W side of the inner harbor near the head and forms a tidal basin, which dries and is used by small craft.

There are three fish quays up to 70m in length. Fishmarket Quay has an alongside depth of 3m.

**Aspect.—**A light is shown from the head of the outer breakwater; a sector light situated at the head of the inner pier indicates the passage through the entrance.

A fish shed, consisting of a large gray building with a prominent white roof, can be seen from a considerable distance seaward.

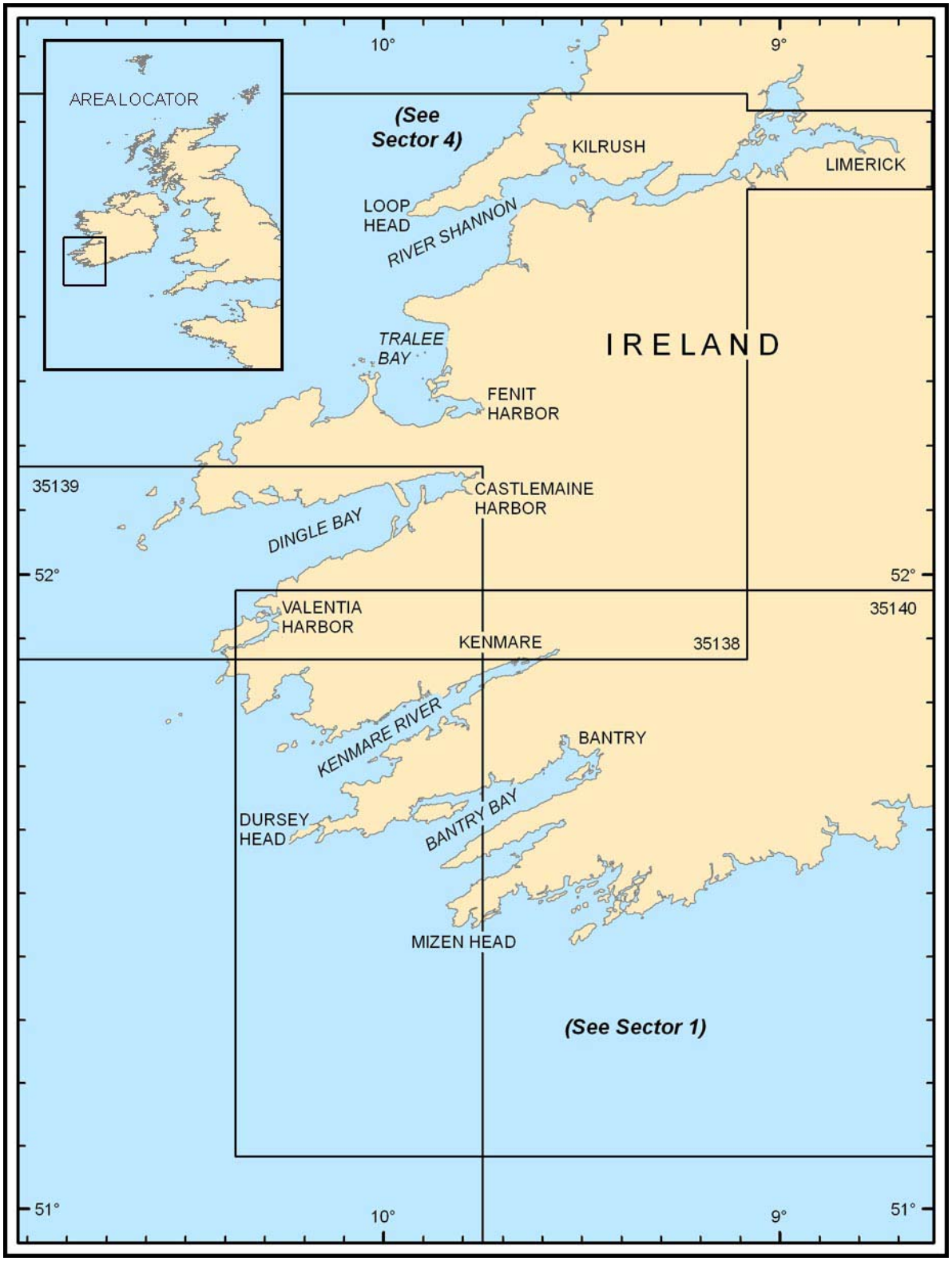
**Pilotage.—**Pilots may be obtained locally; the harbor can be contacted by VHF. Local knowledge is required at night.

**Anchorage.—**Anchorage may be taken close outside the harbor, in depths of 11 to 17m.

**Guns Island** (54°18'N., 5°33'W.) lies 0.5 mile offshore, about 2.7 miles NE of Ardglass. A square obelisk, 7m high, stands on the S end of the island.

A conspicuous water tower, 24m high, stands on the mainland coast about 0.8 mile W of Guns Island.

Killard Point, the S entrance point of Strangford Lough, is located about 1.2 miles NE of Guns Island.

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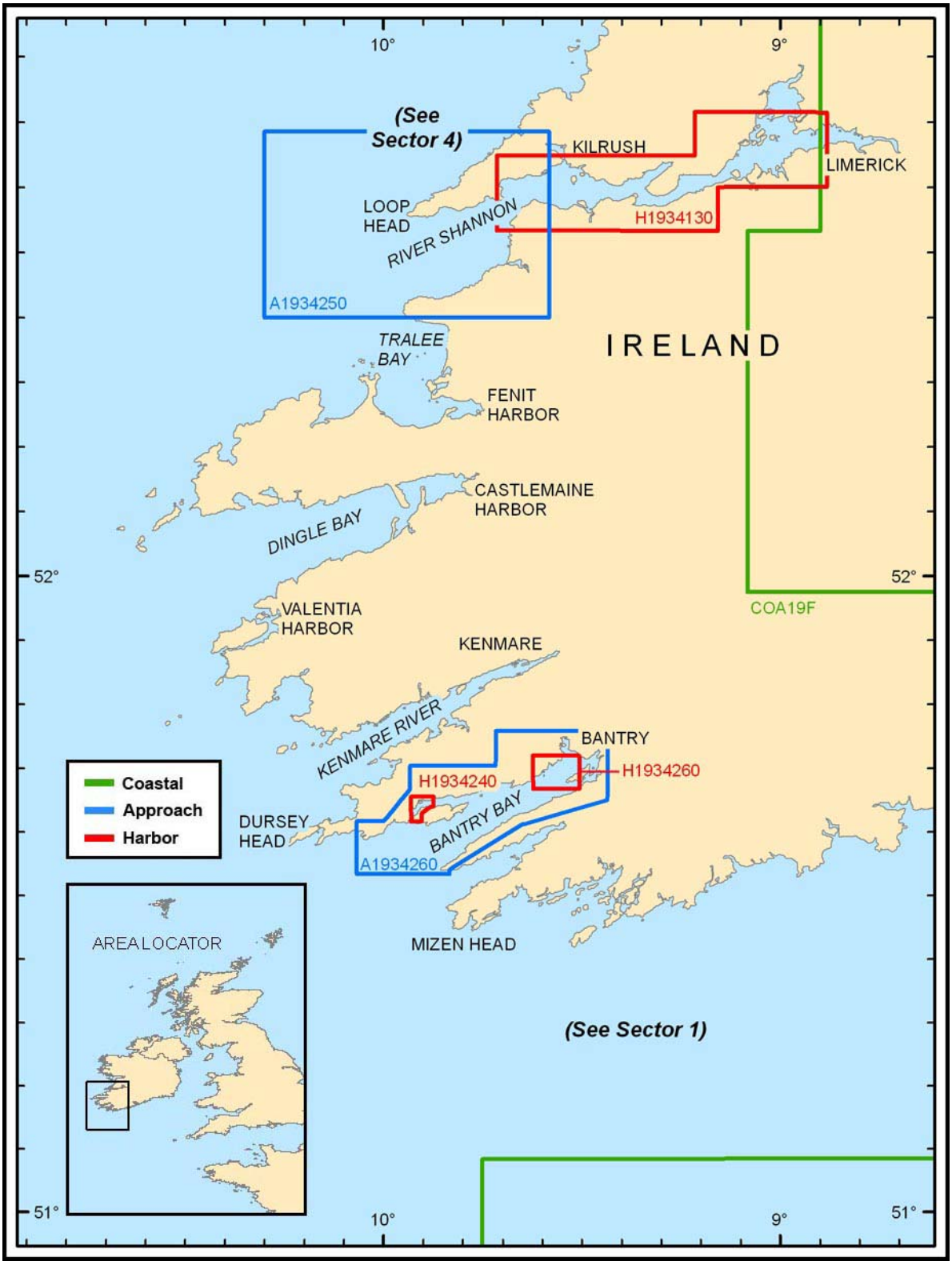
SECTOR **3** — CHART INFORMATION

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SECTOR 3 — DNC LIBRARY INFORMATION

# SECTOR 3

## SOUTHWEST COAST OF IRELAND—MIZEN HEAD TO LOOP HEAD, INCLUDING THE RIVER SHANNON

**Plan.—**This sector describes the SW coast of Ireland between Mizen Head and Loop Head (52°34'N., 9°56'W.) and includes the River Shannon. The sequence of description is from S to N.

### General Remarks

**3.1** The SW coast of Ireland between Mizen Head and Loop Head, 92 miles N, is characterized by bold mountainous peninsulas and deeply indented bays. Most of the coast is bordered by a predominantly rocky and cliffy shore, however, a few stretches of sandy beach fringe the heads of some bays and coves, and tidal flats are common. Most of the indentations are subject to heavy seas and swell from the North Atlantic, but several good partly protected anchorages are available in some of the bays as well as to leeward of the large islands.

**Winds—Weather.—**The climate on the SW and W coast is generally humid because of the prevailing SW and W winds. The summers are cloudy and relatively wet. The winters are usually windy with frequent rain; snow is rare. Although winds may be expected from any direction in any month, SW and W winds are more frequent than those from any other direction. North winds are common in April W of Ireland.

Winds reach gale force most frequently in December and January when there is an average of 10 gale days per month. The months with fewest gales are from May to August. The wind reaches gale force or more only 1 to 3 days a month in June and July while in May and August, the number of gales exceeds 3 only in the area W of 15°W.

October to January are the wettest months and April to July are the driest. Thunderstorms are not common, but over the open sea and on the SW coast, however, there is little seasonal variation and thunderstorms may occur during the passage of a cold front at any time of the year. This condition may also occur when cold polar air passes over the relatively warm sea in late autumn or winter.

Fog is most common in June off the SW and W coasts of Ireland and in July in the area W of about 15°W. The greatest frequency occurs in the summer months. Land fog generally forms at the mouths of the rivers in autumn and winter and is dense in the first hour or two after sunrise. In settled weather, the coasts are often obscured by rain or drizzle and low clouds.

**Tides—Currents.—**The tides on the SW and W coasts of Ireland are semidiurnal. The range reaches a maximum of 4.6m at Galway, gradually decreasing S. The range is appreciably more in the estuary than anywhere on the coast, and attains a height of 5.6m at springs at Mellom and Limerick. In the larger estuaries, the range may also be greater near the head of the estuary than at the entrance.

The currents off the W coast of Ireland split to set in a N direction off the N part, and S off the S part. The points at which these currents meet are subject to considerable variations, especially in and off the estuaries where they are subject to local conditions. The rates of the currents are usually moderate, but may become considerable off the salient points.

The offshore currents between The Bull and Fastnet Rock set in a NW-SE direction. The SE current begins about 2 hours 30 minutes after HW at Dover and the opposite current about 4 hours before HW at Dover. About 3 miles NW of The Skelligs, the currents setting N and S begin at about the same time as the currents just described. The spring rate in both directions is about 1 knot. Wind conditions increase or decrease this rate.

The currents up to 5 miles offshore between Mizen Head and Three Castle Head set in a NW-SE direction at a rate of about 1.5 knots at springs. Closer inshore, the currents between the heads set in a S direction when running E and NW when running W. The spring rate of the S current is about 3 knots off Three Castle Head and 4 knots off Mizen Head. The NW current attains a rate of 4 knots off Mizen Head, but is weak along the coast N and off Three Castle Head.

The currents W of Ireland are more or less rotary in a clockwise direction. It appears that the currents are weakest in WNW and ESE directions about 2 hours after HW at Dover and 4 hours before HW. Twenty to 30 miles offshore, the spring rate in the direction of the currents is probably not more than 0.8 knot with the currents becoming more rotary and weaker farther W, and more rectilinear and stronger as the coast is approached.

On the W coast of Ireland the sea level is raised by S and W winds, and decreased by winds from the opposite directions.

**Caution.—**Trawlers may be encountered off the SW coast of Ireland and in the major inlets.

Buoys moored in exposed positions off the W coast of Ireland may be off station after winter gales.

Oil platforms and exploration vessels may be encountered off the W coast of Ireland.

### Off-lying Islands and Dangers

**3.2** **The Bull** (51°35'N., 10°18'W.), the W of the islets lying W of Dursey Island, is 89m high, precipitous and steep-to; it is perforated in an E-W direction by an arched cavern, in which there is a depth of 9m. Detached rocks lie within 0.3 mile W from The Bull, terminating at Gull Rock, 6.1m high.

A light, with a racon, is shown from a white tower, 83m high, standing on the seaward side of The Bull.

The Cow, an islet, 62m high, precipitous and steep-to, and in the NE end of which there is an arched cavern, lies about 1 mile ESE of The Bull. There are passages with considerable depth which are clear of dangers in the fairway on either side of The Cow. The tidal currents in these passages are strong and cause a breaking sea at times. A vessel should not proceed through them in foggy or stormy weather.

The Skelligs, consisting of two conspicuous pinnacled rocky islets, lie about 14 miles NW of The Bull.

**Great Skellig** (51°46'N., 10°32'W.), the outer islet, rises to

**The Cow from NE**

an elevation of 214m. On the high E part, there are the remains of a monastic establishment of the early Christian Ages, consisting of a walled enclosure, solid and unbroken after 14 centuries, though built of dry masonry. Adjacent to it is a small square building of similar structure. Needle's Eye, the highest peak, rises from the NW part of the islet, and between it and the E elevated part is a deep depression, known as Christ's Valley. Washerwoman Rock, 1.8m high, lies 0.3 mile SW of Great Skellig, and 90m off its N end are two sunken rocks.

A light is shown from a white tower, 53m high, standing on the SW side of the islet. The remains of a disused lighthouse stand close NW of it.

Little Skellig, about 1.3 miles ENE of Great Skellig, is 130m high. A rock lies less than 90m from its S side. Lemon Rock, 21m high, lies about 2.2 miles NE of Little Skellig.

**3.3** The **Blasket Islands** (52°05'N., 10°40'W.) are a group of precipitous rocky islets, lying on the N side of the entrance of Dingle Bay. The depths around them are considerable and irregular, and the tidal currents are strong, causing, in unsettled weather, heavy breaking seas that are dangerous to small vessels, especially during gales from W.

Tearaght (Inishtearaght) Island, the W of the Blasket Islands, is 179m high, precipitous, and perforated by an archway which runs NE-SW. Some high, detached rocks lie about 0.2 mile W of the W extremity of the island, and two reefs, which dry 1.2 to 1.8m, lie within 0.2 mile S of them. Tearaght Rocks, 12.8m high and steep-to, lie about 0.4 mile farther W of the reefs. A light is shown from a white tower, 17m high, on the island.

Inishtooskert, the N of the Blasket Islands, lies about 3.5 miles NE of Tearaght Island; its NW side consists of nearly vertical cliffs, 171m high, sloping SE. A rock, awash, over which the sea usually breaks, lies 0.3 mile SW of the SW extremity of the island, and between them are Carrigduff and another high rock.

The channel between Inishtooskert and Great Blasket Island, about 1 mile SE, and the islets and rocks N of the latter, has irregular depths, with tide rips in fine weather over the shoaler parts. There are heavy breakers during W gales over an 18.3m bank, about 1 mile S of Inishtooskert.

Great Foze Rock, the SW danger of the Blasket Islands, lies about 3 miles SSW of Tearaght Island; it is rugged and steep-to, with a 16.5m patch about 0.1 mile NW of it. Little Foze Rock, 0.8 mile NNE of Great Foze Rock, is 7.9m high, steep-to, and with a deep channel between them.

Inishvickillane and Inishnabro are two islands lying close together on the same bank about 2 miles SE of Tearaght Island; they are 134 and 174m high, respectively, and fringed by rocks, with off-lying dangers on the S and W sides of the bank. They are generally inaccessible, except from a small bay on the N side of Inishvickillane, where landing may be effected in fine weather and off which a small vessel may anchor, during settled weather and in W winds, in a depth of 18.3m, about 0.1 mile offshore.

**Caution.—**A local magnetic anomaly is reported to exist in the vicinity of the Blasket Island.

**3.4** **Fohish Rocks** (52°02'N., 10°36'W.), which dry 2.7m, lie 0.5 mile SE of the S extremity of Inishvickillane. Milkaunmore and Milkaunbeg are two rocks, above water, lying between Fohish Rocks and the SE end of the island.

**Directions.—**The SE extremity of Inishtooskert in range with Canduff Point, the SW extremity of Great Blasket Island, bearing about 006°, leads W of Fohish Rocks; Tearaght Island peak in range with Stack Rock, bearing about 325°, leads SW of them.

**Thunder Rock** (52°02'N., 10°36'W.), 32m high, lies about 0.1 mile SSW of the S extremity of Inishvickillane, and is nearly connected to it by a sunken ridge. Stack Rock, above water, lies 0.1 mile off the W side of the same island, 0.8 mile NW of Thunder Rock. About 0.2 mile SW of Stack Rock is a rock which dries. Sound Rock, which dries 0.9m, lies about 0.2 mile E of the N extremity of Inishnabro. A shoal, with a least depth of 11m, lies 0.9 mile E of the E extremity of Inishvickillane.

**Directions.—**The two W peaks of Inishnabro in range, bearing about 041°, leads NW of Stack Rock and the dangers SW of it. Great Skellig, bearing 183° and well open E of Milkaunbeg, leads E of **Sound Rock** (52°04'N., 10°36'W.).

**3.5** **Great Blasket Island** (52°06'N., 10°32'W.) lies with Canduff Point, its SW extremity, about 1 mile NE of Inishnabro; it is precipitous, especially on its NW side, and attains an elevation of 289m at Croaghmore, about 1 mile NE of Canduff Point. A ruined tower stands on the summit of a ridge, about 1.5 miles farther ENE. Close NW of Garraun Point, the E extremity of the island, is a landing place, off which a vessel may find temporary anchorage in fine weather, in a depth of 9.1m, sand. There is a depth of 3.7m about 90m E of Garraun Point.

**Illaunboy** (52°07'N., 10°31'W.), 11m high, with Carrigfadda, 11.9m high, close N of it, lies 270m NW of the N extremity of Great Blasket Island, with foul ground between. Several rocks, awash, lie within 0.2 mile W and NW of these two islets, and a group of sunken rocks and islets extends nearly 1 mile N from them. Near the N end of this group are Edge Rocks, 17.4 and 16.2m high, with a rock awash 0.1 mile farther N, and Connor Rocks, also awash, 0.2 mile farther NE. The bank on which these lie extends 0.5 mile farther N, with depths of 9.1 to 18.3m, and breaks heavily in bad weather.

**Beginish** (52°07'N., 10°30'W.), a rocky islet, with the Young Islets close N, lies within 0.8 mile NE of the N extremity of Great Blasket Island. A rock, awash, lies 0.2 mile E of the Young Islets; there is a depth of 4.6m over a group of pinnacles about 90m S of the rock. Theogh Rocks extend 0.1 mile S from the E side of Beginish.

**Barrack Rock** (52°01'N., 10°33'W.), with a depth of 8.2m and steep-to, breaks during gales, and lies 2.5 miles SE of

Inishvickillane.

Wild Bank, formerly Three Fathom Pinnacle, lies 2.5 miles SSW of **Slea Head** (52°06'N., 10°27'W.); it has a least depth of 5.2m, over a pinnacle rising from a rocky bank, and general depths of 11 to 18.3m.

**Directions.—Clogher Head** (52°09'N., 10°28'W.) in range with the site of the tower on **Sybil Point** (52°11'N., 10°28'W.), bearing 015°, leads about 0.3 mile E of Barrack Rock, but passes within 0.1 mile of a 9.1m depth, 0.8 mile NE of Beginish Islet.

The S extremity of Tearaght Island seen over Canduff Point, bearing 274°, leads N of Wild Bank. The S extremity of Tearaght Island in range with the N end of Inishnabro, bearing 286°, leads 1 mile SW of Wild Bank.

## Mizen Head to Bantry Bay

**3.6** **Three Castle Head** (51°29'N., 9°50'W.) which rises to an elevation of 111m within 0.4 mile of its extremity, lies about 2 miles N of Mizen Head, and was previously described in paragraph 1.2. The coast between is indented by Dunlough Bay; this small open bay is exposed to the prevailing winds and should be avoided. Foul ground extends about 0.5 mile SW from Three Castle Head and breaks in heavy weather.

Sheep's Head (Muntervary) lies about 3.5 miles N of Three Castle Head. It rises to an elevation of 168m within 0.5 mile inland. A light is shown from a white building situated at an elevation of 83m on the head. The head is the extremity of a promontory which separates Bantry Bay to the N from Dunmanus Bay to the S.

Dunmanus Bay, entered between Sheep's Head and Three Castle Head, extends NE for 12.5 miles to its head. The bay affords ample room and safe anchorage for a large number of vessels, but there is no shelter for large vessels from SW gales in the outer part. Such gales send in a heavy ground swell as far as Carbery Island, which is heavier than that caused by gales from W or NW.

Dunbeacon Harbor, at the head of the bay, is mostly shallow and affords only limited anchorage for coasters and small craft. Dunbeacon Harbor is obstructed near mid-channel by shoals. The channel to the harbor between these shoals is 0.2 mile wide, with depths of 10 to 17m., shoaling to 5 to 10m off Dunbeacon Point.

As far as Carbery Island the shores of the bay are for the most part composed of rugged inaccessible cliffs, which are steep-to, but they are exposed to a heavy sea, particularly along the S shore.

The most prominent mountain peaks, which may be identified when approaching the bay, include Cruckna Sassenagh, 205m high, located about 1.8 miles ENE of Three Castle Head; Knocknamaddree, 311m high, located about 2.5 miles NE of Cruckna Sassenagh; Knockaphuca, 235m high, located about 1.7 miles ENE of Knocknamaddree; and Caher Mountain, 340m high, located about 4.8 miles NE of Sheep's Head.

## Bantry Bay

**3.7** **Bantry Bay** (51°39'N., 9°40'W.), which is entered between Sheep's Head and Black Ball Head, 7.5 miles WNW, extends NW for about 20 miles to its head. The bay is easy of access, free from dangers in the fairway, and with scarcely any tidal current. The holding ground is good, but the bay is exposed to W winds. Bear Haven on the N shore, Glengariff Harbor and Whiddy Harbor, near the head of the bay, afford secure anchorage to vessels of the deepest draft.

**Tides—Currents.—**The tidal currents are barely perceptible, except in the entrances to Bear Haven and Bantry Harbor. With strong S and SW winds, a current sets into the bay from Sheep's Head.

**Depths—Limitations.—**Depths leading into the bay are over 30m for about 16 miles and then reduce to between 20 and 30m, with several patches of less than 20m.

**Aspect.—**On approaching Bantry Bay from SW, the Slieve Miskish Mountains, on the N side of the bay, will first be sighted. The most conspicuous peaks include Knockgour, 480m high, with a television mast on the summit, located about 3.2 miles NE of Black Ball Head; Knockoura, 487m high, located about 0.8 mile NNE of Knockgour; Miskish, 384m high, located about 1.5 miles NE of Knockoura; and Knocknagallaun, 374m high, located about 2 miles NW of Knockgour.

**Pilotage.—**Vessels should send notice of ETA 24 hours of arrival and contact Port Control when entering port limits. Pilot requests are made through SafeSeas Ireland (http://www.safeseas.ie). Pilotage is compulsory for tankers operating within the bay and for passenger vessels maneuvering S of Garinish Island.

The pilot boards 1.5 miles SSW of Leahill Jetty in position 51°39.5'N, 9°38.9'W. The pilots board cruise ships in position 51°42.0'N, 9°33.0'W.

Bantry Bay Pilots can be contacted, as follows:

1. Telephone: 353-27-50487
2. Facsimile: 353-27-50487
3. E-mail: bantrybaypilotage@eircom.net

All vessels arriving in Bantry Bay should contact Bantry Bay Harbor Radio.

**Contact Information.—**Bantry Bay Harbour Radio can be contacted, as follows:

1. VHF: VHF channels 14 and 16
2. Telephone: 353-27-53277
   353-879532777 (mobile)
3. Facsimile: 353-27-51202
4. E-mail: harbourmaster@bantrybayport.com

**3.8** **Hungry Hill** (51°42'N., 9°47'W.), 682m high, with a pyramid on its summit, rises about 6.5 miles ENE of Miskish and is easy to identify.

Bear Island, about 4.5 miles N of Sheep Head, is difficult to identify at a distance, but on a nearer approach, the towers W and E of its summit will assist in distinguishing it.

The S shore of the bay presents a series of inaccessible precipices. The mountain range, rising to an elevation of over 304m, 0.5 mile inland, causes heavy squalls with S and SE winds.

At White Horse Point on the S shore, about 9 miles NE of Sheep's Head, there is a conspicuous white patch on the cliff.

The N shore of Bantry Bay is of the same mountainous character as the S, but more indented.

**Black Ball Head** (51°35'N., 10°02'W.), 81m high, is surmounted by an old tower and is a conspicuous feature when ap-

proaching the bay from W. Gull Rock, above water, lies close offshore, about 135m W of the head. During strong NW winds, its vicinity is subject to heavy squalls.

**3.9 Bear Island,** (51°38'N., 9°52'W.) which forms the S shore of Bear Haven, is high and rugged from its summit, Knockanalling, 270m high, it descends gradually towards the E end. A conspicuous ruined tower stands at an elevation of 209m about 1 mile W of Knockanalling. A prominent martello tower stands at an elevation of 164m about 1 mile ENE of Knockanalling; a martello tower with a flagstaff close E, stands at an elevation of 95m about 1.5 miles ESE of the same summit.The S coast of the island is steep and cliffy, especially at its W end.

**Caution.—**Bear Island Firing Practice Area extends 1 mile E from the Rifle Range located 1.5 miles N of Leahern's Point. The limits of the area are marked by three conical lighted buoys.

**Ardnakinna Point** (51°37'N., 9°55'W.) is the W extremity of the island. A light is shown from a prominent white tower, 20m high, standing on the point.

Doonbeg Head, a prominent headland, 84m high, is situated l.2 miles ESE of Ardnakinna Point. Greename Rock, 12m high, lies close off the S shore of the island, 1.2 miles E of Doonbeg Head. Feagh Rock, 0.9m high, lies about 0.3 mile S of Greename Rock. A rocky patch, with a depth of 7.3m and which breaks in W gales, lies about 0.5 mile E of Feagh Rock.

**Lonehort Point** (51°39'N., 9°47'W.) is the E extremity of the island. It is low and shelving, terminating in a dangerous reef on which stands a disused lighthouse. Carrigavaddra, a reef which dries, lies about 0.5 mile ESE of the point and is marked by a beacon.

**3.10 Bearhaven** (51°39'N., 9°51'W.) lies between Bear Island and the mainland to the N. This sheltered harbor is spacious, easy of access, and has good holding ground with depths of 12.8 to 18.3m. Although it can be entered from either E or W, the wider and deeper E entrance is preferred. With the exception of George Rock, about 1.7 miles within the E entrance, the fairway is clear of dangers. The buildings on the N side of the island are conspicuous when viewed from E.

**Caution.—**A prohibited anchorage area, best seen on the chart, lies in the E entrance to Bearhaven.

**3.11** The E entrance is deep and about 0.7 mile wide between the fringing dangers off Lonehort Point and Roancarrigmare Island. A detached 16.4m patch lies in the middle of the fairway, 0.7 mile E of Lonehort Point.

Roancarrigmore Island (Roancarrigmare Island), flat-topped, 6m high, and reef-fringed, lies about 1.2 miles ENE of Lonehort Point. A light is shown from a tower, 18m high, standing on the island. The lighthouse buildings, with a flagstaff close W, are enclosed by a prominent white wall.

Roancarrigbeg, N of Roancarrigmore Island, consists of several above-water rocks surrounded by reefs. The channel between the island and the rocks should not be attempted without local knowledge. A 9.1m patch lies in the middle of the channel, N of the rocks.

**Doucallia Rocks** (51°40'N., 9°44'W.), which dry, lie about 0.5 mile E of Roancarrigmore Island.

Bulliga Ledge, with a least depth of 3.6m, lies 0.7 mile NNE of Doucallia Rocks.

George Rock, with a least depth of 7m, lies in the middle of the fairway in the E part of Bear Haven about 1.7 miles WNW of Lonehart Point. A lighted buoy is moored close S of the rock.

**Lawrence Cove** (51°38'N., 9°48'W.), small in extent and encumbered by numerous dangers, indents the N side of Bear Island, W of Lonehart Point. The facilities within the cove are available only to small craft.

The dangers between Lawrence Cove and Long Point, the NW extremity of Bear Island, are contained within 0.1 mile of the shore. Along the N side of Bear Haven, between Roancarrigbeg and **Mill Cove** (51°39'N., 9°52'W.) to the W, the dangers to navigation lie within 270m of the shore.

**3.12 Hornet Rock** (51°39'N., 9°51'W.), with a least depth of 1.2m, lies at the outer end of a shoal which extends 0.2 mile S from the W entrance point of Mill Cove. A lighted buoy is moored 135m SE of the rock.

A stranded wreck, which is radar conspicuous, lies about 0.5 mile E of Hornet Rock and is marked by a lighted buoy.

Between Hornet Rock and Dinish Island to the W, the N side of Bearhaven is fringed by rocks, shoals, and other dangers.

The W entrance lies between Fair Head and Ardnakinna Point to the ENE. The narrowest part of the navigable channel is 228m wide abeam of Piper Point, about 0.5 mile within the entrance. The least depth in the fairway is 7.9m.

The W side of the entrance between Piper Point and Drom Point to the NNE is indented by several small bays and coves.

Harbor Rock, consisting of several pinnacles, lies on the W side of the fairway, 0.3 mile NNE of Piper Point.

Colt Rock, which is detached and dries 2.1m, lies about 0.2 mile farther NNE; a lighted beacon with a red horse topmark stands on the rock.

The dangers on the E side of the fairway are contained within 0.1 mile of the W side of Bear Island.

**3.13 Dinish Island** (51°39'N., 9°54'W.), about 1.7 miles NNE of Ardnakinna Point, lies on the N side of Bearhaven. The island is connected by a bridge to the mainland.

A directional light, shown from a white hut, 7m high, is situated on the SW end of the island. A beacon stands at an elevation of 12m about 0.3 mile NNE of the hut. By day the alignment of the hut and beacon, and at night the white sector of the light, lead through the W entrance.

**Walter Scott Rock** (51°39'N., 9°54'W.) lies at the outer end of the foul ground extending from the S side of Dinish Island and consists of two adjoining heads with depths of 2.7 and 5.2m. A lighted buoy marks the S side of Walter Scott Rock.

**Anchorage.—**Anchorage for large vessels in Bearhaven is in the E part, between Lonehort Point and George Rock, in 12.8 to 16.5m, mud and sand, taking care to avoid the rocky patch and irregular soundings. There is a least depth of 13.7m lying 0.3 mile N of Lonehort Point. A vessel may, however, anchor anywhere in the fairway between George Rock and Hornet Rock, in 10.1 to 12.8m.

Anchorage is prohibited in the charted area between Bear Island and the mainland, close NW of the E entrance.

**Caution.—**Care should be taken to avoid the submarine ca-

bles which extend SSE to Bear Island from a position on the mainland about 1 mile E of Dinish Island.

**3.14 Castletown Bearhaven** (Castletown Bere) (51°39'N., 9°54'W.) (World Port Index No. 34190) is a major fishing port situated close NW of Dinish Island. It is approached from the W end of Bearhaven.

**Tides—Currents.—**Tides rise about 2.9m at MHWS and 1.5m at MLWS. Small craft and fishing vessels of up to 1,000 tons, with drafts of up to 4.5m, use the harbor.

**Depths—Limitations.—**Alongside berths are located on the mainland side of the harbor and on the N side of Dinish Island. Depths alongside the berths are 3.7 to 4.9m.

**Aspect.—**The entrance from Bear Haven through the fairway W of Dinish Island is indicated by range lights, in line, bearing 010°. A large square hotel building stands on the W side of the entrance and is prominent. A chapel with a high roof and pointed belfry stands close W of the range lights and is conspicuous.

**Pilotage.—**The port can be contacted by VHF. Pilots are not compulsory and there is no recognized pilot; however, persons with local knowledge are available upon request.

**3.15 Bulliga Point** (51°40'N., 9°44'W.) lies on the N side of the bay, about 1.5 miles NE of the E entrance to Bear Haven. Adrigole Harbor, an inlet, is entered about 0.5 mile NE of Bulliga Point. It affords shelter to small craft, but is only suitable for vessels with drafts of less than 3m.

Small vessels may obtain temporary anchorage, in 12.8 to 14.6m, close to the entrance of Adrigole Harbor, with Roancarrigmore Light well open SE of Bulliga Point, bearing about 222°.

**Shot Head** (51°40'N., 9°40'W.), about 2 miles E of Bulliga Point, is fairly steep-to, and temporary shelter may be obtained NW of it during E winds.

Between Shot Head and Sheelane Islet, about 3.2 miles ENE, the shore is steep-to and free of dangers. The shore between Sheelane Islet and Four Heads Point to the NE is fringed by foul grounds as far as 0.2 mile offshore. Depths of 8.2 to 10m lie about 0.5 mile offshore in this same area.

**3.16 Glengarriff Harbor** (51°44'N., 9°32'W.), entered between **Crowdy Point** (51°43'N., 9°33'W.) and Gun Point to the NE, is divided into inner and outer parts by Garinish Island. This island, together with two islets E of it, lies on an extensive shoal extending from the W shore. The narrow channel leading into the inner harbor passes E of this shoal. The channel W of the island is foul. A conspicuous tower, 41m high, stands on the summit of Garinish Island.

Several detached dangers lie on the W side of the outer harbor between Crowdy Point and the E end of the above shoal.

The E side of the harbor is steep-to close offshore, but foul off its N and W sides above Garinish Island.

A conspicuous gray house with three chimneys stands on the E side of the harbor about 0.7 mile NE of Garinish Island. Glengarriff Castle, which is prominent, stands close SE of the gray house.

A conspicuous white house stands on the E side of the approach to the harbor, about 1.5 miles ESE of Garinish Island.

During the summer, good anchorage can be obtained, in 12.8 to 20.1m, in the outer harbor S of Garinish Island.

Sheltered anchorage can be taken, in 7.3 to 10.9m, in the E part of the inner harbor.

**Directions.—**Vessels proceeding into the inner harbor, and having passed Gun Point, should favor the E shore to avoid the foul ground E of East Garinish Island. Gun Point in range, 182° astern, with Whiddy Point West leads close E of this danger. Course can be altered for the anchorage when Glengariff Castle is sighted, or when Garvillaun Island bears 270°.

**Caution.—**In 1993, it was reported that there are a growing number of unlighted marine farms distributed about the entrance to Glengariff Harbor.

**3.17** Between Gun Point and Ardnamanagh Point, about 1.7 miles SE, the dangers are contained within 0.2 mile offshore. An obelisk stands on the SW end of an islet close SE of Gun Point; a small beacon stands on a rock about 0.5 mile farther SE.

**Carrigskye** (51°43'N., 9°31'W.), the outermost danger, is usually marked by breakers; this low islet lies about 0.8 mile W of Ardnamanagh Point at the outer end of a rocky spit which extends about 0.4 mile offshore.

**Castle Breaker** (51°43'N., 9°30'W.), a detached 3.6m patch, lies on the N side of the approach to Whiddy Harbor, about 0.2 mile SW of Ardnamanagh Point.

The shore between Glengarriff Harbor and Whiddy Harbor is usually subject to a heavy swell that breaks violently over the off-lying rocks.

**Whiddy Island** (51°41'N., 9°30'W.), steep-to on its NW side, lies on the S side of the approach to Whiddy Harbor at the SE end of Bantry Bay. Three conspicuous circular forts, disused batteries, stand on the island. Several prominent tanks stand in the vicinity of the SW end of the island. Two groups of above-water rocks lie within 0.5 mile of Whiddy Point West, the SW extremity of the island. Whiddy Point East, its steep-to NE extremity, may be rounded at a distance of about 0.1 mile.

Whiddy Harbor, lying N and E of Whiddy Point East, is easy of access. Carrignagappul, a rock which dries 1.8m, lies in the N arm of the harbor, about 1 mile NE of Whiddy Point East.

Castle View, a white two-story house, in the village of Ballylicky, 1 mile E of Carrignagappul, is conspicuous to vessels entering the harbor.

**Horse Islet** (51°42'N., 9°28'W.), 0.9m high, lies on the S side of Whiddy Harbor, about 0.5 mile SE of Whiddy Point East; a reef, which dries, extends about 0.1 mile W from it, and the flat on which the islet lies extends 0.2 mile from all sides, except the S, which is fairly steep-to. Cliffy Rock, 0.6m high, stands on this flat, close N of Horse Islet. A shoal, with depths of less than 5m, extends 230m W from the N side of Gurteenroe Point, on the E shore about 0.4 mile SE of Horse Islet. A lighted buoy marks the E edge of the flat extending from the E side of Horse Islet. Gurteenroe Lighted Buoy marks the W edge of the shoal extending from the point of that name.

Anchorage may be taken, in 14.6 to 18.3m, with Whiddy Point East bearing between 273° and 284°, where a vessel will be sheltered from W gales.

**3.18 Bantry Harbor** (51°41'N., 9°29'W.) (World Port Index No. 34260), lying SE of Whiddy Island, affords protection against all winds and sea, in 7.3 to 11m, mud, with fairly regu-

**Dursey Head—Ring of Beara**

lar depths. The channel leading into the harbor S of Whiddy Island is available only to small craft. There are general and bulk cargo berths in the harbor having alongside depths of up to 4.5m.

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The Chapel Islands, two in number, each about 18m high, lie close together in the middle of the harbor, about 0.4 mile S of Horse Islet. A shoal, with depths of less than 5m, which dries in places, extends about 0.1 mile from the NE and SW extremities, and to a lesser distance on either side. Chapel Lighted Buoy marks the E edge of the shoal extending from the NE extremity of Chapel Island East.

Hog Islet, 4m high, lies near the N end of a shoal with depths of less than 5m, lying between the Chapel Islands and the E side of Whiddy Island.

The channel leading into Bantry Harbor E of Horse Islet is preferable to the channel passing W of the islet. The E channel is about 320m wide with depths of over 15m, reducing to depths of 8 to 10m, SE of the Chapel Islands.

**Caution.—**Mussel fishing rafts may be found in the waters E of Whiddy Island, outside the buoyed channels. They may extend in strings or consist of lines of barrels which are sometimes difficult to see.

In 1993, it was reported that there was a rapid expansion of unlighted marine farms in the area W of Eagle Point.

**3.19 Bantry Bay Oil Terminal** (51°41'N., 9°32'W.) is located near the SW extremity of Whiddy Island.

**Depths—Limitations.—**The terminal, which consists of an SPM and shore facilities, is capable of accommodating tankers of over 300,000 dwt.

**Pilotage.—**See paragraph 3.7.

**Contact Information.—**See paragraph 3.7

**Caution.—**The terminal was severely damaged by the explosion of a tanker vessel in 1979. Liquid cargo operations are now handled by the SPM, with the offshore jetty disused.

The platform is lighted with temporary lights and should be approached with caution.

Passage is prohibited between Whiddy Island and the disused terminal due to submarine high tension cables and pipelines laid between the jetty and the shore.

**3.20 Crow Head** (51°35'N., 10°10'W.) is a narrow promontory, 74m high, extending about 1 mile SW from the mainland, 4 miles W of Black Ball Head. A rock, which dries and is generally marked by breakers, lies about 0.2 mile SW of the extremity of the head.

Dursey Island, 250m high, with an old watch tower on its summit, lies 1.5 miles WNW of Crow Head. It is a good mark for vessels bound for Bantry Bay.

The Calf and Heifer, two above-water rocks, lie close together about 0.7 mile SW of Dursey Head, the SW extremity of Dursey Island. A conspicuous red pillar, the remains of an old lighthouse, stands on The Calf. The channel between the rocks and the dangers fringing Dursey Head is subject to 3.5 knot currents at springs.

**Dursey Sound** (51°36'N., 10°09'W.), the narrow channel between Dursey Island and the mainland, should only be attempted by vessels with local knowledge and under favorable conditions.

**Cod's Head** (51°40'N., 10°06'W.), about 5 miles NE of Dursey Island, is formed by a barren spur terminating to the W in high steep-to cliffs. A large bight, indented by two small bays, lies between the N entrance of Dursey Sound and Cod's Head to the NNE. During the summer, the bays are occasionally visited by coastal vessels, but should not be attempted by

those without local knowledge.

The current about 3 miles W of **The Bull** (51°35'N., 10°18'W.) begins setting SE about 4 hours 20 minutes before HW at Cobh and the opposite current sets about 1 hour 45 minutes after HW at Cobh. Both currents attain a velocity of 1.5 knots at springs.

The current about 5 miles S of The Bull is more or less rotary in a clockwise direction and varies in velocity from 0.5 knot to 1.3 knots, according to direction and time before and after HW at Cobh.

Between Dursey Head and The Bull, the current setting E begins about 3 hours 45 minutes before HW at Cobh and the opposite current sets about 2 hours 30 minutes after HW at Cobh. The spring velocity of both currents is about 3 knots.

The currents follow the directions of the channels between the islands in a general N-S direction, except between The Calf and Dursey Head, where a SE-NW current is encountered.

## The Kenmare River

**3.21** The **Kenmare River** (51°45'N., 10°00'W.), a narrow, deep inlet extending about 22 miles ENE, is entered between Cod's Head and Lamb's Head about 4.5 miles NNW. The bold, high land on both sides of the entrance rises to elevations in excess of 305m. The rocky and indented shores are mostly foul and must be approached with caution. Small vessels can find shelter in the bays on either shore. Large vessels anchor near the head of the inlet.

**Scariff Island** (51°44'N., 10°15'W.), 252m high and precipitous, is the outer of a group of islands extending 4.5 miles W from Lamb's Head. Narrow deepwater channels lie between the islands and afford access to the river entrance for small vessels.

The flood and the ebb follow the direction of the shore within the Kenmare River. The flood begins about 5 hours 20 minutes after HW at Galway and the ebb begins about 1 hour before HW at Galway. The spring velocity in the outer part is about 0.5 to 0.8 knot, increasing to a maximum of 1.5 knots farther in. With W gales, there may be a turbulence off **Deenish Island** (51°44'N., 10°13'W.) and the **Dunkerron Islands** (51°52'N., 9°38'W.).

Between Scariff Island and Lamb's Head (51°44'N., 10°08'W.), the currents set N when the flood sets into the Kenmare River and S with the ebb. Slack water lasts for about 15 minutes between each change.

**3.22** **Ballycrovane Harbor** (51°43'N., 9°57'W.), in the NE part of Coulagh Bay about 6 miles ENE of Cod's Head, is entered between Ainrush Islet and the mainland N. The channel at the head of the harbor is narrowed to a width of 0.1 mile by the shoals on either side. Anchorage can be taken, in 7.3 to 9.1m, in the middle of the harbor.

**Kilmakilloge Harbor** (51°46'N., 9°50'W.), 6 miles NE of Ballycrovane Harbor, affords safe anchorage for small vessels against all winds. The harbor can be identified by a high, grassy precipice on the NE side of the entrance. The most secure anchorage is in Collorus Harbor, the W arm, but its entrance is encumbered by a shoal, leaving a channel on each side, less than 0.1 mile wide, with depths of 7 to 9.3m. Vessels with a draft of 3.7m can anchor in Bunaw Harbor on the N side of Kilmakilloge Harbor, but with NW winds there is a heavy sea in the harbor. Anchorage can be taken, in 3.6 to 5.5m, in the SE part of Kilmakilloge Harbor.

**Daniel Islet** (51°46'N., 10°01'W.) lies on the N side of the Kenmare River. Vessels without local knowledge should not approach this section of the shore within 1 mile or approach in depths of less than 41m.

**3.23** **Sneem Harbor** (51°48'N., 9°53'W.) may be identified by Sherky Island and a large conspicuous hotel on the mainland, 1.5 miles farther NNE. Sherky Island, together with the islands and rocks in its vicinity, gives partial shelter to Sneem Harbor. Cottoner Rock, which dries, lies close N of the SW part of Sherky Island. During heavy weather, the breakers over the rock extend more than halfway across the channel toward the Pigeon Islands, which lie about midway between Sherky Island and Garnish Island, close off the N shore. Rossdohan Island, on the E side of the harbor, is surrounded by foul ground. The dangers SW of the island break heavily during unsettled weather and are dangerous to approach.

**Anchorage.—**Anchorage can be taken, in 5 to 7m, in the NE arm of the harbor, but both shores are fringed by foul ground. A rock, which dries, is marked by a beacon and lies 0.3 mile SSE of the hotel. Small vessels can anchor, in 2.7 to 3m, in the inner harbor, NE of Garinish Island.

**3.24** **Coongar Harbor** (51°49'N., 9°50'W.) indents the N shore of the river. Although fringed by foul ground, it offers temporary anchorage, in 16m, in its central part. Partial shelter can be obtained from the prevailing W swell.

With the exception of Kilmakilloge Harbor, the only secure anchorage for vessels of moderate size is found in the vicinity of **Lackeen Rocks** (51°50'N., 9°44'W.). Large vessels can anchor in 10 to 14.6m, E of the rocks.

The best anchorages are found below and above the narrows. The outer anchorage is for large vessels and the inner anchorage for vessels with drafts of 6m and less.

The directions for entering the inner part of the Kenmare River are indicated on the chart.

Ballinskelligs Bay, entered 4 miles N of Scariff Island, between **Hog's Head** (51°47'N., 10°13'W.) and Horse Island to the NW, is open to the SW and exposed to a heavy sea from that quarter. Anchorage can be taken, in 14.6 to 16.5m, N of the low neck connecting Hog's Head to the mainland. During SW gales a heavy sea sets into this anchorage.

**Bolus Head** (51°47'N., 10°21'W.), which terminates in a precipice, 183m high, lies about 4.5 miles NW of Scariff Island. A tower stands at an elevation of 283m about 0.5 mile NE of the head. Bolus Mountain, 407m high, stands about 1.5 miles NE of the head and is conspicuous.

**Puffin Island** (51°50'N., 10°24'W.), 166m high, lies close SW of Ballaghnanea (Ballagh Point), about 3 miles NW of Bolus Head. Both the island and the point can be distinguished by steep cliffs. A conspicuous television mast stands at an elevation of 368m, about 3.2 miles NE of Puffin Island. Puffin Sound is a rock-encumbered sound between Puffin Island and the point. It has a narrow passage, 45m wide, with a depth of 5.5m, through which the tidal currents run very strongly.

The current setting toward the coast divides W of **The Skelligs** (51°46'N., 10°32'W.) and sets SE and N in the direction of

**Fort Point Light**

the coast. The currents from the opposite directions meet off The Skelligs and set seaward. The spring velocity of all the currents is about 1 knot.

**3.25 Valentia Island** (51°55'N., 10°21'W.) lies on the S side of the entrance to Dingle Bay with high land at each end and prominent slate cliffs. Bray Head, the SW extremity of the island, is bold and precipitous and is located about 2.7 miles N of Puffin Island. Conspicuous disused quarry workings are situated along the NW side of the island. A conspicuous hill, 267m high, with a radio mast, 30m high, standing on the summit, is situated on the N side of the island, about 4 miles NE of Bray Head.

The N side of the island between **Fort Point** (51°56'N., 10°19'W.) and Knightstown, at the NE extremity of the island, forms the S side of Valentia Harbor. The SE side of the island forms the NW side of Portmagee Channel.

Portmagee, at the W end of Portmagee Channel, is entered from W between Bray Head and the islands and rocks fronting the coast between **Doon Point** (51°53'N., 10°24'W.) and Reencaragh Point, abput 0.5 mile N.

North of Reencaragh Point, the channel narrows and the fairway lies off the N shore; this shore should be given a berth of about 90m in order to avoid a rock, awash, E of Reencaragh Point.

Local knowledge is necessary to proceed through Portmagee Channel to Valentia Harbor as the navigation is intricate and the channel obstructed by rocks. There is, however, sufficient water to carry a 4.6m draft through at HWN. A bridge, with a 10.7m wide opening, spans the channel about 90m E of Port Magee Pier.

Small vessels can anchor, in 5.5 to 9.1m, within Portmagee, but in unfavorable weather a heavy sea sets into the entrance. Anchorage can be taken, in 3.6 to 5.5m, E of Reencaragh Point, but it is necessary to moor.

**3.26 Valentia Harbor** (Valencia) (51°56'N., 10°18'W.), entered between Fort Point and Beginish Island (Beginnis Island) to the NE, provides shelter against all winds and sea and is easy of access. The harbor is used by fishing boats and small vessels.

**Winds—Weather.—**During NW gales, the sea sometimes breaks across the narrow entrance.

**Tides—Currents.—**Spring tides rise 3.1m; neap tides rise 1.6m.

**Depths—Limitations.—**The least depth on the entrance range is 5.8m. There are depths of 9.7 to 18.3m in the S part of the harbor.

The entrance channel is reduced to a width of 90m by the foul ground extending from Fort Point and the W end of Beginish Island.

**Valentia Island**

Harbor Rock, which dries, lies on the SW side of the entrance range, about 0.3 mile SE of Fort Point; a lighted beacon stands on the rock.

Racoon Rock, with a least depth of 4.5m, lies within Beginish Patch on the NE side of the fairway opposite Harbor Rock.

The channel between the NE extremity of Valentia Island and Reenard Point on the mainland to the E is narrowed to a width of about 0.1 mile by shoals which extend from each shore. The drying spit on the W side of the channel is known as The Foot.

The harbor consists of a sheltered anchorage, with depths of 4 to 14m, and two small piers, one at the E end of Valentia Island and the other on the mainland close E. The pier at Reenard Point is in a dangerous condition, and access and use is prohibited.

**Aspect.—**The former pilot lookout tower is conspicuous and stands on the summit of Beginish Island at an elevation of 63m.

A sectored light stands on the W side of Valentia Island and indicates the entrance to the harbor.

**Pilotage.—**Licensed pilots are not available, but fishermen with local knowledge may be available.

**Anchorage.—**The berth with the best holding ground is in 12.8m, sand and clay, with the light on Fort Point in range with the first hollow N of Cruppaun Point, bearing 275°, and the lifeboat station bearing 140°.

Vessels with a draft of less than 5.5m can anchor in Portmagee Channel, in a depth of 9m.

During spring and early summer the anchorage S and E of Knightstown is usually occupied by fishing vessels.

## Dingle Bay

**3.27** Dingle Bay, entered between Valentia Island and the Blaskets, 10 miles to the NW, is deep and clear in the entrance and shoals gradually toward its head. Like the other open bays along this coast, it is exposed to the full force of the sea and swell from W and can be used only as a temporary anchorage.

Vessels of moderate draft can obtain sheltered anchorage in Valentia Harbor on its S side and in Ventry Harbor on its N side.

**Dingle Harbor** (52°08'N., 10°17'W.), on the N shore, is a busy fishing port. There is a marina and a basin suitable for deep water fishing vessels with drafts of 5m. A basin having a depth of 2.6m lies E of Dingle Pier. The entrance channel is dredged and marked with lighted buoys.

**Caution.—**Reenbeg Point (52°07'N., 10°16'W.), a rock, with a least depth of 0.8m, lies 0.3 mile SW of Reenbeg Point, the W entrance of Dingle Harbor.

Castlemaine Harbor at the head of the bay is obstructed by a shallow bar and dries over most of its area. Caution should be exercised when attempting to enter Castlemaine Harbor, as the charts of the area are based on antiquated surveys and there are no beacons, buoys, or leading marks.

The land on both sides of the bay is high and bold, especially on the N side, where the Brandon Mountains attain an elevation of 949m. Mount Eagle, which rises in precipices to an elevation of 513m, stands about 2.5 miles W of Ventry Harbor and is conspicuous. **Doulus Head** (51°57'N., 10°19'W.), 104m high, on the S side of the entrance, is conspicuous from seaward and is backed by Killelan Mountain, 276m high.

The currents off the entrance of the bay set in a N-S direction, but little current is felt within the bay until within 2 miles of the bar fronting Castlemaine Harbor. The flood over the bar begins 6 hours after HW at Galway and the ebb at about the time of HW at Galway. The spring velocity is about 3 to 4 knots in both directions. The spring velocity in the narrowest part of the channel leading into Dingle Harbor is 2.5 knots in both directions with little current within the harbor. The currents in Ventry Harbor are negligible.

**Caution.—**Barrack Rock (52°01'N., 10°33'W.), Wild Bank, and the Blasket Islands have been previously described in paragraph 3.3 and paragraph 3.5, along with the directions for clearing them.

**3.28** **Ventry Harbor** (52°07'N., 10°20'W.), on the N shore of Dingle Bay, is easy of access with sufficient anchorage space for several vessels of moderate draft. Being open to the SE, it is exposed to a swell from that direction. With W winds, the harbor is subject to heavy squalls from the mountains, but only a slight swell is raised.

There are depths of 14.6 to 21.9m between Parkmore Point, the W entrance point, and Paddock Point, the E entrance point, decreasing to 7.3 to 8.2m at the anchorage about 1 mile within the harbor. A sunken ledge extends about 0.3 mile offshore, about 0.5 mile within Paddock Point. Two above-water black rocks lie close SE of Parkmore Point.

The best anchorage is near the middle of the harbor, in 7.6m, with Ventry Church bearing 018° and Parkmore Point bearing 150°. A vessel of moderate draft should not approach in depths of less than 9.1m or bring the church to bear more than 350°.

**Directions.—**The entrance against the high land is difficult to identify when approaching from W or SW, but on nearer approach, the two black rocks off Parkmore Point will be seen. In the event that these rocks are not seen, the light on Fort Point, bearing 177° astern, and open W of Doulus Head, will lead to the entrance.

**3.29** Blasket Sound lies between the NE end of Great Blasket Island, the dangers N of it, and the mainland to the E. The narrowest part of the sound lies between the NE extremity of Great Blasket Island and Dunmore Head to the E, where its width is reduced to 0.7 mile by a narrow strip of rock extending from Dunmore Head and terminating W at a high conical rock, 44m high. From a short distance, this strip of rock appears as an island. Stromboli Rocks, consisting of several small pinnacles, with a least depth of 1.8m, lie in the channel W of this strip and breaks heavily in bad weather.

Vessels awaiting favorable weather to pass through the sound can take temporary anchorage in the small bay between Dunmore Head and **Slea Head** (52°06'N., 10°27'W.).

**Clogher Head** (52°09'N., 10°28'W.) is rugged and lies 2.5 miles N of Dunmore Head. Clogher Rock, a sharply pointed and prominent above-water rock, lies close off the head.

**Sybil Point** (52°11'N., 10°28'W.), about 1.7 miles N of Clogher Head, terminates in a bold precipice which rises to a height of 206m. The point has the ruins of a tower on its summit. The tower is not conspicuous, but the summit on which it stands is useful as a leading mark when traversing Blasket Sound.

A rock, 47m high, lies close SW of Sybil Point and drying

rocks and shoals extend about 0.5 mile from the point.

Clogher Rock, in range 016° with the ruins of the tower, or the summit on which it stands, leads clear of the dangers in the sound, but passes over Barrack Rock.

The currents in the sound follow a general N-S direction at a velocity of 2 to 3 knots. The current setting N begins about 4 hours 45 minutes after HW at Galway and the opposite current about 1 hour 45 minutes before HW at Galway. Velocities of up to 4 knots are experienced in the narrow channels between the islands.

North of The Blaskets, the current setting N turns E toward **Brandon Point** (52°17'N., 10°09'W.) and when within 7 miles of the coast sets in a direct line to and from the River Shannon.

**3.30 The Three Sisters** (52°12'N., 10°25'W.) are three remarkable hills, about 0.5 mile apart, which stand on the coast between Sybil Point and the entrance to Smerwick Harbor, 3 miles NE. East Sister, 150m high, is the highest of the three hills.

**Smerwick Harbor** (52°12'N., 10°24'W.) is entered between East Sister and Dunacapple Islet about 1 mile NE. Sunken rocks lying between the islet and the shore on the E side of the entrance partially protect the harbor from NE winds.

During the summer, temporary anchorage can be taken within the harbor, but it should be avoided during the winter because of the heavy swells. The holding ground is mostly indifferent, but comparatively safe anchorage can be taken, in a depth of 10.9m, in Smerwick Roads, close to the W shore abreast the village, 0.7 mile S of East Sister, with the entrance point bearing 019°. The exposed anchorage in the middle of the harbor is not recommended.

A prominent radio mast, 138m high, stands on the E shore of the harbor.

Ballydavid Head lies about 0.8 mile NE of Dunacapple Islet. A prominent conical hill, 251m high, on which stands the ruins of a signal tower, is situated close ENE of the head.

**3.31 Brandon Point** (52°17'N., 10°09'W.) is precipitous and lies about 13 miles NE of Sybil Point. The coast between is backed by mountain ranges which terminate near Brandon Head in high, bold, easily identified cliffs about 3.2 miles SW of Brandon Point. Brandon Head, together with several peaks in the vicinity including Masatiompan Hill, 760m high, close within the head, and Brandon Mountain, 949m high, about 2 miles S of it, form a most remarkable coastal feature.

A rocky bank with a least depth of 12.8m, lies 2.5 miles N Brandon Point. In heavy weather the sea breaks over it and the area should be avoided.

Brandon Bay is entered between Brandon Point and the NW extremity of a sandy peninsula about 4 miles ENE, which separates it from Tralee Bay. Being open to the N, it is exposed to the full impact of the Atlantic swell.

There is anchorage for small vessels is in a depth of 6m, E of the pier at Brandon. This anchorage is safe with offshore winds, but should not be used with onshore winds or on the approach of bad weather.

**The Seven Hogs** (Magharee Islands) (52°20'N., 10°03'W.) are a group of islands which lie N of the N end of the sandy peninsula which separates Brandon Bay from Tralee Bay. Rocky patches over which the sea breaks, extend to the N of the islands as far as the 20m depth contour. Magharee Sound leads between the extremity of the sandy peninsula and the islands. This narrow, intricate passage has a least depth of 4.5m, but should not be attempted without local knowledge.

Between the Blasket Islands and Kerry Head, the currents set in the direction of the coast and across the entrances of Smerwick Harbor, and Brandon, Tralee, and Ballyheige Bays. The current setting NE begins about 5 hours after HW at Galway and the opposite current about 1 hour 20 minutes before HW at Galway. The spring velocity in both directions is 1 to 1.5 knots, except in Magharee Sound where the velocity is 2 to 3 knots. During W gales, a heavy breaking sea makes up in the sound with an opposing current.

**3.32 Tralee Bay** (52°17'N., 9°56'W.) is entered between Rough Point, the NE extremity of the sandy peninsula, and Kerry Head, about 6 miles NNE. It is open to the prevailing wind and swell and affords little shelter, except in Fenit Harbor.

**Kerry Head** (52°25'N., 9°57'W.), the N entrance point of the bay, is a bluff headland, 68m high, and steep-to; the S side of the headland extends E and S forming Ballyheige Bay. Kerry Head Shoal, with a least depth of 20.7m, lies 5 miles NW of Kerry Head.

**Mucklaghmore** (52°20'N., 9°56'W.), a rock, 30m high, with a drying rock close N of it, is located about 4.5 miles S of Kerry Head in the N part of the bay. Illaunnabarnagh, a flat-topped rock, 9m high, lies 0.8 mile E of Mucklaghmore. Boat Rock, which dries, lies 0.7 mile ENE of Illaunnabarnagh. Vessels entering the bay should pass to the W of Mucklaghmore.

**Fenit Island** (52°18'N., 9°53'W.), at the S end of Ballyheige Bay, is connected to the mainland by a narrow, stony embankment at its S end. The island forms the W side of Barrow Harbor, suitable only for small craft.

The Rose, an islet, lies on the N end of foul ground that extends 1 mile W from the N end of Fenit Island.

Little Samphire Island lies on the N side of the approach to Fenit Harbor, about 1 mile S of Fenit Island. A light is shown from a conspicuous blue round tower, 17m high, surrounded by a stone wall. The light tower and attached buildings entirely occupy the small island.

Samphire Island, at the W end of Fenit Harbor, lies about 0.7 mile E of Little Samphire Island.

## Fenit Harbor (52°16'N., 9°52'W.)

World Port Index No. 34160

**3.33** Fenit Harbor is formed and protected by a causeway connecting Great Samphire Island to the mainland and by a pier extending E from the same island. The port is used by fishing, pleasure and commercial traffic, with cranes being the primary export.

**Port of Fenit Home Page**

http://www.fenitharbour.com

**Tides—Currents.—**Spring tides rise 4.1m; neap tides rise 1.8m.

Although the currents are weak in the outer part of Tralee Bay, a velocity of about 1.5 knots is attained in both directions off Fenit Pier. Toward the head of Tralee Bay, the currents run strongly to and from the River Lee.

**Depths—Limitations.—**The fairway to the harbor leads over a bar extending SW from Fenit Island, then close S of Little Samphire Island and Samphire Island. The channel is about 180m wide and bounded on the S side by shallow banks extending from the S shore of Tralee Bay. The approach channel has a least depth of 4.2m.

A general and bulk cargo wharf, 170m in length, has a depth of 6.5m alongside; another wharf, 90m in length, has a depth of 5.5m alongside.

Vessels having a maximum length of 122m and a maximum draft of 6.5m can be accommodated.

**Aspect.—**Between Ballyheige Castle (52°23'N., 9°50'W.) and Fenit Island, about 5.5 miles S, the E shore of Tralee Bay is composed of ranges of low sandhills.

In clear weather, a vessel will have no difficulty in approaching Tralee Bay. Church Hill, upon which stand two churches, is an excellent landmark.

**Pilotage.—**Pilotage is not compulsory, but is available if required. Only vessels with local knowledge should enter the harbor at night without a pilot. Berthing is recommended from 2 hours before to 2 hours after HW.

The pilot vessel cruises in the vicinity of The Seven Hogs. In good weather, the pilot boards near The Seven Hogs 1 mile W of Little Samphire Island Light. In bad weather, the pilot boards W of Samphire Island.

**Regulations.—**The vessel's ETA should be sent 24 hours in advance. The port can be contacted on VHF channel 12, 14, or 16.

**Contact Information.—**Fenit Pilots and Fenit Port can be contacted, as follows:

1. Telephone: 353-66-7136231
2. Facsimile: 353-66-7136473
3. E-mail: fenitharbour@eircom.net

**Anchorage.—**Good anchorage, sheltered from all except N winds, may be obtained, in 8.2m, on the W side of Tralee Bay.

The anchorage on the E side of Tralee Bay is confined to the narrow channel, about 1.5 miles long, S of Samphire Island.

The best anchorage in Fenit Harbor is in 6.4m, about 0.2 mile NE of the pier head, with Fenit Lodge, a square white building, about 0.6 mile N of the pierhead, bearing 340°; it is very narrow here, and a vessel could swing into a much shallower depth.

**Regulations.—**A copy of the by-laws and can be obtained from the harbormaster.

**Directions.—**In heavy weather, vessels seeking shelter should proceed to the mouth of the River Shannon where pilots can always be boarded or anchorage taken.

Approaching from W, Kerry Head should be steered for until The Seven Hogs have been cleared. When Mucklaghmore bears 125°, it should be steered for on that bearing until Loop Head Light is just open W of Kerry Head, bearing 004°. Alter course S with this bearing astern, passing between The Seven Hogs and Mucklaghmore. With the flood, a considerable set E will be experienced on this course.

When Little Samphire Island Light bears 131°, course may be altered to pass about 0.3 mile SW of it, crossing the bar. When the light bears 040°, a vessels may haul gradually around to the E, to the course up the channel, which is about 080°, but due allowance must be made for the tidal current.

## The River Shannon

**3.34** The River Shannon (52°34'N., 9°56'W.), the largest river in Ireland, is entered between Kerry Head and Loop Head to the N. It offers spacious and secure anchorage for all classes of vessels, and is easy of access. Its wide entrance is easily identified by the conspicuous landmarks on both sides.

The river is tidal as far as Limerick, about 50 miles inland, and can be navigated by vessels with a draft of 5.5m. Above the city, the river traffic is confined to barges and small craft.

Between the confluence of the Fergus River, about 15 miles below Limerick, and the entrance of the River Shannon, navigation is possible at all stages of the tide, but above this the river shallows and is obstructed by rocks and flats. Navigation is possible only near HW.

**Depths—Limitations.—**The River Shannon is navigable for all classes of vessels for 36 miles above Loop Head, or up to its junction with the Fergus River, with depths in the channel of not less than 18m. In the estuary, however, there are charted depths of 16m, 2 miles SE of Kilcoher Head, where the fairway crosses Ballybunnion Bank for a short distance.

Above the junction the river is barred in several places, with a least depth of 0.9m in the fairway.

Deep draft vessels are usually lightened to 5.3m at springs for the passage between Foynes and Limerick.

**Tides—Currents.—**Although the River Shannon is said to enter the sea between Kerry Head and Loop Head, the tides and currents of the lower reaches up to the junction of the River Shannon and the Fergus River are those of a long deepwater inlet. The duration of rise and fall, and ebb and flood, are nearly equal, with little difference between the velocities of the ebb and flood. Above the junction of the rivers the characteristic river tides and currents are experienced, with a shorter duration of rise than of fall, and a shorter flood than ebb. The river tides and currents are fully developed off Limerick.

The currents in the estuary and river are greatly affected by the winds. South and W winds increase the velocity and duration of the flood and reduce the ebb. North and E winds have an opposite effect. After a prolonged period of heavy rain, the duration and velocity of the ebb is increased and the flood decreased. The effect is greatest off Limerick, but decreases gradually toward the mouth of the river.

Close outside the entrance and in the lower reaches of the river, the flood continues to set up to 30 minutes after local HW and the ebb sets up to 45 minutes after local LW.

South and W winds raise the sea level and N and E winds lower it.

**Pilotage.—**The Shannon Foynes Port Company Pilotage District comprises all navigable waters from the Sarsfield Bridge in Limerick to a line joining Loop Head and Kerry Head, including Foynes Harbor.

Pilotage is compulsory for vessels of more than 5,000 gross tons NE of a line joining Kilcredaun Point and Kilconly Point, 1.8 miles SE. Pilotage is compulsory for all vessels E of Scattery Island.

Pilots will normally board vessels with drafts of over 13m in

a position about 2 miles W of Ballybunnion Racon Buoy. The boarding grounds are, as follows:

1. Vessels over 20,000 gross tons—position 52°33.4'N, 9°43.8'W.
2. Vessels over 5,000 gross tons and less than 20,000 gross tons—position 52°35.4'N, 9°37.4'W.
3. Vessels of 5,000 gross tons and under—position 52°36.1'N, 9°28.6'W.

In SW gales, the pilot boat may direct vessels by VHF from a position NE of Beal Point.

The pilot station, located near Cappagh Pier, about 0.7 mile SW of Kilrush, is equipped with VHF radio (call sign: Shannon Pilots). Pilots listen on VHF channel 16 and work on VHF channel 11 when vessels are expected.

Shannon Pilots can be contacted, as follows:

1. Telephone: 353-65-9051027
2. Facsimile: 353-65-9051913

**Regulations.—**The vessel's ETA should be sent 24 hours in advance and subsequently amended as necessary. Tankers over 1,600 gt must confirm that the vessel is properly manned and that navigation equipment, machinery and structure are in good order.

Radio reporting points have been established E of Scattery Island. Eastbound vessels are required to contact the Shannon Reporting System when close S of Money Point. Westbound vessels should report from the calling-in-point N of Glin Pier.

**Contact Information.—**Shannon Ports Radio can be contacted, as follows:

1. Telephone: 353-69-73103
   353-87-2560427
   353-87-2542266 (after hours)
2. Facsimile: 353-69-65552
3. E-mail: marineops@sfpc.ie

## The River Shannon—Estuary

**3.35** Between the entrance of the **Cashen River** (52°29'N., 9°41'W.) and Ballybunnion Castle to the N, the high sand hills along the shore are conspicuous from the offing.

**Beal Point** (52°35'N., 9°37'W.) is marked by several conspicuous sandhills.

Loop Head, the N entrance point of the estuary, terminates W in a steep precipice, 55m in elevation. The sea breaks on two rocks, 59m high, lying close N of the head.

A light is shown from a prominent tower, 84m high, standing about 0.2 mile inside the extremity of the cape.

## The River Shannon—River Features

**3.36** **Carrigaholt Bay** (52°36'N., 9°42'W.), N of **Kilcredaun Point** (52°35'N., 9°41'W.), provides secure anchorage during W winds, but a short sea sets up with winds from the opposite quadrant. During SW gales, a long rolling swell sets in around Kilcredaun Point.

Vessels of moderate draft can take anchorage, in 9.1m, about 0.5 mile NNE of Kilcredaun Point, but the currents are strong. Small vessels can anchor farther N and closer inshore. Large vessels using this anchorage should moor due to the limited swinging room and strong currents.

**Scattery Island** (52°37'N., 9°31'W.) is noted for the remarkable ruins on its slopes. A conspicuous tower, 26m high, stands on the N part of the island. Hog Island lies about midway between Scattery Island and the mainland NE.

*Courtesy of the Commissioners of Irish Lights*

**Loop Head Light**

**Scattery Roads** (52°36'N., 9°30'W.) lies E of the S end of Scattery Island and provides sheltered anchorage during the prevailing W winds.

Large vessels can anchor, in depths of up to 11m, on the alignment of Rineanna Point and Kelcredaun Hill, bearing 260°, with the E end of Hog Island bearing 026°. Small vessels can anchor farther N to avoid the strong currents.

**3.37** **Kilrush** (52°38'N., 9°30'W.) (World Port Index No. 34200) is situated about 1.5 miles NE of Scattery Island. The harbor consists of Cappagh Jetty and Cappa Quay.

**Depths—Limitations.—**Kilrush Channel leads between Scattery Island and the mainland to the harbor and has a charted depth of 5.2m in the fairway. Vessels should keep to the SW side of the channel through the narrow passage E of Hog Island in order to avoid Wolf Rock.

Cappagh Pier has two berths alongside; the head is used by Shannon Pilots.

No. 1 berth is 51m in length, with a depth of 7.9m at MHWS; No. 2 berth is 46m in length, with a depth of 5.8m at MHWS.

Vessels of up to 3,000 dwt, with lengths of 100m and drafts of up to 5m, have been accommodated in the harbor.

The outer approach channel to the marina and marina berths is buoyed and dredged to a depth of 2.5m.

The minimum maintained depth within the marina basin is 2.7m.

**Aspect.—**Two conspicuous chimneys, 218m high, are situated on the N bank of the river about 3 miles SE of Kilrush at the Money Point Terminal.

**Money Point Terminal**

**3.38 Ballylongford Bay** (52°34'N., 9°28'W.), on the S side of the river, SE of Scattery Island, is shallow and suitable only for small craft. Anchorage can be taken, in about 12.8m, close N of the E entrance point of the bay.

**Ardmore Point** (52°35'N., 9°26'W.) lies on the S side of the river. Temporary anchorage can be taken, in 9.1 to 10.9m, in the small bay E of Ardmore Point, or in similar depths in the inlet about 1 mile ENE of Money Point, on the N side of the river in position 52°36'N, 9°24'W. Both anchorages must be approached with caution.

**Tides—Currents.—**The spring velocity of the flood current in mid-channel at the entrance of the River Shannon is about 2.5 knots and the ebb about 4 knots. The flood begins about 5 hours 20 minutes before HW at Galway and the ebb about 45 minutes after HW. Off Tarbert Island, the flood begins about 5 hours before HW at Galway and the ebb about 1 hour after HW.

Both currents decrease toward **Kilconly Point** (52°33'N., 9°40'W.), but the flood increases and the ebb decreases toward Kilcredaun Point. Near the shore, the flood attains a velocity of about 3.7 knots at springs.

Between the river entrance and Scattery Island, the spring velocity in both directions is about 3 to 3.5 knots in mid-channel. South of the island, the flood increases to 4 knots and the ebb to 4.5 knots. When the wind and current are in opposition, heavy overfalls develop in the channel N of **Carrig Shoal** (52°35'N., 9°30'W.). E of the island, the flood decreases to 3.5 knots and the ebb to 3.8 knots. Both currents set very strongly across the ridge W of Money Point. During W gales, overfalls develop when the ebb is setting. E of the bridge, the velocities decrease, but increase again between Tarbert Island and **Kilkerin Point** (52°36'N., 9°20'W.).

The currents set in about the direction of the channel, but divide E or W of Scattery Island depending on the flood or ebb, passing N and S of the island and reuniting at the other end.

**Money Point Terminal** (52°36'N., 9°25'W.) is located on the N shore of the river, about 3 miles E of Scattery Island. The terminal supplies the coal-fired power station situated nearby and consists of a jetty with a berthing length of 380m and a depth of 25m alongside at MLWS. The berth can accommodate vessels of up to 220,000 dwt, with drafts of up to 17m.

**3.39 Tarbert Island** (52°35'N., 9°22'W.), 1.5 miles SE of Money Point, is joined to the S shore by a causeway. The island is almost entirely occupied by a power station and its associated buildings. A ferry runs between a small pier at the SE end of the island and the N shore of the river.

**Depths—Limitations.—**At the W end of the island, a jetty extends NW for 317m to the tanker terminal, which consists of a breasting face 91m in length and mooring dolphins, forming

**Tarbert Island**

a berth 320m in total length. The terminal can accommodate vessels up to 250m long and 14m of draft.

**Aspect.—**A light is shown from a prominent tower, 18m high, standing at the outer end of a short causeway extending from the N side of the island.

Two conspicuous chimneys with elevations of 159 and 129m stand at the power station. Groups of conspicuous oil tanks stand near the W end of the island and on the mainland about 0.2 mile SW.

**Anchorage.—**Tarbert Road, SE of Tarbert Island, is one of the best anchorages in the River Shannon, being sheltered from the prevailing W winds. The holding ground is good, but the currents are strong. Anchorage should be taken as close to the edge of the flats as safety permits in order to avoid the currents.

In Tarbert Roads, large vessels can anchor, in about 10.6m, with Tarbert Island Light bearing 321° and the storehouses in Tarbert Village, at the head of the drying bight SW of Tarbert Road, bearing 240°. In the channel abreast of the anchorage, the flood sets at a velocity of 3 knots and the ebb at about 3.8 knots.

Boland's Rock (Bowline Rock), which dries 1.2m, lies close off the N shore, about 1.2 miles E of Tarbert Island and is marked by a beacon.

**Caution.—**After passing Tarbert Roads, the S side of the river should be approached with caution due to the shoals.

**3.40 Glin Village** (52°34'N., 9°17'W.), with Glin Castle W of it, is located about 3.2 miles E of Tarbert Village. A pier, reported to be in a state of disrepair, extends from the shore N of Glin Village. During S winds, small vessels can take anchorage, in 9.1 to 10.9m, E of the pier, or farther E, in about 7.3m.

Carrigeen Rocks, composed of drying boulders, lies about midway between **Garraunbaun Point** (52°35'N., 9°14'W.) and Coalhill Point (Loughel Point), about 1.5 miles ENE, and about 0.2 mile offshore.

**Labasheeda Bay** (52°37'N., 9°15'W.), on the N shore opposite Garraunbaun Point, is entirely covered by a mudflat which almost dries. The outer edge of the flat is steep-to, especially near the middle of the bay. The anchorage off the entrance of the bay is considered to be one of the best in the river for small vessels, especially with N winds. The holding ground is excellent. Anchorage can be taken E of the W entrance point, in 10.9 to 16.4m, or 12.8 to 20.1m farther NE. Care is necessary to avoid a detached 8.8m patch lying in about the middle of the latter anchorage.

**Tides—Currents.—**Off Tarbert Island, the flood attains a spring velocity of 3.5 knots in mid-channel and the ebb attains a velocity of about 4 knots. Off Rinealon Point, the flood be-

gins about 4 hours 45 minutes before HW at Galway and the ebb begins about 1 hour 15 minutes after HW.

The velocities of the currents remain constant between Tarbert Island and the meridian of **Red Gap Point** (52°36'N., 9°15'W.) to the E, but then decrease as the channel widens, and increase again in the vicinity of Rinealon Point.

In mid-channel the current usually sets in the direction of the channel, but in the bend off Glin Village both currents set toward the S shore. Off Rinealon Point, the flood sets toward Foynes Channel and the ebb toward the shore E of Coalhill Point.

Eddies form with both the ebb and the flood on both sides of the channel between Tarbert Island and Rinealon Point.

## Foynes Harbor (52°37'N., 9°06'W.)

World Port Index No. 34130

**3.41** Foynes Harbor lies between Foynes Island and the mainland. The harbor serves as a base for the servicing of offshore oil exploration, as well as a commercial harbor for the import and export of bulk and general cargo.

**Tides—Currents.—**Spring tides rise 4.9m; neap tides rise 2.2m.

The tidal currents run through Foynes Harbor and channel in about the direction of the channel; the spring velocity in both directions is about 3 knots. The ebb current forms eddies over the banks on both sides of the W entrance to the channel.

**Depths—Limitations.—**There are two entrances to the harbor, that from the W having a least depth over the bar of 7.8m, and that from E having a depth of 2.1m.

**Foynes Harbor**

Three deep-water jetties, designated West Jetty, East Jetty and Western Quay East Jetty, are located in the port.

Foynes Island Oil Terminal is located at the NW side of Foynes Island. The terminal consists of a jetty extending NW from the island, with a berth at its head. For berthing information see the table titled **Port of Foynes Port—Berth Information.**

**Aspect.—**The W entrance between the spit which extends 0.2 mile from the W extremity of the Foynes Islands, and the bank that fronts the shore of the mainland, is marked by lighted and unlit buoys. The entrance is indicated by a range and the white directional sector of the front range light.

**Port of Foynes Port—Berth Information**

| Berth | Length | Depth | Maximum Vessel | | | Remarks |
|---|---|---|---|---|---|---|
| | | | LOA | Draft | Beam | |
| **Aughinish Aluminum Jetty** | | | | | | |
| 1 (Outer) | 285m | — | 225m | 12.5m | 33m | Aluminum exports and bauxite. Can accommodate vessels up to 80,000 dwt. |
| 2 (Inner) | 180m | 11.5m | 180m | 11.0m | — | Aluminum and bauxite. Can accommodate vessels up to 40,000 dwt. |
| **Shannon Airport** | | | | | | |
| Jetty | 130m | 7.0m | — | — | — | Aviation fuel. T-shaped berth. Can accommodate vessels up to 6,500 dwt |
| **Western Quay and Eastern Jetty** | | | | | | |
| 1 | 143m | — | — | — | — | General and bulk cargo. |
| 2 | 271m | 12.0m | — | — | — | General and bulk cargo. |
| 4 | 271m | 8.5-11.0m | — | — | — | General and bulk cargo. |
| 5 | 142m | 6.5m | 137m | — | — | General and bulk cargo. |
| 6 | 295m | 12.0m | — | — | — | General and bulk cargo. |

| Port of Foynes Port—Berth Information | | | | | | |
|---|---|---|---|---|---|---|
| Berth | Length | Depth | Maximum Vessel | | | Remarks |
| | | | LOA | Draft | Beam | |
| **Multi-purpose Berths** | | | | | | |
| Money Point Jetty | 380m | 11.0m | 290m | 20m | — | Coal and fuel oil. Can accommodate vessels up to 6,500 dwt |
| Limerick Dock | 914m | 8.0m | 152m | — | — | Dry and break bulk. Liquid special cargo |
| **Tanker Berths** | | | | | | |
| Tarbert Island Jetty (Power Station) | 317m | 14.6m | 250m | 14.om | 28m | Heavy fuel oil. Can accommodate vessels up to 80,000 dwt. |
| Ted Russell Dock | 914m | — | 152m | — | — | Petroleum products |
| Foynes Island Oil Terminal | 9.5 | — | — | — | — | Two dolphins connected to shore by a walkway 35m apart, with mooring facilities at each end. Berths are rail served. |
| Foynes No. 7 | 162m | 6.5m | 100m | 16m | 6.0m | Aviation fuel, LPG, clean products, and dirty products. |
| Shannon Jetty | 130m | — | 117m | 7.om | — | — |

The E entrance channel is available only to small craft with local knowledge.

A conspicuous memorial cross stands on the high ground to the S of the West approach channel. A prominent hospital building with a flat roof stands close S of the West Pier.

Vessels departing Foynes Harbor during periods of darkness or restricted visibility should use the white sector of Shannakea Beg Light which leads 288° through the W entrance into the River Shannon.

**Pilotage.—**Pilotage is compulsory. Pilots board at the entrance to the W entrance channel for vessels entering Foynes Harbor.

For further information, see paragraph 3.34.

**Contact Information.—**See paragraph 3.34.

**Anchorage.—**Vessels awaiting the tide or a berth at Foynes usually anchor outside the W entrance, about 0.6 mile NE of **Mount Trenchard** (52°36'N., 9°09'W.).

The best anchorage for small vessels is abreast the village, in 10.9 to 12.8m, or farther E, in 3.6 to 9.1m, close S of Foynes Island.

**Caution.—**A lighted buoy marks the extremity of a spit, with depths of less than 15m, extending across the river NW from Foynes Island.

**3.42** Aughinish Shoal, with a least depth of 5.2m, lies about 0.7 mile NW of **Aughinish Point** (52°38'N., 9°04'W.), the N extremity of Aughinish Island. Patches with depths of 7.6 to 8.2m lie N and NE of the shoal and are marked by lighted buoys.

**Aughinish Marine Terminal** (52°39'N., 9°03'W.) is located at the N extremity of Aughinish Island about 1.5 miles NE of Foynes Island. The terminal serves an alumina extraction plant which is situated on Aughinish Island. The terminal consists of an L-shaped jetty extending 1,000m N of the island, with an outer berth having a depth of 12.4m alongside at LWS and an inner berth having a depth of 11m at LWS. Vessels of up to 235m in length and 12.5m draft can be accommodated at the outer berth; vessels of up to 180m in length and 11m draft can be accommodated at the inner berth.

Two conspicuous chimneys, 83 and 124m in elevation, stand at the alumina plant with three prominent large bauxite storage buildings nearby.

**Herring Rock** (52°38'N., 9°02'W.), which dries, lies about 0.8 mile E of the terminal jetty. Shoals extending 0.2 mile N from the rock to the S side of the main river fairway are marked by a lighted buoy.

Beeves Rock lies on the N side of the main channel leading up the River Shannon a little more than 1.5 miles ENE of Aughinish Island. A light is shown from a prominent stone tower, 12m high, standing on the rock.

Cork Rock and Wide Rock lie at the outer end of foul ground extending NW and NNE from Beeves Rock.

The Fergus River, entered about 1.5 miles NE of Beeves Rock, is navigable only by coasters and small craft.

**3.43** Above the Fergus River, the River Shannon shallows and is obstructed by rocks and flats. Navigation is possible only near HW.

Beagh Castle, a conspicuous ruin, stands on a point on the S side of the river, about 2.7 miles ENE of Beeves Rock Light.

**Shannon Airport Oil Jetty**

The Shannon Airport control tower is conspicuous and stands on the N bank of the river about 2.5 miles E of the entrance to the Fergus River.

**Shannon Airport Oil Jetty** (52°41'N., 8°55'W.) is situated on the N shore of the river about 2.7 miles E of the entrance to the Fergus River and serves as the jet fuel terminal for Shannon Airport, 1 mile N. The terminal consists of an L-shaped jetty, with a depth of 7.9m alongside at LWS. Vessels of up to 6,500 dwt, with a maximum length of 115m and a maximum draft of 7m, can be accommodated alongside the jetty head.

**The Middle Ground** (52°41'N., 8°53'W.), a long, narrow, drying shoal, lies in the middle of the river and extends about 4.5 miles E of Dernish Oil Terminal.

North Channel lies between Middle Ground and the drying coastal bank N. The channel has a least depth of 2.1m in the fairway and is marked by lights and buoys. Lighted beacons, in range 093°, lead through the E part of North Channel. The front beacon stands about 0.5 mile ENE of **Sod Island** (52°41'N., 8°51'W.); the rear beacon stands on Quay Island (Cain's Island) in position 52°41'N, 8°49'W.

**South Channel** (52°40'N., 8°53'W.), entered S of Middle Ground, is obstructed in its W entrance by The Flats, a long narrow shoal with depths of 1.5 to 1.8m. Waller Bank, awash at its N end, lies close E of this shoal. The preferred channel passes N of these obstructions and has depths of 1.8 to 2.1m. North Channel is marked by lights and buoys.

**3.44 Bridge Rock** (52°40'N., 8°53'W.), a drying ledge lies across Middle Ground and is marked by a lighted buoy to the N. Hall's Rock, awash and marked by a green buoy, lies 0.2 mile S of Bridge Rock.

**Quay Island** (52°41'N., 8°49'W.), with ruins of a pilot lookout tower near its S end, lies close off the N shore at the mouth of the Bunratty River. Vessels bound for Limerick change pilots here.

The River Maigue flows into the River Shannon from the S shore opposite Quay Island. Anchorage can be taken, in about 5.5m, off the river entrance, with the E extremity of Quay Island in range 354° with Bunratty Castle (52°42'N., 8°49'W.).

**Battle Islet** (52°40'N., 8°48'W.) lies in the middle of the River Shannon, about 0.5 mile SE of the mouth of the River Maigue. Both the islet and the bank on which it lies dry at low water. Navigable channels pass on both sides of the islet, but the deeper S channel is preferred.

**Logheen Rock** (52°40'N., 8°48'W.), which dries, lies close W of the drying bank which extends NW from Battle Islet.

**Spilling Rock** (52°40'N., 8°47'W.), on the outer edge of the drying coastal bank, about 0.5 mile SE of Battle Islet, has a 2.7m rocky patch close N of it and several rocky heads W of it.

Hogshead and Slate Rock, both drying, lie on the outer edge of the drying flats N of Spilling Rock. Dead Woman's Hand, a rocky 1.5m patch, lies about midway between Slate Rocks and Spilling Rocks.

**The Scarlets** (52°40'N., 8°46'W.), an extensive rocky shoal with a tower on its S part, obstruct the S half of the navigable channel about 1.5 miles ENE of Battle Islet. The Whelps, a long bank of sand and mud with several drying rocks, lie in the middle of the channel close NE of The Scarlets.

The channel leads N of The Scarlets and Whelps, the greatest depths being found along the drying bank fringing the N shore.

Lighted beacons, in range 061°, lead through the channel N of The Scarlets and The Whelps. A light is shown on the N side of The Whelps from a rocky projection known as Ball of the

Whelps. A light is shown from Flagstaff Rock, on the N side of the channel, about 0.5 mile E of Ball of the Whelps.

Kippen, Ardbane, Cratloe, and Horrils Rocks lie on the N side of the channel between Flagstaff Rock and Meelick Rocks, about 1.4 miles ESE. Flagstaff Rock Light, in range 302°, astern, with the rear light of the range leading N of The Scarlets and The Whelps, leads S of Ardbane Rock. Meelick Rocks Lighted Beacons, in range 106°30', lead S of Horrils Rock.

Temporary anchorage can be taken, in depths of 2.4 to 4.2m, S of Meelick Rocks; small vessels finding they cannot reach Limerick with the tide anchor here.

The channel above Meelick Rocks narrows to a width of about 135m and maintains this width almost as far as Limerick.

Coonagh Point lies on the N shore, 0.2 mile NE of Braemar Point.

Cock Rock, a mass of rock on a gravel bed, extends about 275m into the channel from the W shore about 0.2 mile S of Coonagh Point. The fairway E of this rock is about 72m wide.

Lights are shown at Clonmacken, on the N shore, about 0.7 mile NE of Braemar Point, and at Spillane's Tower, on the S shore, nearly 0.8 mile ESE of Clonmacken.

Barrington's Quay, on the N shore, about 0.2 mile NE of Spillane's Tower, dries at its outer end. Between Spillane's Tower and Barrington's Quay there is a ledge of limestone rocks with a depth of 0.9m which extends nearly across the channel from the S shore.

The channel reach between Barrington's Quay and Limerick has general depths of 1.2 to 1.5m and is known as "The Pool."

From the entrance of the River Shannon to its junction with the Fergus River, the tides and currents rise and fall normally with no great differences between the durations and velocities of the ebb and flood. Above the junction of the rivers, the characteristic river tides and currents develop rapidly.

High water occurs off Limerick about 1 hour 20 minutes after HW at Galway, and LW about 4 hours 30 minutes before HW at Galway. The actual time of LW, however, is uncertain for the tide falls regularly for about 6 hours. This fall is followed by a period of 2 to 2 hours 30 minutes with no tidal movement. The tides begin to rise about 2 hours 45 minutes before HW at Galway and rise very rapidly in the first hour, with a rise of up to 2.1 to 2.5m at springs.

The flood begins with a sudden rush as the tide begins to rise. After the first hour, as the drying banks in the river cover, the velocity decreases and remains moderate until after HW at Limerick. The ebb begins about 1 hour 45 minutes after HW at Galway and sets at a moderate velocity for about 3 hours to 3 hours 30 minutes, but increases and sets strongly for about 2 hours as the river banks dry, after which time there is little or no current.

The currents off Limerick are greatly affected by rainfall in the area drained by the river. After a long period of heavy rainfall, both the duration and velocity of the flood is reduced at springs, the only noticeable flood occurring during the first rush. At neaps, there may be no flood.

## Limerick (52°40'N., 8°38'W.)

World Port Index No. 34110

**3.45** The port of Limerick, located 45 miles up the River Shannon and 95 miles SW of Dublin, is one of the principal W outlets of the extensive inland waterways of the country.

**Tides—Currents.—**The tidal rise is about 5.7m at springs and 3.4m at neaps.

**Depths—Limitations.—**The harbor is formed by the city reach of the River Shannon and a wet dock situated on the S side of the river.

Tidal quays totalling 457m in length are located along the S side of the reach. Charted depths in this part of the river are 0.2 to 2.1m. The quays are mainly used by coastal vessels of up to 1,000 dwt which lie aground on soft mud at LW.

Limerick Dock is a wet dock entered through an entrance 21.3m wide with depths over the sill of about 7.0m at MHWS and 5.2 at MHWN. The dock gates are usually open from 2 hours before HW to HW.

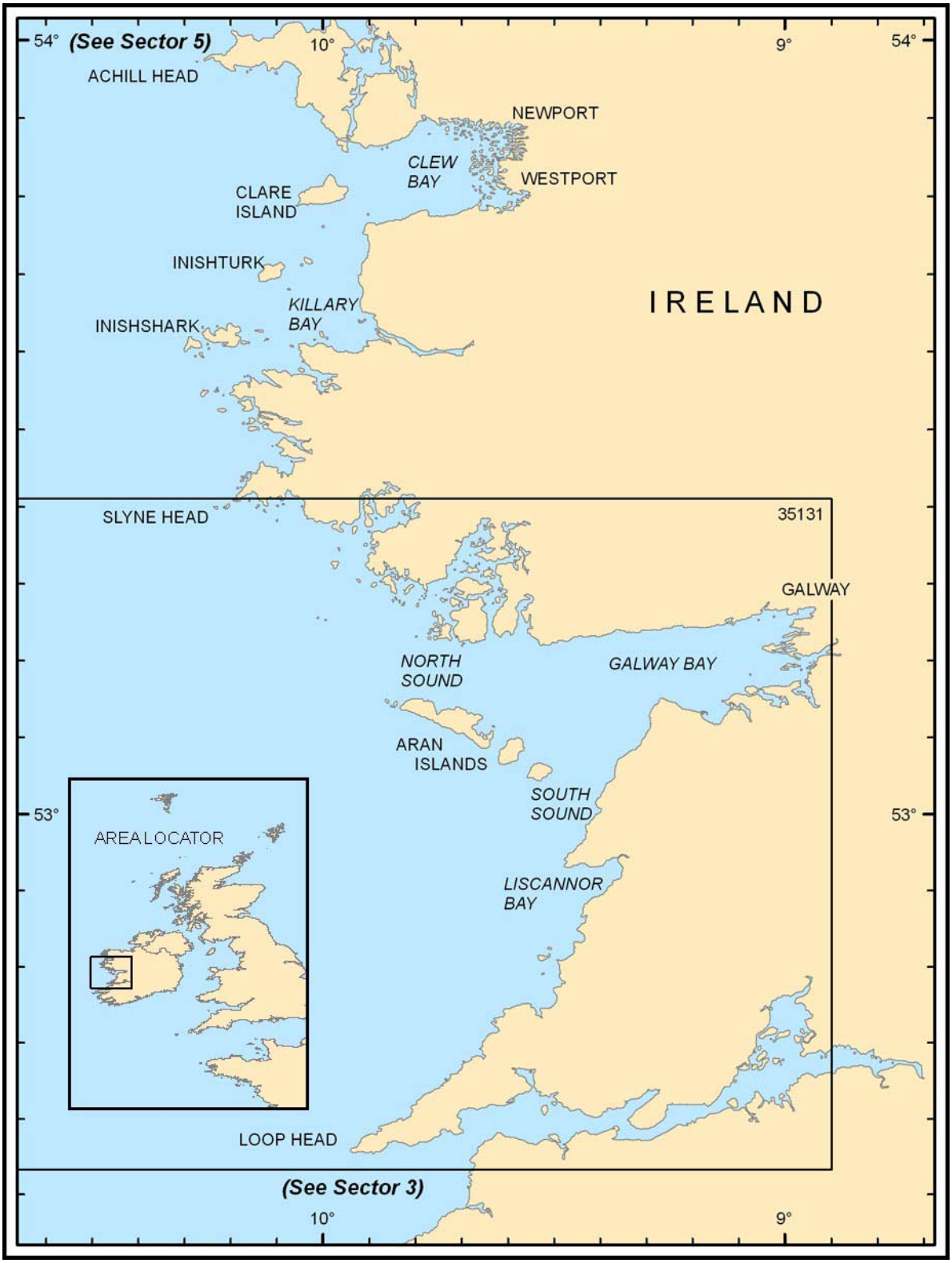
There are ten berths within the wet dock, with alongside maintained depths of 5.5 to 6.0m.

Vessels exceeding 3,000 dwt enter at HW in daylight only. Vessels with drafts of up to about 5.8m use the dock at springs. Vessels of up to 12,000 dwt, 152m in length, and 19m beam, with suitable drafts have entered the dock, but it is mainly used by vessels of up to 4,000 dwt.

**Pilotage.—**Pilotage is compulsory from Scattery Island to Limerick.

**Contact Information.—**See paragraph 3.34.

**Caution.—**A bridge crosses the river from Russell's Quay, 0.5 mile above the entrance, to Limerick Dock. The span is 16m wide and has a vertical clearance of 3.3m.

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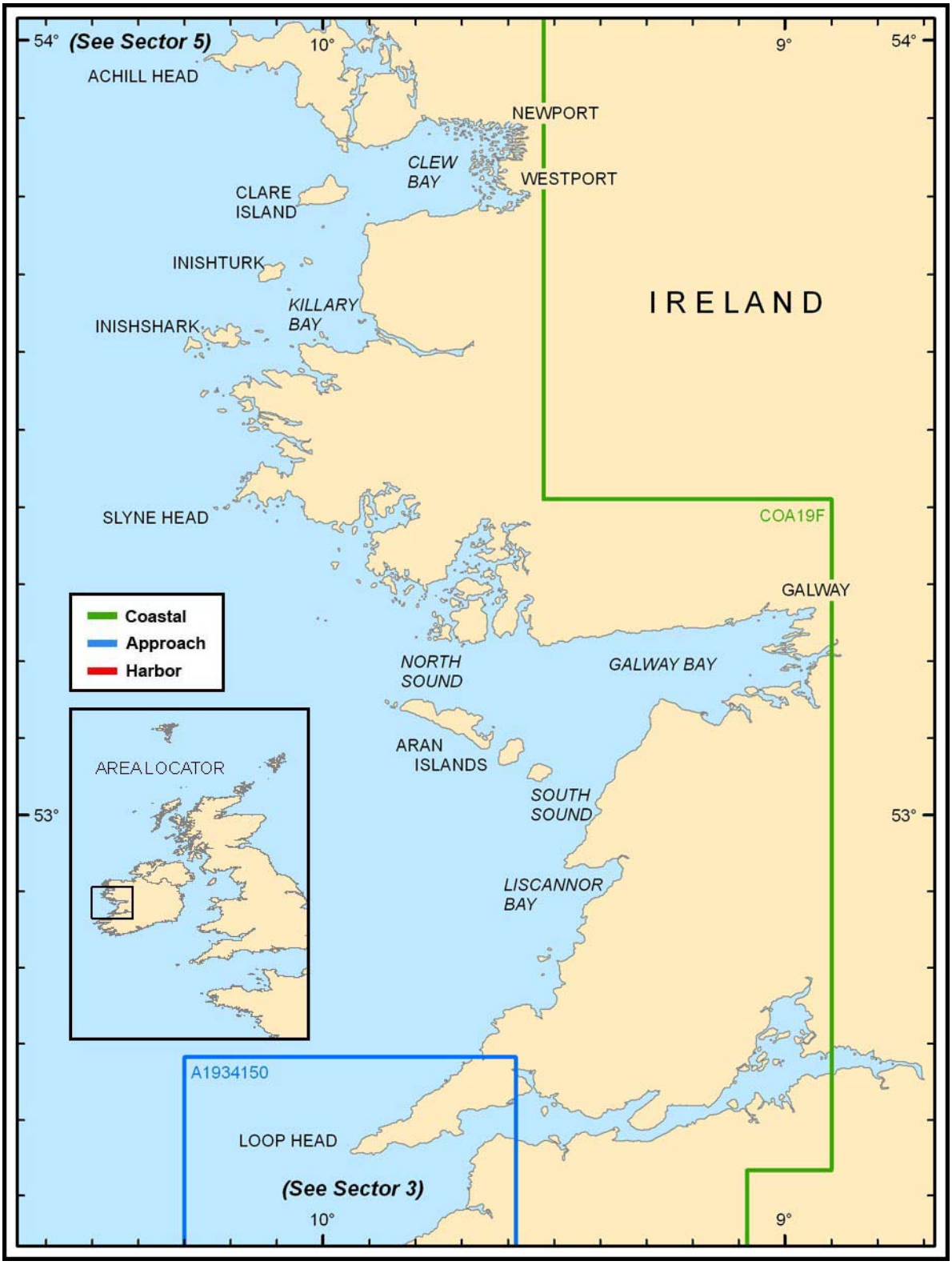
SECTOR **4** — CHART INFORMATION

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SECTOR 4 — DNC LIBRARY INFORMATION

# SECTOR 4

## WEST COAST OF IRELAND—LOOP HEAD TO ACHILL HEAD

**Plan.—**This sector describes the W coast of Ireland between Loop Head and Achill Head (53°58'N., 10°15'W.); the sequence of description is from S to N.

## General Remarks

**4.1** The W coast of Ireland between Loop Head and Achill Head, about 88 miles N, is of moderate elevation in its S part, but rises to peaks in excess of 610m in its N part. The Aran Islands, extending across the approaches to Galway Bay, serve as a buffer against the heavy Atlantic swell. Achill Island is the largest island off the Irish coast. A peak on the N side of Achill Island rises to an elevation in excess of 610m.

**Depths—Limitations.—**The depths are fairly regular in the approaches to the coast between Loop Head and Slyne Head (53°24'N., 10°14'W.), but in thick weather a vessel should not proceed in depths of less than 90m unless certain of its position.

**Caution.—**Between Slyne Head and Achill Head, in thick weather, it is not advisable to proceed to less than 100m unless certain of the position as this depth is found about 2 miles W of Inishshark Island.

Oil platforms and exploration vessels may be encountered off the W coast of Ireland.

## Off-lying Islands and Dangers

**4.2** The **Aran Islands** (53°07'N., 9°40'W.) form an island chain across the approach to Galway Bay to which they serve as a barrier to the Atlantic swell.

Inishmore Island, the largest of the islands, appears from seaward to be bordered by vertical cliffs. At the E end the land slopes from its summit in a succession of abrupt ledges and terraces. The W part of the island rises to an elevation of 104m. The central and largest part of the island is also the highest with an elevation of 118m. The conspicuous ruin of an old lighthouse stands on the summit with an ancient fort located close E of it.

A low neck of land separates the central part of the island from the W part, which, from a distance, gives the impression of Inishmore Island being two islands.

Portmurvy indents the N shore of Inishmore Island with its head in the depression formed by the central and NW parts of the island. The inlet affords anchorage for small vessels, in depths of 7m, near the head. It can be used in fine weather, but a swell sets in.

Straw Island, 11m high, is located about 0.5 mile N of the NE extremity of Inishmore Island. A light is shown from the island.

**4.3** **Killeany Bay** (53°07'N., 9°39'W.) is entered between Straw Island and Carrickadda Point 1 mile WNW. It is available to vessels of moderate draft, but during NW gales a heavy swell sets in. The entrance is obstructed by Bar of Aran, a narrow ridge with a depth of about 3.4m extending from Carrickadda Point. The entrance channel between the bar and the foul ground extending from Straw Island has a least depth of 7.3m in the fairway, increasing to 9.1m a short distance within, then decreasing gradually to the shore.

Vessels with drafts of 3.7 to 5.5m should anchor 0.7 mile W of Straw Island, in a depth of 8.2m with Carrickadda Point bearing 348° and the old fort on the summit of Inishmore Island bearing 285°.

The **Brannok Islands** (53°09'N., 9°51'W.), a group of five islets, 12m high, lies 0.5 mile W of the W extremity of Inishmore.

**Rock Island** (Eeragh) (53°09'N., 9°51'W.), the W of the Aran Islands, lies 1 mile W of the W extremity of Inishmore. A light is shown from a prominent tower, 31m high, standing on the island.

**Inishmaan Island** (53°05'N., 9°35'W.), 80m high, lies about 2 miles SE of the E extremity of Inishmore. Vertical cliffs, 37m high, stand at the SW side of the island. A conspicuous ancient fort stands on the summit of the island.

**4.4** **Inisheer Island** (53°03'N., 9°32'W.), the most SE of the Aran Islands, lies about 1.2 miles SE of Inishmaan Island and rises to an elevation of 55m. A light is shown from a prominent tower, 34m high, standing at the SE extremity of the island. A floating marine farm has been established about 1 mile N of Trawkeera Point, the E point of Inisheer Island.

Finnis Rock lies at the E extremity of foul ground extending about 0.8 mile E from Inisheer Island and is marked by a lighted buoy.

**Gregory Sound** (53°05'N., 9°37'W.), 1 mile wide at its narrowest part, is deep and separates Inishmaan Island from Inishmore Island. It is used by fishing vessels.

Foul Sound, with a navigable channel 1 mile wide, is deep and separates Inisheer Island from Inishmaan Island.

The currents in the vicinity of the Aran Islands are negligible except those through Gregory Sound and Foul Sound. The currents in both sounds follow the directions of the channels at a velocity of 1.5 knots at springs.

**Inishshark Island** (53°37'N., 10°17'W.) rugged and precipitous, is the outermost island of a group lying about 4 miles NW of **Cleggan Point** (53°34'N., 10°08'W.). Its W side is deeply indented with fissures. Kimmeen Rocks lie about 0.5 mile W of the SW extremity of the island. An islet, 17m high, lies on the rocks and shoals which extend about 1 mile S from the SE shore of the island. Mweemore, a rock with a depth of 7.6m, lies about 1.5 miles S of the island and is the southernmost danger.

**4.5** **Inishbofin** (53°37'N., 10°13'W.) lies with its W end about 0.5 mile E of Inishshark Island. The island rises to three peaks of almost equal elevation, the highest rising to 85m near the W end. Rusheen Bay indents the E side of the island and anchorage can be taken by small vessels, in 5.5m, near the

head. A small boat harbor is situated on the S side of the island.

Inishlyon, 39m high, lies about 0.5 mile E of the SE end of Inishbofin. A light is shown from a structure standing at the E extremity of the island.

Lecky Rocks, 7m high, lie about 1.5 miles E of Inishlyon Light.

Davillaun, 24m high, with a rock which breaks located about 0.5 mile E, lies 1.2 miles NE of Inishbofin Light.

Carrickmahoy, a rock which breaks heavily at times, lies about 0.7 mile S of Inishbofin Light and is the most dangerous rock in the channel between the islands and the mainland SE.

The currents in the channel between Inishbofin and the mainland set in the direction of the channel. The current setting NE begins about 3 hours 30 minutes before HW at Galway; the opposite current begins about 2 hours 45 minutes after HW at Galway. The spring velocity in both directions is about 1.5 knots, but greater off the E end of Inishlyon.

**4.6** **Inishturk** (53°42'N., 10°06'W.) lies about 5 miles NE of Inishbofin. The summit rises to an elevation of 187m and has a prominent ruined tower standing on it. The steep and rocky coasts are bordered by cliffs, which attain an elevation of about 132m on the W side.

Anchorage can be taken in a bay on the E side of the island, protected from W winds. The best berth lies about midway between the entrance points, in 9.1 to 10.9m, good holding ground. Small vessels may anchor farther in.

Caher Island, about 1.5 miles E of lnishturk, has a somewhat peaked summit, 57m high; its NW extremity terminates in a bold cliff about the same height. Ballybeg, 17m high, lies close SW of the island. The best landing is at Caher Point, the SE extremity of the island. Portatemple, close NW, is a small sandy cove.

Inishdalla, 22m high, lies about 1.5 miles SE of the SE end of Inishturk. The small island is grassy and has a drying rock lying close SW of it.

**Clare Island** (53°48'N., 10°00'W.), the most imposing feature in the approach to Clew Bay, lies in the middle of the entrance about 4 miles N of Caher Island; its summit, 459m high, rises from the sheer cliffs along its NW side. Viewed from this direction it presents the appearance of a tabular mountain, dipping slightly W and terminating in a bluff point with the ruins of a tower standing on it. The mountain descends to the N extremity of the island on which stands a disused light tower. Calliaghcrom Rock lies about 0.5 mile N of the N extremity of the island. Two Fathom Rock, over which the sea breaks heavily in bad weather, lies 0.5 mile NNW of the NW extremity of the island.

Anchorage can be taken by small vessels, in about 5m, in a sandy bay on the SE side of Clare Island. The bay is exposed to S winds and the holding ground is poor.

Large vessels can anchor temporarily in the bay between Kinnacorra Point, the E extremity, and the N extremity of Clare Island, in a depth of 18m, mud.

## Loop Head to Galway Bay

**4.7** Between Loop Head and **Cape Cancregga** (52°56'N., 9°28'W.), the S entrance point of Galway Bay, the coast is of moderate elevation, but exposed to the full force of the Atlantic swell. There is no safe anchorage throughout its entire extent. In thick weather, a vessel should not approach within a depth of 100m.

Mount Cahercroghaun Hill, 79m high, rises about 1.7 miles NE of Loop Head and provides a good landmark.

The ruins of a castle on a hill about 0.8 mile E of Trusklieve Point (52°38'N, 9°46'W) are easily identified.

**Bishop's Island** (52°40'N., 9°42'W.), precipitous on all sides and high, has two old dome-shaped buildings standing on its summit.

Moore Bay (Kilkee Bay), about 12 miles NE of Loop Head, is open to the NW, but protected by Duggerna Rocks which extend from the S shore. Black Rocks, steep-to and drying, lie farther N with some detached rocks in between. Drying reefs fringe the shores and a sandy flat extends from the head of the bay.

The narrow entrance channel into the bay lies between the above rocks and a drying rock off the N entrance point. Depths decrease from 10.9 to 12.8m in the entrance to 5.5m about 0.8 mile farther in. Only vessels with local knowledge should attempt to enter.

Ballad Tower stands on the cliffs E of Leamconor Point (52°44'N, 9°37'W) and is conspicuous from the offing.

**4.8** **Mal Bay** (52°50'N., 9°31'W.), entered between Killard Point and Cape Cancregga, about 6 miles NNE, is exposed to the W and always subject to a heavy swell. Doonbeg Bay, in the S part of Mal Bay, is encumbered by rocks and open to the N, but during the summer affords temporary anchorage to fishing vessels.

Mutton Island, with the ruins of a tower on its W end, lies at the outer edge of foul ground extending W from Lurga Point (52°48'N., 9°29'W.). During SW gales, small vessels can take temporary anchorage, in 4.5m, about midway between the pier on Lurga Point and a drying rock to the N.

**Slieve Callan** (52°50'N., 9°16'W.) rises to an elevation of 386m and is a conspicuous landmark.

Liscannor Bay indents the coast between **Ship Point** (52°53'N., 9°26'W.) and Cape Cancregga to the NNW and is exposed to the full force of the Atlantic swell. No shelter is provided with onshore winds. With offshore winds, small vessels can take temporary anchorage, in 5.5m, off the village on the N side of the bay.

Between Loop Head and Moore Bay, the currents follow the direction of the coast. The spring velocity in both directions is about 1 knot.

The offshore currents, about 6 miles NNE of Loop Head, set E and SW at a velocity of 0.5 knot.

The offshore currents about 8 miles WSW of Cape Cancregga set N and SW at a velocity of about 0.3 knot.

## Galway Bay

**4.9** Galway Bay may be considered as those waters within Cape Cancregga and Golam Head, about 21 miles NW. Although possessing several snug inlets available for small vessels, the bay affords no sheltered anchorage for deep-draft vessels during W winds.

The Aran Islands, previously described beginning in paragraph 4.2, serve as a barrier against the heavy swell of the

ocean and protect the bay.

The principal approaches are through South Sound, between the SE end of the Aran Islands and the mainland to the E, or through North Sound, between the NW end of the Aran Islands and the mainland to the N.

**Tides—Currents.—**The currents are not strong in Galway Bay. The directions of the currents, and the times at which they begin, are stated to depend to a great extent on the wind. The sea level is also considerably affected by the wind.

The flood begins in North Sound, South Sound, and Galway Bay approximately 5 hours 20 minutes before HW at Galway. The spring velocity in both directions in South Sound is about 1 knot, and less in North Sound. Over Inverine Bank, the velocity does not exceed 1 knot at springs.

**Directions.—**A vessel bound for Galway may enter the bay by any of the passages between the Aran Islands. During heavy weather, North and South Sounds are preferred, but the other passages are available. Care should be taken to avoid Finnis Rock if South Sound is used, and Brocklinmore Bank if North Sound is used.

From a position about 3 miles W of Tearaght Island (52°05'N., 10°40'W.), a course of 039° over a distance of 85 miles leads to a position about 1.5 miles NW of Black Head. Then a course of 063° for a distance of 7.2 miles leads to the lighted whistle buoy moored off the W end of Margaretta Shoal. This track passes over a least charted depth of 14.6m.

From a position about 5 miles WSW of Slyne Head (53°24'N., 10°14'W.), a course of 126° for a distance of 20 miles leads to a position about 3 miles NW of Rock Island. Then a course of 063° for a distance of 7.2 miles leads to the lighted whistle buoy moored off the W end of Margaretta Shoal. This track passes over a least charted depth of 14.6m.

**4.10 Hag's Head** (52°57'N., 9°28'W.) is situated 1 mile N of Cape Cancregga. A conspicuous tower stands on the head. The cliffs of Moher are a prominent feature of the coast in the vicinity NE of Hag's Head. A prominent tower in ruins stands on the shore about 2 miles NE of Hag's Head and a remarkable pillar rock, 61m high, stands close to the coast below it.

**Doolin Point** (53°01'N., 9°24'W.) is located about 4.7 miles NE of Hag's Head. Crab Island, 8m high and bordered by foul ground, lies close off the point. A pier for small craft is located close SE of the point leeward of the island.

A prominent castle in ruins stands about 1.2 miles SE of Doolin Point.

With offshore winds, small vessels can anchor, in 9.1m, about 0.3 mile offshore abreast some sand hills at the mouth of the Murroogh River (53°07'N., 9°17'W.).

**Black Head** (53°09'N., 9°16'W.) is a bold prominent headland which rises steeply to Doughbranneen, a conspicuous hill, 312m high, about 1 mile SSE. A light is shown from a tower, 20m high, standing on the headland.

A conspicuous castle is situated about 2.3 miles SE of the headland.

Anchorage can be taken, in 10.9 to 12.8m, with the castle bearing 148° and Black Head bearing less than 277°. Small vessels can anchor farther in, but should bear in mind that a shift of wind to the N may make the anchorage untenable.

The S side of the bay extends about 12 miles E to the head. The shore is indented with several shallow inlets and bays which dry and are encumbered with sandbanks. The S side of the bay is used by boats and small craft.

**4.11 Golam Head** (53°14'N., 9°46'W.), the N entrance point of Galway Bay, is the W extremity of a small islet with the conspicuous ruins of a tower on its summit.

During stormy weather, seas break heavily on the off-lying rocks and shoals in the vicinity of Golam Head and over the banks extending N from Inishmore. The coast between Golam Head and Galway is mostly low-lying and featureless, but a number of inland heights may be identified.

Greatman's Bay, about 5 miles E of Golam Head, is entered between **Trabaan Point** (53°14'N., 9°39'W.) and Keeraun Point, nearly 1.2 miles E. The currents in the entrance and in the narrows to the N attain a velocity of about 2 knots in both directions at springs. Small vessels with local knowledge can anchor about 2 miles within the entrance, but it should not be attempted by those without local knowledge.

Cashla Bay, about 2 miles E of Greatman's Bay, is entered between Killeen Point and Cashla Point about 1.2 miles E. The bay extends for about 3 miles N and is easy of access. It provides secure anchorage for small vessels in all winds and sea. Larger vessels can anchor in the outer part of the bay, but it is exposed to S and SW winds.

A rock fringed by foul ground lies in the center of the outer approach and is marked by a beacon. The main entrance channel lies W of the rock and is indicated by a directional light and a lighted buoy. The channel is about 0.2 mile wide with depths of 14m.

Rossaveel is a small fishing harbor situated on the NE side of the bay. Pilotage is not compulsory. Vessels of 30m loa or more, and which are restricted in their ability to maneuver, may request pilotage by contacting the harbormaster. The harbormaster monitors VHF channels 12, 14, and 16; pilots are available on these same channels. The pilot boards in position 53°13.7'N, 9°34.6'W.

Anchorage can be taken, in depths of 9.1 to 10.9m, abreast of the tower on the E side of the bay, about 1 mile above **Cashla Point** (53°14'N., 9°33'W.).

Small vessels can anchor, in a depth of 5.5m, in the upper part of the bay, but caution is necessary to avoid a drying rock in the fairway above the narrows.

**Caution.—**A submarine cable, which is shown on the chart, lies between the entrance of Cashla Bay and the Aran Islands.

**4.12 Cruckdough** (53°17'N., 9°29'W.), a 157m high hill, rises about 4 miles NE of Cashla Point and is conspicuous from the offing.

**Mutton Island** (53°15'N., 9°03'W.), low and rocky, lies at the outer end of a rocky flat extending from the N shore; the island and the flat form the W side of Galway Outer Harbour. A conspicuous disused light tower, 10m high, stands near the center of the island.

**Hare Islet** (53°15'N., 9°01'W.), low and cliffy on its W side, lies on the E side of the entrance of Galway.

**Black Rock** (53°14.5'N., 9°07'W.), on which stands a beacon, which has a red metal, cage topmark, is marked by Black Rock Lighted Buoy.

**Caution.—**It has been reported that vessels navigating with radar have mistaken the beacon on Black Rock for Black Rock

Lighted Buoy; mariners are cautioned to positively identify these features.

## Galway (53°16'N., 9°03'W.)

World Port Index No. 34060

**4.13** The port of Galway is located at the head of Galway Bay, in a shallow inlet, just within the mouth of the River Corrib. The port consists of a town and an inner and outer harbor with berthing facilities in the former. Galway Dock, the inner harbor, is a wet dock controlled by a tide gate. The port provides services to the oil and gas exploration industry.

**Port of Galway Home Page**

http://www.galwayharbour.com

**Tides—Currents.—**Spring tides rise 4.5m; neap tides rise 1.9m.

**Depths—Limitations.—**The dredged channel leading from the entrance of the outer harbor between Mutton Island and Hare Island up to the inner harbor is about 79m wide, with a charted depth of 3.4m.

The largest vessels can enter the roadstead and lie at anchor there.

Entry into the harbor is restricted to 2 hours before HW until HW only. The maximum size vessel that can enter is governed by the depth on the sill of 8.5m at springs and 7.3m at neaps. The width of the dock gates is 19.8m and the length of the turning area is 146m.

Vessels of up to 10,000 dwt with lengths of 137m and drafts of up to 7.9m at springs and 6.7m at neaps, have been accommodated in the harbor.

**Aspect.—**A directional light, shown at an elevation of 9m from a tower, stands about 0.8 mile E of Mutton Island and indicates, along with lighted buoys, the fairway leading from seaward between the dangers. When vessels have approached to within 0.2 mile of the tower, a directional light standing on the shore about 0.5 mile E of the dock, indicates a fairway which passes to the NW of the light and leads for a short distance to the outer end of a dredged channel to Galway Dock. The dredged channel to the dock entrance is indicated by a directional light.

A conspicuous radio mast, 93m high, stands at the head of the bay about 2.7 miles ESE of the dock entrance. A conspicuous large round ore silo stands close NE of the dock entrance. A prominent church spire with illuminated clock face stands close NW of Galway dock and the prominent dome of the cathedral stands close NW of the spire.

**Pilotage.—**Pilots are stationed at Inisheer and Killeany Bay in the Aran Islands and will board when pilotage signals are displayed. Pilotage is not compulsory from the Aran Islands to the roadstead, but is compulsory from the roadstead into the inner harbor. Harbor pilots board in the roadstead, about 0.5 mile SSW of Mutton Island tower, 3 hours before until HW. Vessels arriving at other times should anchor SW of Mutton Island.

The vessel's ETA should be forwarded not less than 24 hours prior to arrival, stating whether outer or inner pilots are being requested. ETA cables may be sent to agents through Valentia Coast Radio or Malin Head; VHF channel 12 may be used. Vessels should confirm pilot arrangements 2.5 hours prior to arrival.

**Contact Information.—**Galway Harbour Radio can be contacted, as follows:

1. Telephone: 353-91-562329
   353-91-561874
   353-91-520034
2. Facsimile: 353-91-563738
3. E-mail: info@galwayharbour.com

**Anchorage.—**Small vessels usually anchor, in 5.8m, in the roadstead E of Mutton Island, with the SE extremity of that island in range 232° with Black Head and with the light on the head of Nimmo's Pier in range 347° with the left hand edge of the conspicuous ore silo. Heavy gales from W or SW raise an uneasy sea in the outer parts of the anchorage, but the holding ground is excellent.

Vessels of moderate or deep draft should anchor S of Mutton Island, in 9.1 to 10.9m. The recommended anchorage is 0.6 mile SSW of Mutton Island on the alignment, bearing 016°, of the tower and a college, 1.5 miles NNE. During W or SW gales a vessel is liable to drag anchor.

**Caution.—**On a falling tide, particularly at springs, or after prolonged rainfall, there may be a strong E set across the mouth of the dock.

## Galway Bay to Achill Head

**4.14** Between Golam Head and Slyne Head about 20 miles WNW, the coast no longer retains the bold features that distinguish the terrain to the S of Galway Bay. It is fronted by numerous off-lying dangers with intricate channels leading through them to the bays and inlets which indent the shore. Some of the bays and inlets afford secure anchorage, but the dangers in the approaches are so numerous that they are seldom frequented and should not be attempted without local knowledge.

**Caution.—**In thick weather, a vessel should approach this part of the coast with caution unless certain of its position. Some dangers to navigation lie as far as 6 miles offshore.

**4.15** **Mount Errisbeg** (53°24'N., 9°57'W.), about 12 miles NNW of Golam Head, serves as an unmistakable landmark in approaching this coast. The highest of several peaks rising from the ridge forming the mountain, it attains an elevation of about 296m.

**Cashel Hill** (53°26'N., 9°48'W.), 308m high and conspicuous, rises at the head of a bay about 6 miles ENE of Mount Errisbeg.

**Knockmorden Range** (53°23'N., 9°43'W.), rising to a peak, 350m high, about 4.5 miles SE of Cashel Hill, is easily identified when viewed from S.

Kilkieran Bay is entered between **Dinish Island** (53°15'N., 9°45'W.) and Birmore Island, about 1.2 miles WNW. Anchorage can be taken SE of **Kilkieran Cove** (53°19'N., 9°44'W.) on the W side of the bay, about 3.8 miles N of Dinish Island. This anchorage has sufficient depths for large vessels, but entry is restricted to vessels with a draft of less than 4.8m by several rocky patches having depths of 5.5 to 9m in the fairway. Local knowledge is advisable.

**Casheen Bay** (53°16'N., 9°44'W.), E of Dinish Island, has sufficient depths for vessels having drafts of up to 10m, is well sheltered, and easy of access. Anchorage can be taken, in 12.8 to 14.6m, with a large boulder close off the N end of Dinish Island in range 278° with the S end of Birmore Island, and the cottage on the S end of **Illauneeragh** (Eragh) (53°17'N., 9°44'W.) in range bearing 021° with a large boulder on the summit of the same island.

**Directions.—**The best approach to Kilkieran Bay lies between Golam Head and Eagle Rock. Having cleared Eagle Rock, Cashel Hill should be steered for on a course of 357° and open E of Birmore Island, which leads W of Dinish Shoals. When the S extremity of Illauneeragh is in range bearing 066° with **Lettermore Hill** (53°18'N., 9°40'W.), course should be altered to this bearing which leads NW of Dinish Shoals. Steer to pass not less than 0.1 mile N of Dinish Point, which is fairly steep-to, and anchor in Casheen Bay as previously directed.

**4.16 Skerdmore** (53°15'N., 10°00'W.), about 8.7 miles WNW of Golam Head, is the largest and outermost rock of an extensive group of rocks and shoals. It is 18m in elevation and easily identified.

Bertraghboy Bay, about 8 miles NE of Skerdmore, provides secure shelter for the largest vessels, but the approach is so encumbered by unmarked dangers that it would be inadvisable to approach it except under very favorable circumstances or with local knowledge.

Croaghnakeela Island, which is covered with brushwood, lies in the approaches to Bertraghboy Bay, about 4.5 miles NNE of Skerdmore. The island is easy to identify; a light is shown from a structure standing on its SE side.

**Slyne Head** (53°24'N., 10°14'W.) is the W extremity of Illaunamid, the outermost island of a chain that extends about 2 miles WSW from the coast. A light, with a racon, is shown at an elevation of 35m from a conspicuous tower, standing on the island. The prominent ruins of a disused light tower stand close S of the light.

The currents off Slyne Head set N and SE along the coast and S to Loop Head. Off Slyne Head and in the channels between the islands to the E the current setting N begins about 3 hours 30 minutes before HW at Galway and in the opposite direction about 3 hours after HW at Galway. In the channels and close off the head, the spring velocity in both directions is about 3 to 4 knots. Farther offshore, these velocities decrease rapidly and become weak about 2 to 3 miles from the head.

**4.17 Barret Shoals** (53°26'N., 10°16'W.) lies about 2.5 miles NNW of Slyne Head. In fine weather, the shoals may be distinguished by tide rips over them. During gales, heavy seas break over them.

**Aughrus Point** (53°33'N., 10°12'W.) lies about 8.5 miles N of Slyne Head. The coast between is fronted by numerous rocks and shoals.

The Twelve Pins is a mountain chain which stretches from about 3 miles N of Galway to a summit 16 miles ENE of Slyne Head. Ben Baun, the summit, is 726m high and conspicuous from seaward. Diamond Hill, 441m high, stands 3.5 miles WNW of Ben Baun and is prominent.

Mannin Bay is entered between **Knock Point** (53°27'N., 10°08'W.) and Errislannan Point (Erislannan Point,), about 1.7 miles NE, and is exposed to the prevailing sea and swell. Small vessels can anchor SE of Knock Point, in 4.5m, when the wind is W of NW.

**4.18 Clifden Bay** (53°29'N., 10°04'W.) is entered between Errislannan Point and Fahy Point to the N. Clifden Bay is separated from Mannin Bay by a peninsula which, at a distance, blends in with the high land to the N, making it difficult to distinguish the entrance. Well sheltered anchorage is provided from all winds and seas with good holding ground.

Doolick Rock, which dries, lies at the outer edge of the foul ground which extends about 1 mile W from Errislannan Point. Illaunrush, a small islet, lies at the inner end of this foul ground.

**Tides—Currents.—**The current in Clifden Bay probably begins to flood about 5 hours before HW at Galway and the ebb begins about 1 hour after HW at Galway. The spring velocity of the ebb is 1.5 knots.

**Depths—Limitations.—**A detached 3.4m patch lies in the fairway, about 0.5 mile SE of Fahy Point.

A channel having a least depth of 4m crosses the bar, which extends across the bay N of Aspen Leaf Point.

**Aspect—**A beacon stands on Fishing Point, about 0.7 mile NE of Errislannan Point. Aspen Leaf Point, which can be identified by the cliff on its SE side, lies about 0.2 mile SE of Fishing Point.

**Anchorage.—**Anchorage can be taken, in 6.4 to 10.9m, in the outer part of the bay by anchoring on the entrance range.

Vessels able to cross the bar can anchor, in 10m, excellent holding ground, in the inner part of the bay with Clifden Castle (53°29'N., 10°04'W.) bearing 035°.

**Directions.—**To cross the bar after passing the 3.4m shoal, the alignment, 289° astern, of Shindilla, the SE end of Ardmore Island and Fahy Point leads over the bar in a least depth of 4m.

Clifden Castle and the beacon on Fishing Point, in range 080°, leads to the entrance.

**4.19 High Island** (53°33'N., 10°15'W.), with several old buildings on its slopes, lies about 2 miles W of Aughrus Point and rises to an elevation of 59m.

**Friar Island** (53°33'N., 10°14'W.), 23m high, lies about 0.8 mile E of High Island. Friar Island Sound, a narrow passage with a depth of 8.3m at its S end, passes between Friar Island and a group of drying rocks to the E. The currents set very strongly through this sound.

**Cleggan Bay** (53°34'N., 10°08'W.), between Aughrus and Cleggan promontories, is easy of access and partially protected from the prevailing swell by the islands of Inishshark and Inishbofin. Fairly good shelter is provided, especially during the summer.

**Tides—Currents.—**The flood current setting into the bay begins about 5 hours before HW at Galway and the ebb begins about 1 hour after HW. The currents are usually weak.

The islands NW of Cleggan Bay have been previously described with off-lying dangers in paragraph 4.4.

**Anchorage.—**Anchorage can be taken, in 9.1 to 18.3m in the outer part of the bay or, in 7.3m, abreast a quay on the S shore, about 0.5 mile from the head of the bay.

**Directions.—**From W, the line of bearing 085° of the sum-

mit, 353m high, of **Tully Mountain** (53°35'N., 10°00'W.), located 4.5 miles E of Cleggan Point and open N of that point, passes close N of the dangers off the W side of the entrance to Cleggan Bay. When Roeillaun bears about 200°, a vessels may steer for the head of the bay and anchor according to draft.

**4.20 Ballynakill Harbour** (53°35'N., 10°02'W.) is entered between Cleggan Point and Rinvyle Point, about 3.5 miles NE; it provides good shelter in moderate depths.

**Tides—Currents.—**The currents in the harbor flood and ebb at about the same time as the currents in Cleggan Bay. The currents are generally weak, but in the anchorage of Ross Point, near the head of the harbor, the spring velocity in both directions may be as much as 2 knots.

**Depths—Limitations.—**The S shore E of Cleggan Point is steep-to and rises to bare high rocky cliffs.

The inner part of the harbor, entered between Letterbeg Point, about 1.5 miles SSE of Rinvyle Point, and the S shore to the SW, is obstructed by a chain of islets and rocks which stretch across the entrance.

Braadillaun, a small low islet, lies close W of Letterbeg Point. Carricklaghan, an above-water rock, and Mullaghadrina, a drying rock, lie within 0.5 mile W of the same point. Detached depths of less than 9.1m lie within 0.3 mile farther W.

Carrigeen South, a low rock, lies about 1 mile SW of Letterbeg Point.

Freaghillaun South, the largest and highest island in the harbor, lies about 0.5 mile SSW of Letterbeg Point. The preferred channel into the inner harbor passes N of the island. The narrow channel S of the island is obstructed in mid-channel by an islet.

Ship Rock, which dries, lies close off the N shore, about 0.8 mile SE of Letterbeg Point. Carrigeen Rocks lie near the middle of the harbor, about 0.4 mile farther SE. A clear channel, with depths of 10.9 to 14.6m, leads S of these rocks, but shoals rapidly as the head of the bay is approached. The N channel, with depths of 5.2 to 11.9m, leads through a narrow gut to Derryinver Bay.

**Anchorage.—**Vessels with drafts of not more than 4.6m can anchor, in 9.1m, in the channel S of Carrigeen Rocks, but the swinging room is limited. Small vessels may anchor close to the E end of Freaghillaun South.

**Directions.—**Vessels of suitable draft may proceed to Ross Point taking care to keep Glassillaun open N of a rocky islet, 3.7m high. The course passes N of a shallow spit extending 0.1 mile NE from the point 0.3 mile N of Ross Point. When on the alignment, 315°, of the E Carrigeen Rock and the W point of Braadillaun, the track turns SE until on the line of bearing 358°, astern, of Ardagh Rocks, which leads to the anchorage NE of Ross Point.

**4.21** Between Rinvyle Point and Tonakeera Point, about 5.5 miles NE, the coast is indented by Killary Bay and Little Killary Bay and fronted by numerous off-lying dangers which obstruct the approaches. There are, however, good passages between them, the principal fairway to Killary Bay being at least 1 mile wide and deep. At night or in thick weather those without local knowledge should approach the harbor with caution.

The ruins of a castle stand about 0.7 mile E of Rinvyle Point, and Blake Point lies about the same distance farther E. Tully Point, 1 mile farther E, has a church about 0.5 mile SW of it.

Culfin Point lies 2.7 miles ENE of Tully Point. Illaunmore, two rocky islets, lie at the outer end of a sandy spit which extends from the shore about 0.5 mile E of Culfin Point. Mweelaun, an above-water rock with foul ground off its E and W ends, lies close N of the islets.

Little Killary Bay, entered between Illaunmore and Carricklea, a point about 0.5 mile NE, provides excellent shelter for vessels able to enter. The anchorage is confined, and a short scope of chain or a taut moor must be used, but the holding ground is excellent.

Carricklass, two small islets, lie in the middle of the entrance, S of the N entrance point. These islets, together with Mweelaun, may be passed on either side. The channel N of the islets has a depth of 11.9m and the channel S of them a depth of 6.4m.

Carricklea, an above-water rock, lies on the E end of a sunken ledge close W of the N entrance point.

Anchorage can be taken, in 12.8m, mud, just above Carricklass, but with strong winds blowing directly into the bay it is better to proceed farther in.

**4.22 Killary Harbour** (53°37'N., 9°50'W.), a narrow deep inlet flanked by high mountains, is easy of access and provides sheltered anchorage for all classes of vessels.

**Tides—Currents.—**The flood current setting into the bay probably begins about 5 hours before HW at Galway and the ebb about 1 hour after HW at Galway. The velocity in the entrance and up to 4.5 miles within the bay does not exceed 0.5 knot. As the entrance of the river at the head of the bay is approached the velocity increases to 1.5 knots.

**Depths—Limitations.—**The channel between Inishbarna and the N shore is about 0.2 mile wide with depths of 26 to 40m decreasing regularly toward the head of the bay.

**Aspect.—**Mweelrea (Muilrea), the highest of the numerous mountains bordering the sides of the bay, is square and rises to an elevation of 815m on the N side, about 1.7 miles within the entrance.

Doonee Islet, reef fringed and marked by a white beacon, lies on the S side of the entrance about 0.3 mile NW of Carricklea. A similar beacon stands on Inishbarna, an island about 0.2 mile E of Doonee Islet.

Black Rocks (53°38'N., 9°55'W.), a group of low above-water rocks, together with Dooneen Island E of them, lie on the N side of the entrance within 0.5 mile W of the N entrance point.

Between Dooneen Island and a point on the N shore about 0.5 mile E, three pinnacle rocks with depths of 4.9 to 5.2m lie within 90m of the shore. With few exceptions, the rest of the harbor is fringed by narrow steep-to banks of rocks and stones.

**Pilotage.—**There are no regular pilots for Killary Harbour, however local fisherman may be engaged. The harbor should not be approached without local knowledge.

**Anchorage.—**Deep draft vessels can anchor up to 4 miles above the entrance and smaller vessels can anchor within 1 mile of the head of the bay.

Excellent anchorage can be taken, in 8.2 to 12.8m, off Bundorragha Village, on the N shore, about 5 miles within the bay. Swinging space is limited for long vessels, but ample room is available off Dernasliggaun about 1 mile to the W.

**Directions.—**The approach from W, between the islands of

Inishbofin and Inishturk may be easily identified. There are no known dangers until the meridian of Inishdalla (53°41'N., 10°04'W.) has been reached. **Pollock Shoal** (53°40'N., 10°02'W.), an isolated danger, lies 6 miles WNW of the entrance to Killary Harbour. There are several islets and rocks fronting the coast E of Rinvyle Point on the S side and to the N there are detached groups of rocks lying W and S of Tonakeera Point. There are passages between these dangers, the center and main channel being amply wide and deep enough in the fairway at any state of the tide for vessels of moderate size.

The alignment, 321° astern, of the SE side of Inishdalla and the tower on Inishturk passes SW of Pollock Shoal. Having passed Pollock Shoal, the alignment, 112°, of the S fall of Ailachoppal and the sharp peak of Leenaun leads toward the center passage, passing N of Illaunananima and Crump Islands and between O'Malley Breaker, known locally as Grania Waile, and Carrickgaddy Rocks.

**Caution.—**Salmon cages may be encountered on either side of Killary Bay between 0.1 and 0.5 mile within its entrance. They are marked by flashing lights. Another area of mariculture is situated off the S shore, further within the harbor, at Derrynacleigh.

**4.23 Devlin Hill** (53°42'N., 9°53'W.) rises to a 269m high peak; it is conspicuous from the offing. Between the hill and Roonah Head, the coast decreases in elevation and nowhere exceeds a height of 43m.

**Roonah Head** (53°46'N., 9°54'W.), a 37m high bluff head, is fronted by foul ground which extends about 1.5 miles W. Meemore, a rock which dries only at very LWS, lies near the outer edge of this foul ground and frequently breaks. Mweelaun, a small rocky islet, 19m high, stands 3.2 miles W of the point. Vessels may pass safely between Mweelaun and Meemore, but without local knowledge, it is dangerous to attempt to pass E of Meemore.

**Clew Bay** (53°50'N., 9°45'W.) is entered between Roonah Head and Achillbeg Island, about 5.7 miles NNW. The bay is spacious, easy of access with moderate depths, and remarkable for the number of small islets that occupy its E portion. Well-sheltered anchorage can be taken between some of these islets by shallow draft vessels. Intricate channels lead through these islets to the towns of Newport and Westport. There is no secure anchorage in the outer part of the bay.

**4.24 Clare Island** (53°48'N., 10°00'W.) lies in the middle of the entrance to Clew Bay and shelters it somewhat from heavy Atlantic swells. The island has been previously described with off-lying dangers in paragraph 4.6.

**Tides—Currents.—**Outside Clew Bay the velocity of the currents rarely exceed 1.2 knots, but in the channels on either side of Clare Island the spring velocity is 1.5 knots. East of Clare Island, the velocity is about 1.3 knots, but increases to 2 knots off the entrance channel to Westport. The current setting N outside Clew Bay sets towards the SW side of Achill Island and then sets NW along that coast. The tendency of both currents is to set towards the S side of Achill Island. The ebb invariably sets along its SW side.

The current between Inishturk and the mainland probably sets NE when the current outside sets N. The current setting S of Clare Island causes an eddy on the NE side of the island while the current outside sets toward and along the SW side of Achill Island. The greater part of the ebb from Clew Bay sets through the channel N of Clare Island and along the coast of Achill Island and forms an eddy effect to the main current setting S around Achill Head.

The current setting N between Inishbofin and Achill Head begins about 3 hours 20 minutes before HW at Galway and the opposite current about 3 hours after HW at Galway.

The flood currents in the channels N and S of Clare Island begin about 5 hours 30 minutes before HW at Galway and the ebb begins about 45 minutes after HW at that place. During the first 2 hours of the flood, the current outside sets N, but during the remainder of the flood, the set is S. Similarly, during the first 2 hours 30 minutes of the ebb in the channels, the current outside sets S, but during the remainder of the ebb, the set is N.

Between Inishbofin and Achill Head, and E to Clare Island, the currents are probably weak and vary in velocity and direction according to the offshore currents and the currents through the channels. The above data should be used with caution until a more complete survey is made.

**Depths—Limitations.—**Depths in the vicinity of Clew Bay are very irregular. Because of these irregularities, soundings are of little value in ascertaining the position at night or in thick weather. The principal channel leading into Clew Bay is 2 miles wide and passes N of Clare Island.

**Aspect.—**Oldhead (53°47'N., 9°46'W.) lies on the S side of the bay, about 4.8 miles ENE of Roonah Point. Some clay cliffs, backed by a high hill, rise about midway between the point and the head. Vessels should not proceed E of Oldhead unless there is a pilot on board.

The Northern Shore, between Achillbeg Island and Moynish More, an island about 7.5 miles ENE, has a barren appearance.

The S side of the bay between Oldhead and Curraghmore Point, about 4 miles E, is broken by low detached cliffs. A conspicuous church about 8.7 miles WSW of the above point is visible from most parts of the bay.

A narrow ridge, fringed by drying ledges and flats, extends about 1 mile NNE from Curraghmore Point and terminates at Bartragh Sandhills. A chain of islets, fronted by several dangerous shoals on their W sides, extends N from these sandhills to the opposite side of the bay.

The following islets are conspicuous from the bay: Moynish More, with Roeillaun, about 0.8 mile SE, lying near the N shore, about 6 miles NNW of Curraghmore Point; Inishoo, marking the entrance of the channel to Newport; Inishgort, from which a light is shown; and Dorinish More, near the S shore, about 0.7 mile S of the light. These islets vary from 27 to 33m high and, with the exception of Inishgort, have clay cliffs on their seaward sides. Inishgort is connected to Island More to the N by drying ledges.

**Dillisk Rocks** (53°48'N., 9°42'W.), which dry, lie 1.2 miles WSW of Dorinish More and are marked on their S side by a perch. No vessel should attempt to pass between these rocks and Dorinish More or approach to within 0.5 mile of them. Patches with depths of 4.4 to 5.5m lie between Dillisk Rocks and the S shore. An 8.2m patch lies about 1.5 miles NW of the perch marking Dillisk Rocks, with a 6.2m patch about midway between the two.

**Cloughcormick Shoal** (53°51'N., 9°43'W.), with depths of 2 to 5.2m over its outer end, extends about 1.5 miles WSW from

**Achillbeg Island Light**

**Inishbee** (53°51'N., 9°40'W.). The shoal is marked by a buoy located 0.3 mile W of its outer end.

**Westport Bay** (53°48'N., 9°36'W.), a shallow, intricate inlet, is entered between Inishgort Light and Dorinish Bar, a drying rocky spit which extends N from Dorinish More to within 0.3 mile of the light. A lighted buoy is moored on the S side of the channel, about 0.2 mile SW of the light.

**Pilotage.—**A pilot will board from Inishgort at the entrance to the channel, or from Inishlyre, close inside, when the usual signals are displayed.

**Anchorage.—**Vessels with a draft of 7.3m can anchor, in 8.5m, about midway between Inishgort and Inishlyre to the SE. This anchorage is partially exposed and subject to some sea during the ebb. Inishlyre Harbour is preferred.

Inishlyre Harbour, on the E side of Inishlyre, is entered through a narrow channel between that island and Collan More to the NE. A 1.5m shoal in the middle of the entrance almost equally divides the harbor. The best anchorage lies in the E part of the harbor, in 6.1m, with the S extremity of **Rosmoney Hill** (53°49'N., 9°37'W.) bearing 114° and the SE extremity of Collan More bearing 043°. Vessels of too great a draft to proceed to Westport Quay usually discharge their cargo here.

Anchorage can be taken, in 4.3m, in Dorinish Harbour, S of Inishlyre, with Inishgort Light bearing 328° and Rosmoney Hill bearing 073°. The anchorage is easy of access with good holding ground, but is not available to vessels with a draft of more than 4.3m. Even vessels with this draft will ground with an exceptionally low tide.

**Directions.—**The S extremity of Inishgort Light in range 071° with the NE extremity of the fall of Collan More Hill will lead to the entrance of the channel leading to Westport in depths of more than 9m. The N point of Inishlyre in range 086° with the S extremity of Collan More leads through the channel between Inishgort and Dorinish Bar. When abeam of Inishgort Light, the track turns SE and the line of bearing 319°, astern, of the light leads into Dorinish Harbour between Dorinish Bar and Inishlyre. When the W extremity of Inishlaghan bears 173°, the track turns SSW to 204°, leading to the anchorage in the middle of the harbor.

**4.25 Westport Harbour** (53°48'N., 9°32'W.) is located on the S side of the channel. A quay, 928m in length, dries alongside. Small vessels with drafts of up to 3.1m can berth alongside at HWS.

**Newport Harbour** (53°53'N., 9°33'W.) is located about 7 miles up a narrow and intricate channel entered at Cloughcormick Buoy (53°51'N., 9°43'W.). A quay, which dries, is located at Newport and is mainly used by small fishing vessels; the quay has depths alongside of 3.7m at HWS.

**Achillbeg Island** (53°52'N., 9°57'W.) on the N side of the entrance to Clew Bay, consists of two peaks separated by a low isthmus which gives the island the appearance of two hills when viewed from a distance of 3 to 4 miles E or W. A light is shown from a tower on a square building, 56m high, standing at the S end of the island.

Achill Sound, which separates Achill Island from the mainland, is entered close N of Achillbeg Island. A fort, with a drying quay W of it, stands on Darby Point, the W entrance point of the sound.

The sound extends N for about 8 miles to the N entrance. It is spanned by a swing bridge about halfway along its length, and dries for a distance of 1 mile S of the bridge. When open there is a passage on each side of the bridge 13.7m wide. The E opening is preferred and has a depth of 2m at HW. The sound affords convenient passage from Clew Bay to Blacksod Bay, but due to overhead cables with a vertical clearance of 11m situated at the bridge, it can only be used by small craft.

**Tides—Currents.—**In the S entrance of the sound, the flood

current begins about 5 hours before HW at Galway and the ebb begins about 1 hour 30 minutes after HW at Galway. The spring velocity in both directions is 2.5 knots. A whirlpool forms in The Pool, W of the E entrance point in the S entrance, between 2 hours 30 minutes before HW until 2 hours 45 minutes after HW. Off Darby Point, the spring velocity increases to about 4 knots, but decreases to 2.5 knots about 0.5 mile farther N.

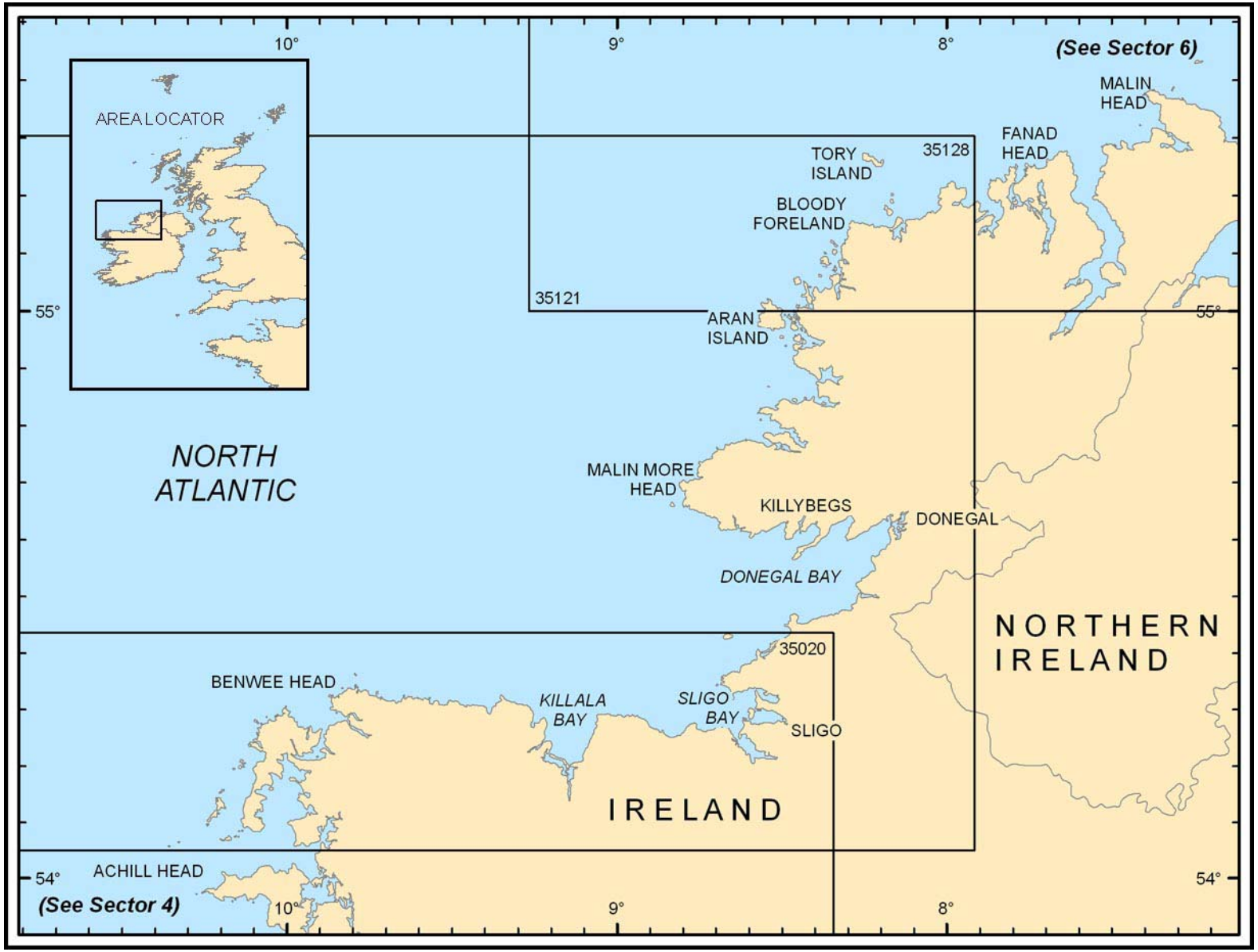
**Anchorage.—**In fine weather, small vessels with drafts up to 3m may anchor off a sandy bay on the E side of Achillbeg Island. However, in SW gales the sea breaks across the entrance to Achill Sound.

Small craft can anchor, in 7.3 to 12m, in The Pool between Achillbeg Island and Darby Point, but the currents are strong. Vessels should enter and leave only at slack water which occurs from about 15 minutes before HW until 15 minutes after HW.

**Directions.—**Leading lights situated on the quay, in line 330°, lead from Clew Bay through the S part of the entrance. When almost abeam of the E entrance point, course should be altered W to avoid the flat extending from the E side and the rock awash W of the point.

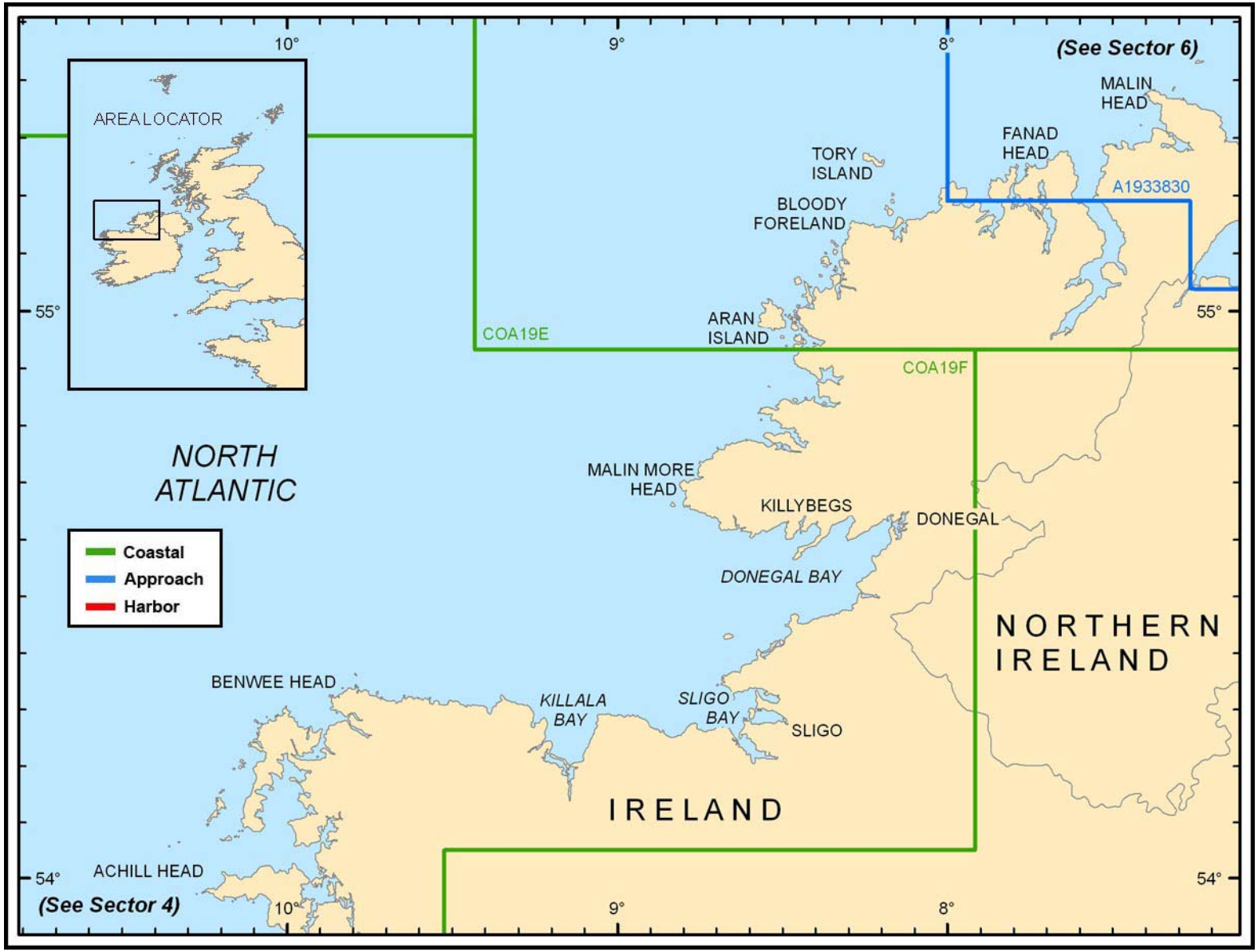
**4.26 Achill Island** (53°58'N., 10°00'W.), separated from the mainland E by Achill Sound, is the largest island off the Irish coast and rises to an elevation of 668m at Slievemore on its N side. A steep range of cliffs borders most of the W coast and terminates at Achill Head. Between the S extremity of the island and Achill Head, about 12 miles NW, the coast is indented by several small exposed bays. Temporary anchorage can be taken by small vessels in some of these bays.

**Achill Head** (53°58'N., 10°15'W.), a precipitous headland, rises to an elevation of 664m within 2 miles of its extremity. Carrickakin, 27m high, lies about 0.5 mile W of the W extremity. Shoals and rocks lie between the islet and the head.




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

SECTOR **5** — CHART INFORMATION

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SECTOR 5 — DNC LIBRARY INFORMATION

# SECTOR 5

## NORTHWEST COAST OF IRELAND—ACHILL HEAD TO MALIN HEAD

**Plan.—**This sector describes the NW coast of Ireland between Achill Head and Malin Head and also includes Sligo Bay, Donegal Bay, and Lough Swilly. The descriptive sequence is from S to N.

### General Remarks

**5.1** The coast between Achill Head and Malin Head, 139 miles NE, is indented by numerous exposed bays and backed, in the interior, by high mountain ranges. Several of the peaks within these ranges are conspicuous and, under favorable conditions, are visible for a considerable distance offshore. The most conspicuous of these peaks rise along the S and N sides of Donegal Bay and SE of Bloody Foreland, the NW extremity of Ireland.

Partially-protected anchorage is available for small vessels within most of the bays and inlets along the coast, but the majority of anchorage roadsteads are open to the prevailing winds and sea and are obstructed in the approaches by rocks, shoals, and other dangers.

Lough Swilly, a narrow and spacious inlet, provides sheltered anchorage for a large number of vessels of all classes and is accessible at all stages of the tide. It is the principal harbor of refuge for vessels rounding the N coast of Ireland.

Sligo Harbor, lying at the E end of Sligo Bay and on the S side of the approach to Donegal Bay, is the only harbor where vessels of moderate draft can be accommodated alongside. The berthing facilities at the other ports along the coast are available only to small coastal vessels and fishing craft.

The bays are separated by bold, high, and cliffy headlands and are backed by lofty mountain ranges which extend well inland. Knocknarea, rising on the S side of Sligo Harbor; Truskmore, Truskbeg, and Dartry rising on the S side of Donegal Bay; and Slieve League, rising 4.5 miles SE of Malinmore Head, are the most conspicuous peaks within these ranges.

In clear weather, several of the peaks of the high mountain ranges, which rise in the deep interior, are visible for a considerable distance offshore. Mount Errigal, rising 31 miles NE of Malinmore Head, and Mount Muckish, rising 6 miles farther NE, are the highest and most prominent of these peaks.

**Tides—Currents.—**Between Eagle Island and Rathlin O'Birne Island, weak currents set NE and SW across the entrance of Donegal Bay. Between Rathlin O'Birne Island and Aran Island, the offshore tidal currents set in the general direction of the coast and attain rates of 0.8 knot at springs. Nearer the land, these currents attain rates of 1.5 to 2 knots at springs. Within Tory Sound, the tidal currents attain rates of 2 knots at springs. Between Tory Island and Malin Head, the tidal currents set in the direction of the coast and usually attain rates of 2 knots at springs. Rates of 3 knots have been experienced off the latter headland at springs.

**Caution.—**The depths off this part of the coast do not give vessels sufficient warning of the approach to danger in thick weather as there are considerable depths close to shore.

Oil platforms and exploration vessels may be encountered off the W coast of Ireland.

### Achill Head to Donegal Bay

**5.2** **Achill Head** (53°58'N., 10°15'W.), the W extremity of Achill Island, is fully described in paragraph 4.26.

**Black Rock** (54°04'N., 10°19'W.), lying 6 miles NNW of Achill Head, is 82m high and the largest of a small group of rocks which lies in the W approaches to Blacksod Bay. A light is shown at an elevation of 86m from a tower, standing on this rock.

**Blacksod Bay** (54°05'N., 10°00'W.) lies 12 miles NE of Achill Head and is protected on its W side by the Mullet Peninsula. This bay is one of the finest along the W coast of Ireland. It is easy of access and provides secure anchorage for a large number of vessels.

The approach to the bay lies between Saddle Head, located NE of Achill Head, and Duvillaun More, 3.2 miles N, and is deep and clear. The tidal currents set N and S across the approach to this bay at rates of 1 to 1.5 knots.

**Duvillaun More** (54°04'N., 10°11'W.), 58m high, is the largest of the Duvillaun Islands. This group of islands is fronted by rocks and foul ground and extends up to 2.8 miles SW of Surgeview Point, the SW extremity of the Mullet Peninsula.

**Blacksod Point** (54°06'N., 10°04'W.), the W entrance point of the bay is marked by a light at an elevation of 13m shown from a structure, standing near the root of a small pier. Termon Hill, 101m high, rises 1.2 miles WNW of the point and is prominent. A radio mast stands 1.5 miles NNW of this hill. Foul ground extends about 0.3 mile E from the point and is marked by a lighted buoy.

Blacksod Quay extends from the shore 0.3 mile WNW of Blacksod Point. Small vessels can anchor, in a depth of 4.5m, within a small bight lying N of the quay. The E side of the bay is fronted by shallow depths and foul ground and, for the most part, should not be approached within 0.7 mile by large vessels. Doobeg Point, located 0.8 mile NNW of Blacksod Point, is fronted by a drying shoal which extends about 0.5 mile E and is marked by a beacon. Elly Bay lies on the W side of Blacksod Bay and is entered 3.5 miles N of Blacksod Point.

The recommended anchorage for large vessels lies in depths of 10 to 13m, sand over clay, between 1.5 and 2.5 miles NE of Blacksod Point.

Elly Bay provides good and sheltered anchorage for small vessels with shallow drafts over a bottom of sand on stiff clay. Vessels with drafts of less than 6m may obtain good anchorage to the E of Elly Bay and as close to the entrance as their draft will allow. There is excellent anchorage for vessels of shallow draft in Elly Bay.

**Caution.—**With W winds, a heavy swell usually sets through the entrance of Blacksod Bay and breaks, during heavy weather, on the shoals fronting Duvillaun More. With S winds, the entrance is subject to heavy squalls which sweep down

**Black Rock Light**

from the mountains standing on Achill Island.

The sea level within Blacksod Bay may be raised up to 0.4m by SW winds and correspondingly lowered by N winds.

**5.3 Bulls Mouth** (54°02'N., 9°55'W.) is approached 6 miles SE of Blacksod Point and forms the N entrance, which is used by small craft, to Achill Sound. The navigable entrance channel narrows to a width of only 130m and has a depth of 11m in the fairway. Above Dooniver Point, located 2 miles S of the entrance, the depths gradually decrease to 2m. The tidal currents within the channel attain rates of about 5 knots at springs, but they increase to 8 knots in some parts. Local knowledge is recommended.

**Erris Head** (54°18'N., 10°00'W.), a cliffy islet fronted by rocks, is 52m high and lies 13.5 miles NNE of Surgeview Point. The coast between forms the W side of the Mullet Peninsula and is composed of sandhills. It is fronted by numerous small islets, rocks, and patches of foul ground. An inner passage leads between these dangers and the coast, but is only navigable by small vessels with local knowledge.

A prominent ruined tower stands 0.7 mile N of Surgeview Point.

Pigeon Islet, a conical and prominent rock, lies at the outer end of a chain of rocks which extends up to 0.3 mile W of Erris Head.

The **Inishkea Islands** (54°08'N., 10°12'W.), centered 5 miles NE of Black Rock, consist of two large islands which are separated by a narrow boat channel and fronted by rocks and foul ground. The S island, 66m high, is marked by a beacon and a flagstaff. Foul ground extends up to 0.5 mile S from the S end of this island. The N island is 22m high and above-water rocks and foul ground extend up to 1.2 miles N of its N end.

Usborne Shoal, with a least depth of 2.1m, lies about 1.9 miles N of the N end of the N island and is usually marked by breakers.

**Portnafrankagh** (French Port) (54°14'N., 10°06'W.), a small inlet, lies 5.2 miles SW of Erris Head and is entered between Annagh Head and Port Point, 0.4 mile NE. It provides sheltered anchorage to vessels with drafts of less than 4m and is often frequented by small craft.

**5.4 Eagle Island** (54°17'N., 10°05'W.) lies 0.8 mile offshore, 3.5 miles WSW of Erris Head. The island is 58m high and steep-to on its W side. A light is shown at an elevation of 58m from a prominent tower, standing on the W extremity of the island. Two conspicuous radio masts stand near the tower.

Off the W coast of the peninsula, the flood current sets NE and the ebb sets SW. These currents are weak in the central part of the area, but attain rates of up to 2.5 knots at springs off the salient points and within the narrower channels. Eddies frequently form along the coast between Erris Head and Eagle Island during the ebb current. Rips or overfalls occur NNE and ENE of Eagle Island and a race occurs off Erris Head where the eddies meet the ebb.

**Broad Haven Bay** (54°17'N., 9°54'W.) is entered between Erris Head and Kid Island, 4.8 miles ENE. It affords a safe clear approach to the small and natural harbor of Broad Haven which lies on the S side. The N part of the W side of the bay is formed by cliffs up to 99m high in places.

Broad Haven, the harbor, is entered between Gubacashel, which is marked by a light, and Brandy Point, 0.7 mile ENE. It is a sheltered harbor of refuge with moderate holding ground for small vessels. The best anchorage lies, in depths of 7 to 9m, in the middle of the fairway about 0.4 mile SE of Gubacashel.

Caution.—A submarine gas pipeline extends across Broad Haven Bay from a point about 1.25 miles SE of Rimroe Point to Corrib Field.

**5.5 Benwee Head** (54°20'N., 9°49'W.), located 1.7 miles ENE of Kid Island, is bordered by cliffs, up to 254m high in places, and fronted by several rocks.

**Benwee Head and The Stags**

**The Stags** (54°22'N., 9°47'W.), a group of four rocky islets, lies 2 miles NE of Benwee Head. These rocks are steep-to and the tallest is 91m high. A deep and clear channel, about 1 mile wide, leads between this group and the mainland.

**Downpatrick Head** (54°20'N., 9°21'W.), fronted to the N by Doonbristy Islet, is located 16.5 miles E of Benwee Head. When viewed from the E or W, this head has a wedge-like appearance with its base to seaward. The coast between Benwee Head and Downpatrick Head consists of a series of bold cliffs which rise, in places, to heights of over 250m. The shore is fronted by several conspicuous tall pinnacle rocks which lie up to 0.3 mile seaward.

Mount Glinsk, 301m high, stands within 0.5 mile of the coast, 7 miles E of Benwee Head. Mount Nephin, 802m high, stands 25 miles SE of Benwee Head. Both of these peaks are prominent from seaward.

Creevagh Head, a low and rocky cliff, is located 3 miles ESE of Downpatrick Head. The land to the SW of this point gradually rises to a height of 182m. An obelisk, known as Gazebo Tower, stands 2 miles S of the point and is prominent. A ruined tower is situated on the same slope, 0.6 mile S of the point, and is often mistaken for the obelisk.

**5.6 Killala Bay** (54°16'N., 9°08'W.) is entered between Kilcummin Head, located 5.2 miles SE of Downpatrick Head, and Lenadoon Point, 5.5 miles E. This bay affords shelter from onshore winds, but is entirely open to the N. The shores are low and are fronted by foul ground.

Rathlee Tower, a conspicuous ruin, stands 1 mile SSE of Lenadoon Point and the prominent spire of Kilglass Church is situated 3 miles SSW of it. The conspicuous tower of Inishcrone Church, which is surmounted by a large cross, stands 1.5 miles SW of Kilglass Church.

The village of Killala is situated in the SW corner of the bay and is fronted by a small quay. The town of Ballina is situated 5 miles inland on the River Moy, which flows into the head of the bay. A quay fronts the E side of this river, 1.2 miles below the town. Sand bars, with least depths of 0.6m, obstruct the approaches to these quays, but both can be used by small coasters at HW. The tidal currents are weak in the entrance of the bay, but attain rates of 3 to 4 knots over the bars at springs. Local pilots are available from Inishcrone, a village fronted by a small pier, which is situated in the SE corner of the bay.

**5.7 Sligo Bay** (54°18'N., 8°45'W.) is entered between Lenadoon Point and Ballyconnell Point, 14 miles ENE. Ballysadare Bay, Sligo Harbor, and Drumcliff Bay are three shallow inlets, which indent the SE side of this bay, and Dromore Bay indents the W side.

The S side of Sligo Bay is mostly low and rocky, but rises in the interior to high, rugged, and bold mountain peaks. Knockalongy, 539m high, rises 5 miles inland, 11.7 miles SE of Lenadoon Point. It is the highest peak in the area and very prominent from seaward. Knocknarea, a very remarkable and solitary limestone mountain, is 324m high and rises 7.2 miles SE of Ballyconnell Point on the peninsula which separates Ballysadare Bay from Sligo Harbor. Its flat summit is surmounted by a cairn and the N and W sides are formed by precipitous escarpments.

The mountain ranges of Slievemore and Keeloges stand 8 and 14 miles E, respectively, of Ballyconnell Point and may be easily identified from seaward.

**Black Rock** (54°18'N., 8°37'W.) lies on the S side of the approach to Sligo Harbor, 4.7 miles SE of Ballyconnell Point. A light at an elevation of 24m is shown from a prominent tower, standing on the summit of this drying rock. The E side of Black Rock is connected to the N extremity of Coney Island by a narrow ridge of boulders and gravel known as The Cluckhorn. Foul ground fronts the W side of Black Rock.

Ballysadare Bay lies in the SE part of Sligo Bay and is entered between Derkmore Point, located 5.5 miles S of Ballyconnell Point, and Killaspug Point, 2 miles ENE. It is encumbered with sand banks and the narrow channels leading between them can only be used by small craft with local knowledge at HW.

Drumcliff Bay lies in the NE part of Sligo Bay and is entered between Raghly Point, located 2.4 miles SSE of Ballyconnell Point, and Lower Rosses Point, 2.5 miles E. It is encumbered by sand banks, almost entirely silted up, and only used by very shallow craft with local knowledge.

**5.8 Dromore Bay** (54°16'N., 8°50'W.) is entered between Carrownabinna Point, located 5.2 miles E of Lenadoon Point, and Aughris Head, 5.3 miles E. Both of these entrance points are high and cliffy. A prominent ruined tower stands 1.8 miles SE of Carrownabinna Point.

The shores of the bay are fronted by foul ground except at the E side. Anchorage can be taken, during offshore winds, on a sandy bank which fronts the E shore. A good berth lies in a depth of 11m, fine sand, WSW of Aughris Head and about 0.3 mile offshore.

**Ballyconnell Point** (54°22'N., 8°40'W.), the N entrance point of Sligo Bay, is the NW extremity of a wide peninsula which separates Sligo Bay from Donegal Bay. Roskeeragh Point is located 1 mile S of Ballyconnell Point and is sur-

mounted by the ruins of a castle. A ruined tower stands near the summit of a high and solitary hill which rises close E of the castle.

Raghly Point, located 2.4 miles SSE of Ballyconnell Point, is formed by a small peninsula which is joined to the mainland N by a shingle ridge.

Brown Bay lies on the N side of the approach to Sligo Harbour and is entered between Seal Rocks and Raghly Point, 1.2 miles ESE. It provides temporary anchorage, in a depth of 12m, sand, for vessels waiting to enter the harbor.

**5.9 The Ledge** (54°18'N., 8°43'W.), with a least depth of 7.3m, lies SW of Raghly Point. Vessels can pass to the N or S of this rocky shoal over which the sea breaks heavily during bad weather.

Ardboline Island, 15m high, lies 1.1 miles SW of Ballyconnell Point, and is fringed with reefs. Passage Rocks, which dry, lie 0.3 mile NE of the island.

Seal Rocks, a group of drying rocks, lies centered 0.7 mile SE of Ardboline Island and a shoal patch, with a least depth of 9.3m, lies about 0.7 mile S of it.

Wheat Rock, which dries, lies near the outer edge of the foul ground which extends S for about 0.5 mile from Raghly Point. A lighted buoy is moored about 0.2 mile S of this rock. Raghly Ledge, awash, is the extremity of a steep-to spit which extends up to about 0.3 mile SE from the S extremity of Raghly Point.

Blind Rock, with a least depth of 2.7m, lies about 0.7 mile S of Black Rock and breaks with a heavy sea.

**5.10 Sligo Harbor** (54°16'N., 8°28'W.) (World Port Index No. 33950) is an extensive inlet, most of which dries, entered between the NE side of Coney Island and Deadman's Point, 0.3 mile NE. A narrow channel leads E and SE through the inlet to the facilities fronting the town of Sligo at the head.

**Port of Sligo Home Page**

http://www.sligococo.ie/services/sligoharbour

**Tides—Currents.—**The tides rise about 3.6m at springs and 1.5m at neaps.

The flood current at springs attains rates of about 3 knots off Deadman's Point, 5 to 6 knots at places within the channel, and 4 to 5 knots off Sligo. The ebb attains rates of 4 to 5 knots off Sligo, 5 to 6 knots at places within the channel, and about 2 knots at the entrance. With strong and prolonged W winds, the rate of the flood current is increased and the ebb current correspondingly reduced.

**Depths—Limitations.—**Five main quays, situated on the SW side of the river at the head of the inlet, have dredged depths up to 3m alongside. From the lower berth to the upper berth, a controlling depth of 1.8m was reported. Vessels lie aground on soft mud at LW.

The Deep Water Jetty used for bulk, general cargo, timber, and tanker vessels has a length of 77m and an alongside depth of 3.0m. Barytes Jetty has a length of 55m and an alongside depth of 3.0m. The Timber Jetty, for small ships, has a length of 55m and an alongside depth of 2.0m. Vessels of up to 110m in length with bow thrusters can be handled. There are also facilities for yachts and small craft within the inlet.

**Aspect.—**A lighted range indicates the entrance to the harbor. The fairway channel, which is bordered by training walls, is marked by lighted beacons and perches.

**Pilotage.—**Pilotage is compulsory.

Vessels should request a pilot 6 hours in advance.

The pilot boards off Raghly Point, in the vicinity of Wheat Rock Lighted Buoy.

Sligo Pilots can be contacted by telephone. as follows:

a. 353-71-9168731
b. 353-71-9721473
c. 353-86-0890767 (mobile)

**Regulations.—**The vessel should send its ETA 7 days, 3 days, and 24 hours in advance via the agent.

**Contact Information.—**Sligo Harbormaster can be contacted. as follows:

1. Telephone: 353-71-9111236
2. E-mail: info@sligococo.ie

**Anchorage.—**Vessels with local knowledge can take anchorage within a reach of the channel, in depths of 5 to 6m, but the tidal currents attain rates up to 5 knots at springs and the holding ground is not good.

**Caution.—**With strong and prolonged W winds, the water level at Sligo may be raised by 0.3 to 0.6m. Strong and prolonged E winds have an opposite effect.

## Donegal Bay

**5.11 Donegal Bay** (54°31'N., 8°30'W.) is entered between Ballyconnell Point and Malinbeg Head, 19 miles NNW. Mountain ranges rise on the S side of the bay and are prominent from seaward. Slieve League rises on the N shore of the bay, 3 miles E of Malinbeg Head. This peak is 596m high and conspicuous.

This bay offers no shelter for large vessels, but those of moderate draft can be accommodated at the anchorages within Killybegs Harbour and Inver Bay, lying along the N shore. Vessels of light draft can enter Donegal Harbour at HW and under favorable weather conditions, vessels of similar draft can enter Ballyshannon Harbour, on the S shore.

**Inishmurray** (54°26'N., 8°40'W.) lies on the W side of Donegal Bay, 4.5 miles N of Ballyconnell Point. This island is 19m high and bordered by low cliffs. Bomore, a group of drying rocks, lies on a shoal bank about 1.5 miles NNW of the island. The rocks dry up to 7m near the E end of the shoal.

**Dernish Island** (54°25'N., 8°30'W.), 28m high, lies close offshore, 7.2 miles NE of Ballyconnell Point. A prominent white tower stands near the NW end of this island. Bulligmore, with a least depth of 2.7m, lies about 1.2 miles NW of the W end of the island. This rocky shoal is the outer of several dangerous shoals which lie to seaward of the island.

**Mullaghmore Head** (54°28'N., 8°27'W.), 60m high, is surmounted by the ruins of a tower and a small drying boat harbor fronts its SE side. During the summer months, anchorage can be taken by small vessels, in depths of 3 to 6m, SE of the head.

A conspicuous television mast, 105m high, stands on the summit of a mountain, 645m high, standing 6.5 miles SSE of Mullaghmore Head.

Aughris Point is located 6.2 miles ENE of Mullaghmore Head. Tullan Strand, a sandy beach, lies 0.5 mile NE of the point and rises to sandhills, 54m high. Kildoney Point, located 2.1 miles NNE of Aughris Point, terminates in sloping cliffs

and is noted for its remarkable green color.

Ballyshannon Harbour lies 2.3 miles E of the mouth of the River Erne, which is entered 1.4 miles NNE of Aughris Point. This harbor is no longer used by commercial vessels and may only be entered by small yachts.

**5.12 Malin Beg Head** (54°40'N., 8°48'W.), the NW entrance point of the bay, is fronted by several rocks and surmounted by a ruined tower.

**Rathlin O'Birne Island** (54°40'N., 8°50'W.), 28m high, lies 1.2 miles W of Malin Beg Head and is fronted on its W side by several rocks. A light is shown at an elevation of 35m from a prominent tower, standing on the W side of this island; a racon is situated at the light.

The Sound, a deep-water channel, leads between the island and the mainland. The navigable fairway is about 0.5 mile wide and vessels are advised to favor the island side.

Carrigan Head, surmounted by a ruined tower, is located 5 miles SE of Malin Beg Head. The coast between is steep-to. Teelin Harbour, a small fishing boat harbor, lies 2 miles E of Carrigan Head.

Fintragh Bay lies between Muckros Head, located 1.5 miles SE of Teelin Harbour, and Drumanoo Head, 3.5 miles E. Its entrance is obstructed by several small islets and rocks. A conspicuous white building stands at the head of this bay and a prominent hill, 88m high, rises 1.2 miles SSE of it.

**Saint John's Point** (54°34'N., 8°27'W.), located 5 miles SE of Muckros Head, is the SW extremity of a prominent tongue of land. A light is shown at an elevation of 30m from a prominent tower, standing on this point.

Bullockmore, a shoal, lies about 1 mile W of the light. It has a least depth of 2.1m and is marked by a lighted buoy. Vessels may pass E or W of this shoal.

**McSwynes Bay** (54°37'N., 8°24'W.) is entered between Drumanoo Point and Saint John's Point, 2.3 miles SSE. This bay is not suitable for anchorage and should be avoided during the winter. The bottom is rocky and uneven and with W winds, a very heavy swell sets in and breaks with considerable violence along the rocky shores.

Bruckless Harbour, a shallow inlet, lies in the NE part of the bay and is used by small craft. Killybegs Harbour lies in the N part of the bay.

**5.13 Killybegs Harbour** (54°37'N., 8°26'W.) (World Port Index No. 33930), formed by a natural inlet, is approached through McSwynes Bay and is a major fishing port. This inlet affords security against all winds and sea and will accommodate several vessels of moderate draft at anchor.

**Port of Killybegs Home Page**

http://www.killybegsharbour.ie

**Tides—Currents.—**The tide rises about 3.5m at springs and 1.5m at neaps.

**Depths—Limitations.—**The entrance to the harbor lies between the W side of McSwynes Bay and Rotten Island, located 1.7 miles NE of Drumanoo Head. The harbor is located 1.7 miles NE of Drumanoo Head. The harbor narrows to a width of 180m in the vicinity of Rashenny Point, 0.5 mile N of Rotten Island. Small islets, shoals, and rocks lie adjacent to the fairway and local knowledge is required.

Three piers are located in the town, as follows:

1. New Landing Pier, 120m long, with a depth of 7.3m alongside.
2. Black Rock Pier, with a depth of 5.6m alongside.
3. Town Pier, 80m in length, with a depth of 4m alongside.

West of the town piers is the Fishery Harbour Centre, consisting of North Quay, 150m in length with depths alongside of 9m, and South Quay, 300m in length with depths alongside of 12m. Vessels up to 300m in length, 40,000 dwt and 12m draft can be accommodated at LW.

**Aspect.—**The town stands on the W side of the harbor, 2 miles within the entrance. A light is shown from a tower, 14m high, standing on Rotten Island. The fairway is marked by buoys and indicated, in places, by lighted ranges.

**Pilotage.—**Pilotage is compulsory for vessels over 50m in length and larger. The pilot boards in position 54°36.4'N., 8°27.1'W.

**Regulations.—**Vessels send their ETA 72 hours, 48 hours, and 24 hours in advance, stating their gt, name, IMO number, arrival draft, and departure draft.

Vessels should maintain a continuous listening watch on VHF channel 14.

**Contact Information.—**Killybegs Port can be contacted as follows:

1. VHF: VHF channels 14 and 16
2. Telephone: 353-74-9731032
3. Facsimile: 353-74-9731840
4. E-mail: info@killybegsharbour.ie

**Anchorage.—**Anchorage can be taken by large vessels, in depths of 25 to 30m, W and S of Rotten Island. Anchorage can also be taken in any part of the harbor according to draft.

**5.14 Inver Bay** (54°37'N., 8°19'W.) is entered between Saint John's Point and Doorin Point, 6 miles NE. This bay affords good anchorage off its NW shore and at its head. Strong winds from the SW quadrant cause a considerable sea within the bay, but usually do not continue for any length of time.

**Donegal Harbour** (54°37'N., 8°14'W.), formed by the estuary of the River Eske, lies at the head of Donegal Bay and is approached between Doorin Point and Rossnowlagh Point, 3 miles SE. It is entered via a channel which winds between extensive sand banks and small islets. Local knowledge is required.

The harbor is suitable for only small craft and small shallow draft vessels. The tides rise about 3.4m at springs and 2.4m at neaps. There are two quays in the harbor which have dredged depths of up to 0.3m and depths of 2.3 to 3.7m alongside at HWS. Anchorage may be taken, in depths of up to 9m, off the entrance to the harbor.

## Donegal Bay to Lough Swilly

**5.15 Malin More Head** (54°42'N., 8°47'W.), located 2 miles N of Malinbeg Head, is conspicuous and easily identified. The coast between is bordered by cliffs, 60 to 90m high.

Dawros Head, marked by a light, is located on the N side of

Loughros More Bay, 11.5 miles NE of Malin More Head. The coast between is indented and bordered by high cliffs. The shore is fronted by sunken ledges, rocks, and small islets.

Glen Head, located 2.5 miles NE of Malin More Head, is formed by a prominent hill, 225m high, and surmounted by a ruined tower. Slievetooey, 512m high, stands 4.5 miles S of Dawros Head. This peak has steep N and W faces and is conspicuous from seaward.

**Boylagh Bay** (54°55'N., 8°30'W.) lies between Dawros Head and the SW extremity of Aran Island, 9 miles N. This bay should be avoided as it is encumbered by numerous sunken rocks which break with violence at times.

Roaninish, 5m high, is surrounded by a sunken ledge. This small islet lies in the approach to the S part of the bay, 2.5 miles NNE of Dawros Head. Shoals, with depths of less than 10m, lie up to 2 miles NW and NE of this islet.

Dunmore Head is located 2.7 miles ENE of Dawros Head and Dunmore Hill, 127m high, stands close E of it. Inishkeel, an islet, lies close offshore, 1.2 miles E of Dunmore Head. This islet is 16m high and a ruined church stands near its E end. Church Pool lies SE of the islet and affords anchorage to small vessels in a depth of 6m.

**Aran Island** (54°59'N., 8°31'W.) rises to a summit, 225m high, at the center. Its W and NE sides and part of its S side are bordered by vertical cliffs indented by fissures and caves. Aranmore Light is shown at an elevation of 71m from a prominent tower, standing on Rinrawros Point, the NW extremity of the island.

The mainland to the E and SE of Aran Island is fronted by numerous islets and shoals. Several narrow and shallow channels lead between these dangers and are used by small craft with local knowledge. Burtonport (54°59'N., 8°26'W.), a small fishing and resort village, stands on the mainland 1.7 miles ENE of the SE extremity of Aran Island. It is approached through a channel with a dredged depth of 2m. Pilotage is available and is recommended for vessels without local knowledge. The pilot boards in position 55°01.0'N, 8°29.0'W.

Large vessels should give the waters fronting the coast between Dawros Head and Aran Island a wide berth.

**5.16 Bloody Foreland** (55°10'N., 8°17'W.), the NW extremity of Ireland, is located 12 miles NE of Aran Island and marked by a light. The coast between is barren, sandy, and fronted by several off-lying islands and dangers which should only be approached with great caution, particularly at night or in hazy weather.

Bloody Foreland consists of a low cliff fronted by several ledges. This point rises to Bloody Foreland Hill, 315m high, which stands 1.5 miles inland and is very conspicuous. The summit of this hill is surmounted by a prominent pile of stones.

Mount Errigal, 749m high, stands 9.5 miles SE of Bloody Foreland and has a distinctive pyramidal peak. Mount Muckish, 664m high, stands 10 miles ESE of Bloody Foreland and has a summit resembling the roof of a barn.

**The Stag Rocks** (55°04'N., 8°29'W.), consisting of three wedged-shaped rocks, lies 3.8 miles NE of the N extremity of Aran Island. It is 9m high and the outermost danger in this vicinity. Owey Island, 100m high, lies 1.5 miles SE of The Stag. Cruit Island lies between Owey Island and the mainland shore.

Gola Island lies 5 miles SW of Bloody Foreland and is the largest island in this vicinity. It is 69m high and bordered by vertical cliffs on the W and NW sides. A sandy beach lies along its E side. Bullogconnell Shoals, which dry in places, extend up to 1.5 miles NW of Gola Island.

Inishsirrer, fringed by drying flats, lies 1.6 miles NNE of Gola Island. A light is shown from the NW extremity of this island.

Several narrow and shallow channels lead through the shoals and islands fronting this section of the coast. Only small vessels with local knowledge should attempt to enter them.

**5.17 Peninsula Point** (55°10'N., 8°09'W.), located 4.7 miles E of Bloody Foreland, is the N extremity of a remarkable bare and sandy peninsula which is 44m high. A group of three islands lies on foul ground to the N of the point. Inishbeg, 22m high, lies 2.5 miles NNW of the point and is the N and outer island.

Inishbofin Bay is entered to the SW of the group of islands. It has depths of 12 to 16m in the entrance which decrease rapidly to drying flats at the head. During the summer, this bay provides temporary anchorage to small vessels, in depths of 4 to 7m, but is exposed and subject to a heavy W swell.

**Tory Island** (55°16'N., 8°13'W.), centered 6.7 miles NNW of Peninsula Point, is bleak and desolate in appearance. The N side of this island consists of conspicuous cliffs, up to 82m high, and the ground sloping SW from them gives it a wedge-like appearance when viewed from the NW. The island usually appears as a low cluster of rocks, but is sometimes not easily identified when in line with the high hills on the mainland. Some of the small bights indenting the N and S sides of the island offer temporary shelter from the winds. A light is shown at an elevation of 40m from a tower, standing on the NW side of the island; a racon is situated at the tower.

Tory Sound lies between Inishbeg and Tory Island. The fairway of this channel has a least depth of 18.6m and general depths of 20 to 30m.

**Ballyness Harbour** (55°09'N., 8°07'W.) is entered close E of Peninsula Point. This inlet mostly dries and is fronted by a bar which also dries at times. It is only used by yachts and small craft.

Templebreaga Head is located 5.2 miles NE of Peninsula Point and, from the NE, bears a considerable resemblance to the profile of a man's face. McSwyne's Gun, which can be heard at times up to a distance of 8 miles, is located 1.5 miles S of Templebreaga Head. It is formed by a blowhole fissure in the cliffs through which the sea is sometimes forced. This action produces a loud report resembling a thunder clap rather than the sound of a gun.

Tramore Bay, entered 2 miles S of Templebreaga Head, is exposed and little used except as a temporary anchorage during offshore winds.

**Horn Head** (55°14'N., 7°59'W.) is the N extremity of a rugged and bold peninsula which forms the W side of the entrance to Sheep Haven. This point is bordered on its E side by sheer cliffs, 183m high, which assume a remarkable horn-like appearance at the extremity of the peninsula.

The tidal currents off this point attain rates of up to 2 knots at springs. When the wind and current are in opposition, a turbulent sea may be raised in this area.

**Tory Island Light**

**5.18 Sheep Haven** (55°12'N., 7°54'W.) is entered between Horn Head and Rhinnafaghla Point, the NW extremity of the Rosguill Peninsula, 4 miles E. This bay is exposed to N and NE winds and provides no safe shelter for large vessels. Small craft, provided the swell is not too great, can sometimes find temporary anchorage within the bay.

Duncap Head is located 1.6 miles SE of Horn Head. Croaghnamaddy Hill, the highest part of the peninsula, of which Horn Head is the N extremity, stands 0.5 mile SW of the point and is 250m high.

**Melmore Head** (55°15'N., 7°47'W.), located 7.1 miles ENE of Horn Head, is surmounted by a prominent ruined tower.

The outer dangers along this part of the coast include Frenchman's Rock, which dries, and Straughan Shoals, a shallow patch, lying about 1 mile W and 0.6 mile WNW, respectively, of Melmore Head.

**Mulroy Bay** (55°15'N., 7°46'W.) is entered between Melmore Head and Ballyhoorisky Point, 1 mile E. This bay forms the entrance to a narrow and tortuous channel which leads 8 miles in a general SSE direction to Broad Water, an area of sheltered water.

The bay is open to the N and provides no safe anchorage with N winds. The exposed and unmarked bar leading into the bay is subject to change and should never be attempted by vessels without local knowledge, except in an emergency. Pilots can be obtained and are usually embarked off Lough Swilly by prior request via a coast radio station. Although not compulsory, pilotage is essential to and from the bar due to the total absence of navigational aids and the numerous dangers. Only small craft can navigate the intricate and shallow channels which lead into Broad Water.

**5.19 Limeburner Rock** (55°18'N., 7°48'W.), lying 2.6 miles N of Melmore Head, is so named because of the resemblance of the foam that it throws up to the smoke of a lime kiln. It has a least depth of 2m and consists of two rocky heads. During heavy weather, this danger breaks, especially when the current is opposed to the prevailing W winds. Vessels may pass either side of this rock which is marked on the N side by a lighted buoy.

**Fanad Head** (55°17'N., 7°38'W.), low and rocky, is located 4.5 miles ENE of Ballyhoorisky Point. The coast between is indented by several sandy bays and backed by undulating hills. During bad weather, vessels should give this section of coast a wide berth as the sea breaks heavily on the reefs which extend as far as 0.8 mile offshore.

A light is shown at an elevation of 39m from a prominent tower, standing on Fanad Head.

## Lough Swilly

**5.20 Lough Swilly** (55°14'N., 7°34'W.) is entered between Fanad Head and Dunaff Head, 3.7 miles E. It is a spacious and narrow inlet which extends to a tidal head near the town of Letterkenny, 22 miles SSW. The inlet can provide sheltered anchorage for all but the largest vessels and is accessible at all stages of the tide. It is the principal harbor of refuge for vessels rounding the N coast of Ireland. The lough may be navigated by vessels of all classes to about 1 mile above Rathmullan, 13 miles within the entrance, but no safe anchorage is provided until Buncrana Bay is reached, 10 miles within the entrance.

Both sides of the lough are bordered by hills, 90 to 413m high, which are mostly bare at the entrance, but more fertile and cultivated farther to the S.

Crockdonelly, 151m high, and Murren Hill, surmounted by a conspicuous radio mast, rise 1.2 miles SSW and 3 miles SSW,

**Fanad Head Light**

respectively, of Fanad Head. Dunaff Head, at the E side of the entrance, is bordered by sheer cliffs which are 180m high on the N side and 45 to 120m high on the W and S sides. The summit of the head, which is 219m high, is somewhat rounded and falls in a very abrupt slope to the bordering cliffs.

Raghtin More, 501m high, stands 2.5 miles SE of Dunaff Head; its prominent summit appears from the N to have a flat top.

**West side.—**A group of rocks, marked by a lighted buoy, lies about 1.7 miles SSE of Fanad Head and forms the principal danger in the entrance channel. A spit, with depths of 5 to 18m, extends up to about 0.5 mile N from Fanad Head and breaks during heavy gales.

Ballymastocker Bay is entered between Portsalon, located 4.1 miles S of Fanad Head, and Saldanha Head, 1.5 miles SE. There are depths of 6 to 8m in the entrance of this bay which decrease gradually to a drying sand at the head. A large hotel, with a tower at one end, stands at Portsalon and is fronted by a pier. This bay affords convenient anchorage for small vessels, but is exposed to the swell which rolls into the lough. Large vessels should approach the shore with caution as depths of less than 9m extend up to over 0.8 mile seaward.

Saldanha Head, the S entrance point of the bay, is formed by the NE extremity of Knockalla, a mountain, which rises 2.5 miles SW and is 362m high. Knockalla Point, located 0.8 mile SE of Saldanha Head, can be identified by a fort and a tower which stand close N of it.

Scraggy Bay, entered close S of Knockalla Point, is fronted by Glenvar Spit, the outer tail of a shoal, which has a least depth of 6m and extends 1 mile SE across the entrance. Small vessels can anchor within this bay, in a depth of 5m.

Mackamish Point, surmounted by a conspicuous tower, is located 2.3 miles SE of Scraggy Bay. The coast between is cliffy and bordered by a rocky shore.

Provincial Bank, with depths of 7 to 9m, lies between 0.8 mile N and 1 mile NW of Mackamish Point. Bull Rock, which dries, lies close SW of the bank. Saltpans Bank, with depths of less than 10m, fronts the shore and extends 2.5 miles SSW from about 1 mile ESE of Mackamish Point. It is marked by buoys and closes the coast in the vicinity of Rathmullan.

**East side.—**Lenan Head, located 2 miles S of Dunaff Head, terminates in a high cliff at its N side and provides partial shelter to Lenan Bay which is entered close S of it. Anchorage can be taken within this bay, in a depth of 7m, sand, but a swell is often experienced.

Dunree Head is located 3 miles SSW of Lenan Head. This point is 94m high; a light is shown from a structure standing half way up the cliff. A prominent white streak is located on the cliff face close below the light. Between Dunree Head and Neds Point, 4 miles SE, the coast is bordered by rocks and shoals which extend up to 0.5 mile seaward and are known collectively as Linsfort Shoal. Colpagh Bank, with general depths of 1 to 3m and two drying rocks at its center, lies midway between Dunree Head and Neds Point and is marked by a buoy. White Strand Rocks, a cluster of sunken dangers, lies about 0.7 mile NW of Neds Point and is also marked by a buoy. A wreck, with a least depth of 10.9m, lies about 0.5 mile WSW of Neds Point.

Dunree Bay is entered close SE of Dunree Head. Dunree Bar, lying at the N end of Linsfort Shoal, breaks heavily when the strong ebb current sets out of Dunree Bay and meets the swell setting into the lough. At such times, the W shore should be favored where the depths are greater and the channel free from breakers.

Buncrana Bay, entered close S of Neds Point, provides good anchorage in its outer part during the summer months, but is dangerous with NW winds. Anchorage can be taken by large vessels in the outer part of this bay, in a depth of 12m, mud, about 0.5 mile SW of Neds Point.

Inch Island, lying 2.7 miles SSW of Buncrana Bay, is connected to the E side of the lough by two embankments. It is surrounded by flats which are intersected by several shallow

channels. Inch Flats, which dry, extend 1.2 miles N from the N side of this island and terminate at Inch Spit which is awash. This area of flats is marked by buoys.

**5.21 Rathmullan** (55°06'N., 7°32'W.) (World Port Index No. 33880), a village with an old fort, stands on the W side of the lough. The roadstead, which lies off the village and W of Inch Island, provides a more sheltered anchorage than Buncrana Bay. During NW gales, a high sea may be experienced in the latter bay, but smooth water will be encountered in the roadstead. A pier, with a depth of 7m alongside, fronts the village. Anchorage can be taken, in depths of 12 to 20m, within the roadstead.

The fairway of the lough continues S with depths of more than 9m to Ballylin Point, 3.2 miles above Rathmullan. Letterkenny Channel is then entered and leads 11 miles to the head. This channel is tortuous, narrow, and used only by small craft at HW. Local knowledge is required.

**Tides—Currents.—**The tides at Rathmullan rise about 4.3m at springs and 3.2m at neaps.

In the entrance to the lough, the tidal currents are weak. Farther in, the currents gradually gain strength and off Rath Mullan, the flood attains a rate of 1.3 knots at springs and the ebb a rate of 1.7 knots. Both of these currents appear to form eddies off the salient points within the lough.

**Pilotage.—**Pilots for Lough Swilly are not available, but persons with local knowledge may be requested in advance through Rathmullan. Small vessels should not proceed above Rathmullan without local knowledge.

**Caution.—**Fish farms lie along the shores of Lough Swilly.

Drift nets may be encountered in the approaches to the lough during January, February, May, and June. During the summer, salmon nets may also be encountered within the lough.

Numerous yachts and small craft may be encountered within the lough during the summer months.

## Lough Swilly To Malin Head

**5.22 Trawbreaga Bay** (55°20'N., 7°25'W.) lies between Dunaff Head and Malin Head, 6.7 miles NE. It is exposed to the prevailing winds and sea and is seldom used except as a temporary anchorage under favorable conditions. The currents in this bay are weak, having rates of 0.5 knot at springs, but the heavy swells cause an inward set.

Glashedy Island lies 1 mile offshore, 4.5 miles ENE of Dunaff Head. It is 36m high and surrounded by dangerous rocks and breakers. Glashedy Sound leads between the island and the coast. It has depths of 7 to 9m in the fairway, but should not be attempted by vessels without local knowledge.

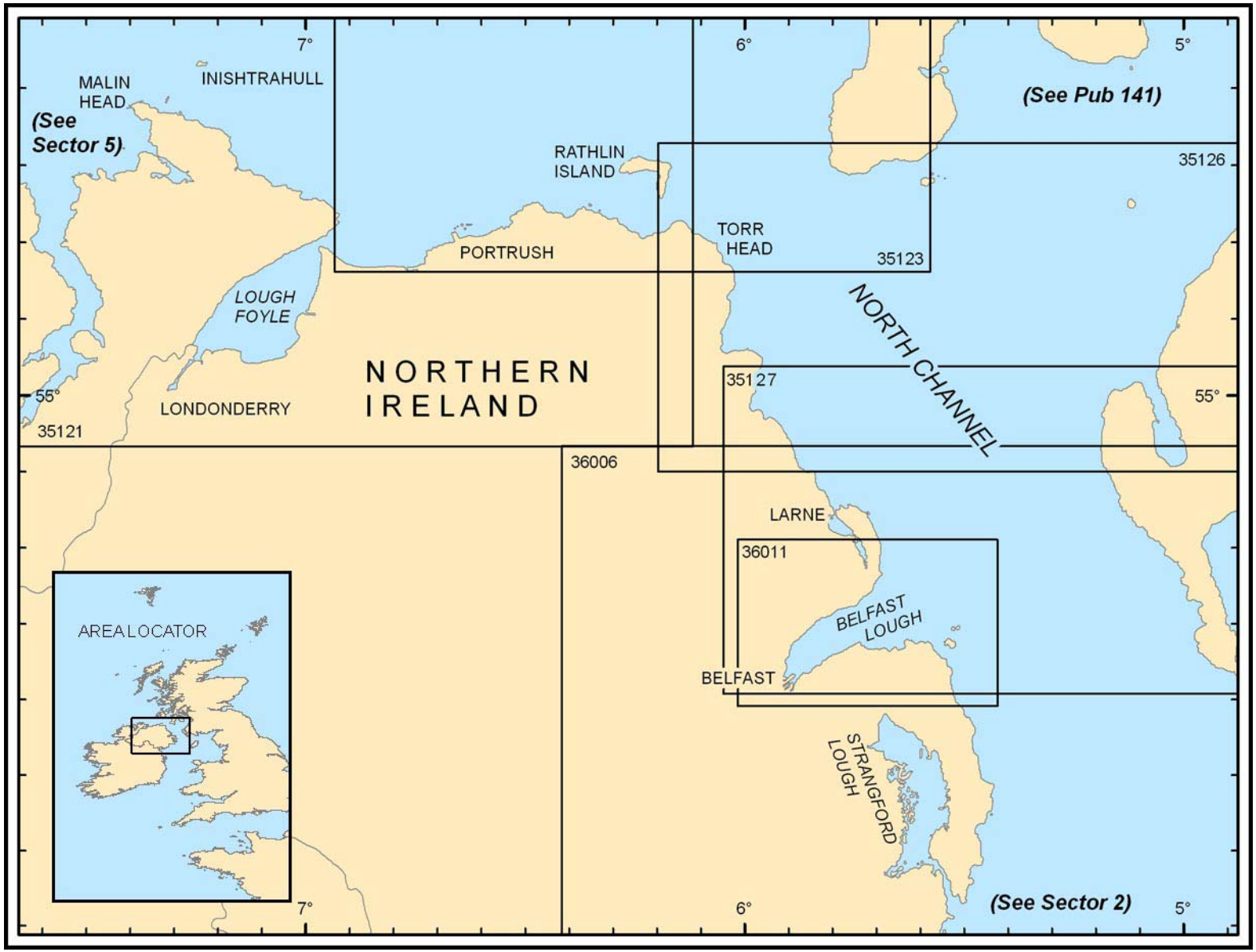
The S side of the bay is generally low, except for Binnion which rises abruptly to a summit, 249m high, 3.5 miles E of Dunaff Head.

Tullagh Point is located 2 miles ENE of Dunaff Head. Rockstown Bay and Tullagh Bay are entered on the W and E sides, respectively, of this point. These bays can be used as temporary anchorages during offshore winds, but both are small and encumbered by several dangers.

Trawbreaga Lough, the SE extension of Trawbreaga Bay, has depths of 7 to 10m in the approach, but shoals rapidly to drying flats within the entrance. It is only used by small vessels with local knowledge. A bar, with a depth of 0.6m, obstructs the entrance and is often impassable due to breakers. The tidal currents at the entrance to this lough attain rates of 5 knots at springs.

White Strand Bay, lying 1.6 miles SE of Malin Head, affords temporary anchorage, in depths of 10 to 15m, during E winds.

**Caution.—**Submarines exercise frequently, both surfaced and submerged, in the waters lying N of Malin Head.

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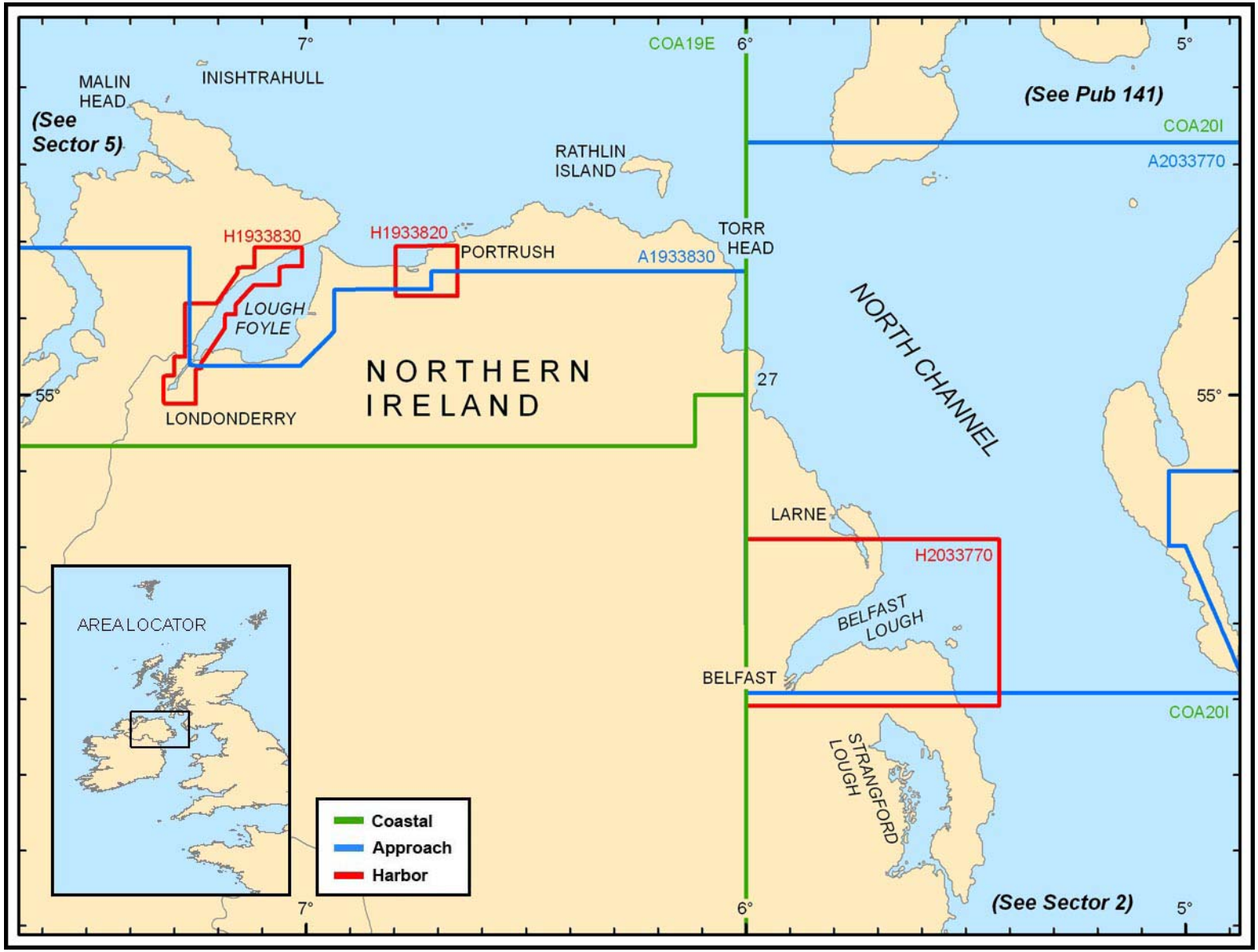
SECTOR **6** — CHART INFORMATION

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SECTOR 6 — DNC LIBRARY INFORMATION

# SECTOR 6

## NORTH AND NORTHEAST COASTS OF IRELAND—MALIN HEAD TO STRANGFORD LOUGH NARROWS

**Plan.—**This sector describes the N and NE coasts of Ireland from Malin Head to the S side of Strangford Lough Narrows. The descriptive sequence is from N to S.

### General Remarks

**6.1** The N and NE coasts of Ireland between Malin Head and Killard Point, extending 108 miles E and SE, are bordered by high, bold cliffs which rise gradually inland to conspicuous peaks which, under favorable weather conditions, are visible for a considerable distance offshore. These peaks are invaluable aids to vessels navigating along this coast.

Strangford Lough, although subject to strong currents, is an excellent harbor of refuge for vessels taking shelter from storms in the Irish Sea.

**Winds—Weather.—**Off the N and NE coasts of Ireland, winds reach gale force most frequently during December and January, when the average number of gales per month exceeds 10. May through August are the months with the fewest gales.

Snow usually falls to some extent from November to April over the open sea N of Ireland and on the N and E coasts. It is most likely to be experienced from January to March, especially when NE winds prevail. The aspect of the coast may change considerably after a snowfall. Fog may occur at any time, but is most common during the summer.

**Tides—Currents.—**The tidal currents setting SE and NW through North Channel attain rates of 3.5 to 4 knots in mid-channel at springs. Heavy overfalls and rips may occur off the banks and salient points of the coast. During unsettled weather, dangerous rips are usually encountered within Rathlin Sound and in the vicinity of several of the banks lying N of Inishtrahull and Rathlin Island. Caution should be observed by small vessels when navigating through these areas.

**Caution.—**Submarines exercise frequently, both surfaced and submerged, in the waters N of Malin Head.

Laden tankers should not use the narrow channel leading through Rathlin Sound.

A IMO-adopted Traffic Separation Scheme (TSS) has been established within North Channel and lies between Rathlin Island and the coast of Scotland. The separation zones and traffic lanes of this TSS may best be seen on the chart. Laden tankers over 10,000 gt are advised to avoid the inshore traffic zones of this TSS.

**Note.—**The direction of the Lateral Buoyage System (IALA) around Ireland changes at Malin Head.

### Off-lying Islands and Dangers

**6.2** The **Garvan Isles** (55°23'N., 7°19'W.), consisting of an extensive group of small islets and rocks up to 20m high, lie centered about 1 mile off the coast, 3.1 miles ENE of Malin Head. The currents in the vicinity of these dangers are strong and caution should be exercised when approaching them. Garvan Sound lies between this group and the rocks fronting the mainland coast to the S. Although only about 200m wide and with strong currents, the fairway of this passage is reported to present no difficulty in daylight for small vessels.

**Inishtrahull** (55°26'N., 7°14'W.) lies 6.5 miles NE of Malin Head. Rounded hills, 41m high, rise at the E and W ends of this island and are joined by a stretch of low ground. A light is shown at an elevation of 59m from a prominent tower, standing at the W side of the island. A racon is situated at the light.

Tor Rocks, up to 22m high, lie centered 1 mile NNW of Inishtrahull. Tor Sound leads between this group of rocks and the N side of the island. Vessels can pass to the S of the island through Inishtrahull Sound, but if passing to the N, they should pass N of Tor Rocks and not attempt to pass through Tor Sound.

**Hempton's Turbot Bank** (55°26'N., 6°57'W.), with a least depth of 15.8m, lies about 9 miles E of Inishtrahull.

**Shamrock Pinnacle** (55°21'N., 6°24'W.), with a least depth of 15.9m, lies about 5.2 miles NW of the W end of Rathlin Island.

**Laconia Bank** (55°26'N., 7°14'W.), with a least depth of 20.1m, lies 2 miles N of Shamrock Pinnacle.

Vessels should avoid the above banks as, in bad weather, overfalls form over their shallowest parts.

**6.3** **Rathlin Island** (55°18'N., 6°12'W.) lies with its W extremity located 7.2 miles ENE of Benbane Head. The S portion of the island is broken into hummocks which gradually decline in height towards Rue Point, the low and rocky S extremity. A light is shown at an elevation of 62m from a tower standing at the W side of the island, 0.5 mile N of Bull Point, the W extremity. A light is also shown at an elevation of 74m from a prominent tower standing at the NE end of the island. A light is shown at an elevation of 16m from a tower standing on Rue Point, the S extremity of the island.

MacDonnel Race extends from about 0.5 to 1 mile off Altacarry Head, the NE extremity of the island, and should be avoided by small vessels. This race is fully formed about 1 hour after the tidal current setting E begins and continues until it ends.

Church Bay lies on the S side of the island and, although exposed to the W, provides anchorage for small vessels. Care must be taken to avoid a dangerous wreck which lies within the bay and is marked by a lighted buoy. The depths are moderate and the holding ground is good.

**Rathlin Sound** (55°14'N., 6°10'W.) lies between Rathlin Island and the mainland coast to the S. Attention should be given to the currents within this passage which can be strong and varied in direction. During the strength of the tidal current setting W, violent overfalls form at the E end of the sound and are usually centered about 1.5 miles SW of Rue Point. The currents set strongly in this area and attain rates of up to 6.5 knots in the sound, and 4 knots about 1 mile N of the N coast of Rathlin Is-

land.

**The Maidens** (54°56'N., 5°44'W.), consisting of two groups of rocks separated by a navigable passage, lie centered 4.6 miles NE of Ballygalley Head. The S group consists of two prominent above-water rocks. A conspicuous disused light tower, along with several other prominent buildings, stands on West Maiden, the W rock. A light is shown from a conspicuous tower, 23mhigh, standing on East Maiden, the E rock; a racon is located at the light. Dangerous rocks lie on a reef which extends up to 0.8 mile S from East Maiden.

The N group consists of several dangerous rocks up to 1m high. Highlandman Rock, the N rock of the group, lies 1.5 miles N of East Maiden and is marked by a beacon. An isolated shoal, with a least depth of 16.2m, lies about 2 miles E of Highlandman Rock and is generally marked by overfalls.

## Malin Head to Lough Foyle

**6.4** **Malin Head** (55°23'N., 7°24'W.) is the bold NW extremity of a peninsula which terminates at Dunaldragh, the N extremity of Ireland. Scart Rocks, a steep-to group of above-water dangers, lies close W of the head. A conspicuous ruined tower is situated near Dunaldragh; two prominent radio masts stand 1 mile SE of it.

Slievebane Bay, entered 2.3 miles E of Malin Head, affords temporary shelter to small craft, but local knowledge is required as several dangers lie in the approaches. Two conspicuous radio masts stand in the vicinity of a radio station situated 0.4 mile SSW of the head of this bay.

Stookaruddan, a prominent islet 70m high, lies about 0.1 mile offshore, 1.7 miles E of Slievebane Bay. Two prominent radio masts and a wind motor stand on a hill 1 mile SSE of this islet.

**Glengad Head** (55°20'N., 7°10'W.), located 8.3 miles SE of Malin Head, is marked by a conspicuous hummock which rises near its extremity.

Culdaff Bay, a small and exposed inlet, is entered 2.5 miles S of Glengad Head. With offshore winds, this inlet provides anchorage to small vessels with local knowledge, in a depth of 7m, sand. The strong coastal tidal currents set past this bay and tend to lower the swell within it to a remarkable degree.

**Inishowen Head** (55°14'N., 6°55'W.), which terminates in an abrupt precipice, is located 10.5 miles SE of Glengad Head. The coast between is indented, bold, and precipitous.

## Lough Foyle

**6.5** The main channel through **Lough Foyle** (55°10'N., 7°00'W.) is the only one leading to the entrance of the River Foyle and hence to the port of Londonderry. It follows the NW shore. It is entered between Inishowen Head and Magilligan Point.

The greater part of the Lough lies SE of the main channel, and consists of sand banks and mud banks. In some areas of this portion of the Lough, it is quite deep and is interspersed with other channels which lead nowhere.

The Tuns, a shallow sandbank, extends up to about 3 miles NE from Magilligan Point, on the S side of the approach. Its seaward extremity is marked by a lighted buoy.

From **Magilligan Point** (55°12'N., 6°58'W.), at its entrance, the channel leads generally SW for a distance of approximately 4.5 miles before entering the narrow maintained channel, the NE end of which is marked by two lighted buoys. It leads further for approximately 9.5 miles to the entrance of the River Foyle.

**Tides—Currents.—**Off the entrance to Lough Foyle, the tidal currents attain rates of 2 knots at springs. The currents on both sides of the approach channel are affected by eddies. Close inside the entrance of the lough, the currents diminish in strength and gradually become weaker as the entrance of the River Foyle is approached.

**Depths—Limitations.—**The channel leading to the entrance of the river and then to the facilities at Lisahally Terminal is reported (1994) to be dredged to a depth of 8m. The channel between this terminal and the Port of Londonderry is reported (1995) to have a least dredged depth of 4.5m.

**Aspect.—**The high and steep cliffs of Inishowen Head are conspicuous from seaward. Inishowen Light is shown at an elevation of 28m from a conspicuous tower, standing on Dunagree Point, 0.5 mile S of the head. A disused light tower stands close ENE of the light. A lighted approach buoy is moored about 2 miles NE of Inishowen Head.

A light is shown at an elevation of 11m from a tower, standing on Warren Point, 1.4 miles SW of Dunagree Point. An old fort, a castle in ruins, a white tower, and a church tower all stand near the coast in the vicinity of Greencastle, 1 mile SW of Warren Point.

The coast rises gradually inland to the peaks of the mountain range which forms the W side of the lough. Crocknasmug, the principal peak in the vicinity, rises 1.5 miles W of Inishowen Head and is 321m high.

The SE side of the entrance is low and sandy. A conspicuous martello tower and several low buildings are situated on Magilligan Point. A lighted beacon stands 0.2 mile NNW of the tower. The loom of the bright lights at the prison, which is situated 1.2 miles SSE of Magilligan Point, can be seen for many miles to seaward.

The channel through the lough is marked by lighted beacons, lighted buoys, and lighted ranges. Caution is necessary as it has been reported (1997) that the fixed structures are in poor condition.

**Pilotage.—**Pilotage is compulsory for passenger vessels over 35m long, all vessels over 50m long, all vessels carrying dangerous substances, and all vessels in ballast that are not gas free. The Londonderry Port and Harbor Commissioners are the Pilotage Authority.

All inbound vessels, outbound vessels, and vessels in transit are required to contact Foyle Pilot or Londonderry Harbor Radio on VHF channel 14.

Inbound vessels boarding a pilot at the inner boarding position should report from a position 3 miles off Tuns Lighted Buoy (55°14'N., 6°53.4'W.).

The outer pilot boarding area, used by vessels over 120m loa, is located in position 55°15.4'N, 6°52'W. The inner pilot boarding area is located off Greencastle in position 55°11.8’N, 6°59'W.

Vessels should send their ETA 24 hours, 12 hours, and 3 hours prior to arrival at the pilot boarding area.

Vessels requiring movement at berth or departing port should request for pilot giving at least 4 hours notice during office

hours or call on VHF to Port Radio at other time.

The pilot station is located at **Greencastle** (55°12'N., 6°59'W.) on the NW shore about 0.5 mile inside the entrance to the Lough. The pilot station, call sign "Foyle Pilots," maintains a watch on VHF channel 14 from Monday to Friday between 0900 and 1700. The pilot vessel is equipped with VHF.

Owners, agents, or masters should notify the pilot station during working hours of the name of the vessel, draft, and ETA off **Moville** (55°11'N., 7°03'W.), which is approximately 2.5 miles within the entrance. Outside of working hours, this information should be passed to the harbormaster's office; VHF communication should be established as soon as possible.

**Anchorage.—**Good anchorage can be taken, in depths of 12 to 17m, between Moville Bank, lying off Moville, and McKinneys Bank, 0.3 mile SE. Several designated anchorage berths lie between Moville Bank and Magilligan Point and can best be seen on the chart. The holding ground is fair and the currents are not excessive in these areas, but closer to Magilligan Point, the current attains a rate of 4.5 knots at springs and the bottom is rocky in places.

**Caution**.—Despite frequent dredging, silting occurs in the channel; lesser depths than those charted may be encountered.

Orange parachute flares, which are occasionally fired from the prison situated on the SE side of the entrance, are often mistaken for, and reported as, distress flares.

The lighted beacons, which are on piles, do not mark the edge of the fairway and even shallow-draft vessels should not deviate from the recommended tracks.

## Londonderry (55°00'N., 7°19'W.)

World Port Index No. 33830

**6.6** The port of Londonderry lies along the W bank of the River Foyle, 4 miles above the entrance and 21 miles from the sea.

**Port of Londonderry Home Page**

http://www.londonderryport.com

**Tides—Currents.—**The tides at Londonderry rise about 2.7m at springs and 2m at neaps.

The currents in the River Foyle generally set in the direction of the channel, but tend to set towards the outer side of the fairway at the bends. In some parts of the channel, the changes from flood to ebb are quick with a very brief period of no perceptible current. However, in other parts of the channel, the change is slow, with a fairly strong set towards one bank or the other. The currents in the river usually attain rates of 1.5 to 2.5 knots at springs.

The currents off the quays at Londonderry are affected by eddies, which vary with the number, position, and draft of vessels lying alongside. For the same reason, the surface and subsurface currents may differ. Caution is therefore necessary when berthing alongside.

**Depths—Limitations.—**The city is fronted by 800m of total quayage with dredged depths of up to 7.5m alongside. Vessels using the city berths are generally limited to 135m in length, 22m beam, and 6m draft. It is reported (1995) that the channel between Lisahally Terminal and the city quays has a least maintained dredged depth of only 4.5m. For further information, see Lough Foyle—Depths—Limitations in paragraph 6.5.

At Maydown, on the S side of the river adjacent to Coolkeeragh, there are two private jetties.

Lisahally Terminal, lying 0.6 mile SW of Maydown,. Smaller vessels may be accommodated at deeper drafts. For further berthing information see table titled **Port of Londonderry—Berth Information**.

**Aspect.—**Londonderry, surrounded by an ancient rampart, stands principally on the W bank of the River Foyle. The buildings, which now comprise the modern part of the city, have been considerably extended beyond the original enclosed site to the E side of the river, both parts being joined by the Craigavon Bridge. Navigation above this bridge, at the inner end of the harbor, is no longer possible.

The cathedral stands on the summit of the hill on the W bank of the river and is conspicuous from most parts of the lough.

Coolkeeragh Power Station, with three conspicuous chimneys, stands on the S side of the river at Maydown.

**Pilotage.—**There are two areas in which the use of pilots is compulsory and they are described as follows:

1. Inner Area: Within Lough Foyle extending from Craigavon Bridge at Londonderry to a line drawn from the Tower on Magilligan Point to Greencastle Fort.
2. Outer Area: Position (55°11.6'N, 6°57.9'W) to position 55°13.6'N, 6°51'W, then N to position 55°15.5'N, 6°51'W, then W to position 55°15.5'N, 6°55.3W, then S to position 55°14.2'N, 6°55.3'W.

**Port of Londonderry—Berth Information.**

| Berth | Length | Depth | Maximum Vessel | | | Remarks |
|---|---|---|---|---|---|---|
| | | | LOA | Draft | Beam | |
| **Londonderry Terminal** | | | | | | |
| Lisahally | 450m | 10.0m | 198m | — | 26m | General cargo and coal. Vessels up to 30,000 dwt accommodated. |
| **Tanker Berths** | | | | | | |
| Container Terminal | 450m | 8.5m | — | — | — | — |
| Bulk Berth | 390m | 8.5m | — | — | — | — |

| Port of Londonderry—Berth Information. | | | | | | |
|---|---|---|---|---|---|---|
| Berth | Length | Depth | Maximum Vessel | | | Remarks |
| | | | LOA | Draft | Beam | |
| Obriens Wharf | 120m | 8.0m | — | — | — | — |
| **Tanker Berths** | | | | | | |
| **Coolkeeragh Power Station** | | | | | | |
| LSS Berth | — | 8.5m | 196m | 8.3m | 26m | Chemicals. |
| **Topaz Terminal** | | | | | | |
| Topaz Berth | 120m | — | 190m | — | 26m | — |

Pilotage is compulsory for the following vessels:

1. All vessels over 50m LOA.
2. All passenger vessels over 35m LOA.
3. All vessels carrying marine pollutants in bulk.
4. All vessels carrying dangerous goods.
5. All vessels in ballast which are not gas-free.
6. All vessels engaged in towing or pushing where the total length of the tug and tow or tug and vessel being pushed is greater than 50m LOA.
7. All vessels over 20m LOA suffering a defect or deficiency which affects their normal ability to navigate and/or manuever; or their ability to comply with all the requirements of the COLREGS and/or STCW (Standards of Training: Certification and Watchkeeping).
8. All vessels maneuvering with the assistance of tugs.

The following types of vessels are exempt from compulsory pilotage:

1. Military vessels.
2. Lifeboats when in active service.
3. General Lighthouse Authority Tenders.
4. Vessels less than 70m LOA engaged in dredging and operating exclusively within port limits.
5. All vessels under the command and control of a Master or Deck Officer holding a Pilot Exemption Certificate (PEC).

Pilots board in the following positions:

a. 55°15.4'N, 6°52.0'W (In the vicinity of the Foyle Buoy)—for vessels over 12m LOA.

b. 55°11.8'N, 6°59.0'W (0·3 n miles S of Greencastle Harbour)—for vessels less than 12m LOA.

**Regulations.—**ETA, arrival draft, and maximum air draft are to be advised to Londonderry Harbour Radio 24, 12, and 3 hours prior to arrival at the pilot boarding position.

Inbound vessels shall contact Londonderry Harbour Radio, as follows:

1. When 1 hour or 3 miles from the Tuns Buoy.
2. When passing Tuns Buoy.
3. When passing Quigley's Point.

Outbound vessels shall contact Londonderry Harbor Radio, as follows:

1. When passing Redcastle Light.
2. When passing Tuns Buoy.

**Contact Information.—**Foyle Pilots can be contacted, as follows:

1. VHF: VHF channels 14 and 16
2. Telephone: 353-74-9381520
3. Facsimile: 353-74-9381521
4. E-mail: foylepilotstn@eircom.net

Londonderry Harbour Radio can be contacted, as follows:

1. Telephone: 44-28-7186-0313
2. Facsimile: 44-28-7186-1357
3. E-mail: harbour.radio@londonderryport.com

Londonderry Port Operations can be contacted, as follows:

1. Telephone: 44-28-7186-1113
2. Facsimile: 44-28-7186-1656
3. E-mail: info@londonderryport.com

**Anchorage.—**Anchorages provide good holding. ground. Anchorage locations are best seen on the chart. For a list of anchorages see table titled **Port of Londonderry—Anchorage Information.**

| Port of Londonderry—Anchorage Information | |
|---|---|
| Berth | Depth |
| C1 | 12.0m |
| C 2 | 8.5m |
| C 3 | 8.5m |
| C 4 | 8.0m |
| C 5 | 17.0m |
| C 6 | 18.0m |
| D 1 | 17.0m |
| D 2 | 17.0m |
| D 3 | 17.0m |

**Caution.—**Vessels are warned that despite frequent dredging, silting occurs in the river and actual depths may be less than those charted. The ranges and leading lines do not always follow the deepest water and local knowledge is desirable.

An overhead cable, with a vertical clearance of 38m, spans the channel close E of the jetties at Maydown.

A bridge, with a vertical clearance of 31m, spans the river 1.2 miles below the city.

## Londonderry to Larne Lough

**6.7** **Portstewart Point** (55°11'N., 6°43'W.), marked by a

light, is located 8.3 miles E of Magilligan Point. A prominent radio mast stands 0.5 mile SSE of the light.

High sand ridges extend E along the coast for about 4 miles from Magilligan Point. Then, for a further 2 miles, rocky cliffs extend up to the entrance to the River Bann. Mount Bainevenagh, 384m high, stands 5 miles SSE of Magilligan Point and is prominent. Mussenden Temple, which is very conspicuous from the NW, stands on the cliffs 1.2 miles W of the river mouth. A prominent ruined castle and a radio mast stand close S and 0.8 mile ESE, respectively, of the temple.

The tidal currents between Magilligan Point and Benbane Head, 17 miles E, probably set E and W in the direction of the coast. They attain rates of up to 2 knots at springs.

**6.8 Coleraine** (55°08'N., 6°40'W.) (World Port Index No. 33820), a small port, lies 4.5 miles above the entrance of the River Bann.

**Tides—Currents.—**The tides rise about 1.8m at springs and 0.9m at neaps.

The flood current setting into the river is not very strong, but the ebb attains a rate of 3 knots at springs. With heavy rains, the rate of the ebb is increased and the flood correspondingly decreased. During the flood current, a fairly strong set is experienced setting across the entrance. Rips or overfalls are reported to form where the ebb meets the offshore currents.

**Depths—Limitations.—**There is a least depth of 3.5m in the entrance and a dredged depth of 3.4m throughout the channel as far as Coleraine. The port has 375m of total quayage, with depths of up to 4m alongside. Vessels of up to 2,300 dwt, 82m in length, 12m beam, and 4.1m draft can be accommodated at HW.

A marina is situated on the E bank of the river and provides good facilities for small craft.

**Aspect.—**The river fairway is marked by lighted beacons and the river entrance is indicated by a lighted range.

**Pilotage.—**Pilotage is compulsory. Pilots can be contacted on VHF channel 12 or 16 and board about 0.5 mile W of Portstewart Point. Vessels should sent an ETA at least 24 hours in advance.

**Anchorage.—**A fair weather anchorage area, the limits of which are shown on the chart, lies close NE of the river entrance.

**Caution.—**A railway bridge, with a navigable width of 18m below a vertical opening span, crosses the river 0.5 mile below the port.

A spoil ground area lies centered 1.2 miles NNW of the river entrance and may best be seen on the chart.

Salmon nets may be encountered within the river.

Several wrecks lie in the approach to the river and are best seen on the chart.

**6.9 Portstewart** (55°11'N., 6°43'W.), a small craft harbor, is entered close S of Portstewart Point. It is used by yachts, fishing boats, and a pilot cutter. Local knowledge is required for entry. Several buildings line the waterfront and are prominent from seaward. A conspicuous convent stands 0.3 mile S of the harbor. The town extends up to 1 mile S of the harbor and is a resort.

**Ramore Head** (55°13'N., 6°40'W.), 18m high, is located 2.5 miles NE of Portstewart Point and surmounted by a coastguard lookout building. A church, with a conspicuous tower, stands at Ballywillin, 1.7 miles S of the head. A prominent television mast and a prominent radio mast stand 2 miles SSW and 0.7 mile SSE, respectively, of the head.

A conspicuous hotel is situated 2 miles ESE of Ramore Head and some prominent white cliffs are located near it.

**6.10 Portrush** (55°13'N., 6°40'W.), a small harbor, lies close S of Ramore Head and is protected by two breakwaters. The tides rise about 2m at springs and 1.4m at neaps. The harbor has 183m of quayage with depths of 3.5 to 5.2m. It is used by small craft and fishing vessels of up to 49m in length. During NW gales, the sea breaks right across the entrance and there is a heavy run inside.

**The Skerries** (55°13'N., 6°38'W.), a chain of rocky islets, extends ENE for 1.5 miles and lies with its W end located 0.3 mile NE of Ramore Head. Skerries Sound leads between Ramore Head and the SW end of the chain. It has a navigable fairway, 180m wide, with depths of over 11m. A heavy sea usually prevails within this narrow passage and strong tidal currents and overfalls, especially at the W end, are often encountered.

Vessels can obtain sheltered anchorage, during the summer, within Skerries Roadstead which lies at the S side of the chain.

**The Storks** (55°13'N., 6°35'W.), consisting of an isolated patch of rocks, lies about 0.7 mile offshore, 2.5 miles E of Ramore Head. This patch is marked by a beacon and the sea breaks heavily over it in any swell.

**Portballintrae** (55°13'N., 6°33'W.), a shallow cove, lies 4 miles E of Ramore Head and affords shelter to small craft. It can be easily identified by a prominent row of houses standing at the head. The conspicuous ruins of Dunluce Castle are situated on the summit of a cliff which overhangs the sea, 1.2 miles WSW of this cove.

**6.11 Benbane Head** (55°15'N., 6°29'W.), located 3 miles NE of Portballintrae, along with Bengore Head, 0.5 mile E, is the N extremity of the high land in this vicinity. Great Stookan, standing 1.5 miles SW of the head, is a prominent, high, and rocky cliff. The Giants Causeway, located close NE of Great Stookan, is a low platform of stone which, when viewed from a distance, blends into the coast and is not readily distinguished. The coast in this vicinity has a remarkably bold appearance.

A conspicuous radio mast stands 2.7 miles S of Benbane Head. Dunseverick (Millport), a small boat harbor, lies 1.7 miles SE of Benbane Head.

**Ballintoy Point** (55°15'N., 6°22'W.), located 4 miles E of Benbane Head, is surmounted by a white church with a conspicuous tower.

A large sandbank, over which the sea breaks during NW gales or when there is much swell, extends up to 0.8 mile NNW of the point. A very small boat harbor lies along the E side of the point.

Larry Bane Head, formed by conspicuous white cliffs, is located 0.5 mile ESE of Ballintoy Point. Sheep Island, a prominent and precipitous rock, lies 0.3 mile N of these white cliffs.

Carrickarade Island lies close off the coast, 0.7 mile E of Larry Bane Head. This island is connected by a crude suspension bridge to the adjacent cliffs of the mainland which are 140m high.

Kinbane Head, surmounted by the ruins of a castle, is located 2.3 miles ESE of Larry Bane Head. A conspicuous radio mast stands 1 mile SW of the head. Carrickmannanon, a small drying rock, lies 0.5 mile NE of the head and small vessels, with local knowledge, can pass inside of it. The tidal currents within Rathlin Sound set past Carrickmannanon at a great rate and cause an eddy under its lee which sets strongly back towards the rock. Great caution is therefore necessary when navigating in this vicinity.

Fair or Benmore Head, located 7.5 miles ESE of Ballintoy Point, is a very conspicuous headland, 191m high. Its top is flat and surrounded by a vertical cliff, 90m high, which slopes abruptly to the sea. The deserted works of a colliery are situated near this head. The coast in this vicinity forms the S side of Rathlin Sound and is fronted by numerous off-lying rocks.

Ballycastle, a small harbor, lies at the head of a bay 3.5 miles WSW of Fair or Benmore Head. It is protected by a breakwater and used by small craft and yachts. During fine weather, temporary anchorage can be taken, in depths of 18 to 26m, within the bay and about 0.5 mile offshore.

Knocklayed, 514m high, stands 2.7 miles S of Ballycastle and has a rounded summit which can easily be identified from seaward.

**6.12 Torr Head** (55°12'N., 6°04'W.), 67m high, stands 3.2 miles SE of Fair or Benmore Head and is surmounted by a disused watchtower. A conspicuous radio mast stands 1 mile WNW of this head.

Cushendun Bay, entered 4.2 miles S of Torr Head, is obstructed by a dangerous wreck which lies about 0.3 mile N of the S entrance point. Although small and exposed to E winds, temporary anchorage can be taken within the bay during fine weather, in depths of 9 to 14m, close SE of the wreck.

Carnaneigh, 262m high, stands 2 miles N of Cushendun Bay. This peak is prominent and rises almost vertically from the sea to its summit.

Red Bay, entered 4 miles S of Cushendun Bay, provides good anchorage, but is exposed to NE and E winds. Small vessels can anchor off a pier, which extends from the NW shore, in a depth of 5m, but a heavy swell is experienced with E winds. A fish farm is reported (1991) to lie about 1.2 miles E of the pier.

**Garron Point** (55°03'N., 5°58'W.), the S entrance point of Red Bay, is formed by a bold and precipitous headland. A conspicuous college stands 0.5 mile S of the point and is situated at the foot of some hills which rise abruptly to heights of over 230m.

Between Garron Point and Cushendun Bay, an eddy runs S along the coast during the second half of the N tidal current in North Channel. A weaker eddy runs N during the second half of the S current in North Channel. Off Cushendun Bay, the S current attains a rate of 3.2 knots at springs while the N current attains a rate of 4 knots.

**6.13 Carnlough Bay** (54°59'N., 5°59'W.) lies 3.8 miles S of Garron Point and is tenable only with offshore winds. Black Rock, always uncovered, lies close NE of Straidkilly Point, the S entrance point. A small craft harbor, protected by a breakwater, fronts the village of Carnlough which stands at the N end of the bay. This village is backed by hills which rise to heights of over 300m about 1 mile inland. Collin Top, the highest peak, is 430m high and stands 3.7 miles W of the village.

Glenarm Bay is entered between Straidkilly Point and Peaks Point, 1.5 miles ESE. It provides good anchorage, in a depth of 11m, with offshore winds. A small drying harbor fronts the village, which stands in the S part of the bay near a river mouth, and is capable of sheltering one or two small coastal vessels. A conspicuous white building stands on Peaks Point.

Park Head, a nearly vertical headland, is located 0.3 mile ESE of Peaks Point. It is 137m high and very prominent. A conspicuous television mast is reported to stand 1.5 miles W of this headland.

**Ballygalley Head** (54°54'N., 5°51'W.), 89m high, is located 5.2 miles SSE of Peaks Point and appears as a rounded knob surmounting a steep cliff. The ruins of a castle are situated on the rocks at the base of the cliffs which form the head. A new castle stands 0.6 mile WSW of the headland at the head of a small bay. During offshore winds, good anchorage can be obtained within this bay, in a depth of 11m.

Robin Youngs Hill, the highest of several peaks in this vicinity, rises 2.7 miles WSW of Ballygalley Head and is 383m high.

**Caution.—**A submarine cable, which may best be seen on the chart, extends seaward from a point on the shore 1.5 miles SSE of Ballygalley Head.

## Larne Lough (54°51'N., 5°48'W.)

World Port Index No. 33790

**6.14** Larne Lough (Lough Larne) is entered between Sandy Point, located 3.2 miles SSE of Ballygalley Head, and Ferris Point, 0.3 mile SE. This inlet is mostly shallow and obstructed in its inner reaches by extensive flats. The port of Larne, a major terminal for vehicle and passenger ferries, lies near the entrance and the town stands on the W side.

**Port of Larne Home Page**

http://www.portoflarne.co.uk

**Tides—Currents.—**The tides rise about 2.4m at springs and 1.7m at neaps.

Off the entrance of the lough, about 1 mile N of Ferris Point, the tidal currents set N and S and attain rates of 1.5 knots at springs. Both the rates and directions of the currents may be affected by heavy rain.

**Depths—Limitations.—**The Maidens have been previously described in paragraph 6.3.

Hunter Rock, with a least depth of 0.8m, lies 2.3 miles NE of Ferris Point. It is marked by lighted buoys and may be passed on either side.

The entrance channel has a least charted depth of 8m on the range.

Six principal berths for ferries, passenger, and ro-ro vessels are situated at the W side of the harbor. They are 80 to 170m long and have dredged depths of 4.5 to 7.5m alongside.

A tanker jetty is situated at the E side of the harbor and fronts the power station. The head of the jetty is 80m long and

has a dredged depth of 12.5m alongside. A small wharf, lying close S of the jetty, has depths of 3.4 to 6.4m alongside.

There are also several small boat basins within the lough and extensive moorings for yachts.

Vessels of up to 35,000 dwt, 175m in length, and 9.3m draft have been accommodated at HW.

**Aspect.—**The shores of the lough are low and predominately stony with hills rising steeply to heights of between 120 and 150m on the W side. On the opposite shore, the hills rise more gradually to heights of between 60 and 90m.

In the approach to the lough, the cliffs on the W side rise inland to high mountainous peaks. Agnew Hill, 471m high, stands 4.8 miles W of Sandy Point and is prominent.

Conspicuous landmarks include Chaine Tower, tall and gray with a conical top, standing on the outer end of a short pier which extends from Sandy Point; Watch Tower, white and surrounded by a white wall, standing on Ferris Point; and Ballylumford Power Station, with three chimneys, each 126m high, standing 0.5 mile S of Ferris Point.

Prominent landmarks include a chimney and a water tank standing at a hospital 0.7 mile W of Chaine Tower; a television mast standing on a hill, 1.2 miles NW of Chaine Tower; a tower standing on Barr Point, 0.5 mile NE of Ferris Point; and two floodlit towers, each 43m high, standing about 0.4 mile S of Chaine Tower.

The town of Larne is situated on the W side of the entrance.

A sector light is shown from Chaine Tower and a lighted range indicates the entrance channel. An outer approach lighted buoy is moored about 0.5 mile NNW of Ferris Point; the fairway is marked by buoys and beacons.

**Pilotage.—**Pilotage is compulsory for all vessels over 30m in length. The pilots can be contacted on VHF channels 11 and 16.

Pilots board near Fairway Lighted Buoy No. 1 except for vessels bound for Ballylumford. Pilots for Ballylumford board in Belfast Lough in position 54°52.1'N, 5°47.7'W.

**Vessel Traffic Service (VTS).—**A Vessel Traffic Service operates in the waters of Larne Lough, providing Informational and Traffic Organizational services. Vessels other than ro-ro ferries must advise Larne Port Control 1 hour before arrival on VHF channel 11 stating:

1. ETA off South Hunter Rock Buoy.
2. Master's name.
3. Maximum draft.
4. Equipment defects.
5. Hazardous or polluting cargo on board.
6. Any other relevant information.

**Contact Information.—**Larne Port Control can be contacted, as follows:

1. Telephone: 44-28-2887-2179
2. Facsimile: 44-28-2887-2180
3. E-mail: portcontrol@portoflarne.co.uk

**Anchorage.—**Vessels may anchor about 1 mile NNE of the entrance, but must remain clear of the range and submarine cables. This roadstead is somewhat exposed in heavy weather.

**Caution.—**A local magnetic anomaly exists in the vicinity of Hunter Rock; it is reported that the magnetic variation can vary up to 4.5° from normal.

A spoil ground area, which may best be seen on the chart, lies centered 1.5 miles N of the entrance.

Ferry boats cross the lough in the vicinity of the entrance.

A submarine pipeline extends across the lough from Curran Point to the shore 0.6 mile ESE of the power station.

## Larne Lough to Belfast Lough

**6.15 Skernaghan Point** (54°51'N., 5°46'W.), the N extremity of Island Magee, is located 1.1 miles ENE of the entrance to Larne Lough. Precipitous cliffs, 15 to 31m high, extend 1.5 miles SE from this point. A prominent radio mast, 37m high, stands 1.2 miles SE of the point.

**Isle of Muck** (54°51'N., 5°43'W.), bare and green, lies close off the NE extremity of Island Magee to which it is connected by a narrow, drying, stony ridge. This islet is 37m high; its E side is bordered by a vertical cliff. Temporary anchorage can be taken by small craft with local knowledge on either side of the stony ridge.

**Black Head** (54°46'N., 5°41'W.), located 5 miles SSE of Isle of Muck, is bordered by an almost vertical cliff with a rounded knob on its summit. A light is shown at an elevation of 45m from a conspicuous white tower, standing on the head. Muldersleigh Hill, 128m high, rises 0.5 mile WNW of the head and is prominent.

**Caution.—**A submarine gas pipeline, which may best be seen on the chart, extends seaward from a point on the shore 0.5 mile SE of Skernaghan Point.

A submarine cable, which may best be seen on the chart, extends seaward from a point on the shore 1.2 miles SW of Black Head.

## Belfast Lough

**6.16 Belfast Lough** (54°42'N., 5°45'W.) is entered between Black Head and Orlock Point, 6.7 miles SSE, and provides an excellent harbor of refuge for vessels navigating the Irish Sea. The lough is 12 miles long and the port of Belfast lies at the head. The shores are backed by lofty hills, over 300m high, which rise inland to the W and SW.

**6.17 North side.—Cloghan Point** (54°44'N., 5°44'W.) is located 2 miles SW of Black Head. Kilroot Power Station, with a conspicuous chimney 205m high, stands 1.7 miles SW of it.

A tanker terminal jetty, which serves the power station, extends 0.6 mile ESE from the point; a lighted buoy is moored about 0.5 mile E of its seaward end. The berth at the head of this jetty can accommodate tankers of up to 70,000 dwt. Pilots for this terminal generally board about 2.5 miles E of the head of the jetty. The terminal monitors VHF channels 14 and 16.

White Head, located 0.5 mile NE of Cloghan Point, can easily be identified by several white limestone cliffs, 91m high.

A metal jetty, which is radar conspicuous, extends 350m SE from Kilroot Point, located 1 mile SW of Cloghan Point, and is used to load salt. Pilotage is not compulsory for the salt jetty but is advisable.

A jetty, 466m long, fronts the power station and is used for discharging coal. An area alongside this jetty is dredged to a depth of 7.2m and marked by buoys. Pilotage is available for the coal jetty. The jetty operation monitors VHF channels 14 and 16.

**Carrickfergus** (54°43'N., 5°48'W.), a small harbor, lies 1.7

**Carrickfergus Harbor**

miles SW of the power station and is protected by breakwaters. The tides here rise about 3.2m at springs and 2.7m at neaps. The harbor has 286m of quayage, with depths of 4.8m alongside at MHWS; vessels take the soft mud bottom at LW. The harbor entrance is 17m wide and the basin has dredged depths of up to 1.8m, but dries over a large part. Vessels of up to 2,100 dwt, 85m in length, and 4.7m draft can be accommodated. Pilotage is not compulsory, but may be requested through Belfast Port Control.

A conspicuous castle, 27m high, stands at the root of the E breakwater. A prominent radar tower, 9m high, stands near the head of the E breakwater and a church, with a prominent spire, stands close NW of the castle.

An extensive yacht marina lies close W of the harbor.

**Carrickfergus Marina**

Knockagh, 280m high, stands 2.5 miles W of Carrickfergus. A conspicuous obelisk war memorial, 41m high, is situated close to the summit of this prominent hill.

**6.18 South side.—Mew Island** (54°42'N., 5°31'W.) lies 2.7 miles NE of Orlock Point. A light is shown from a conspicuous tower, 37m high, standing at the NE end of the island. A racon is situated at the light.

Lighthouse Island lies close W of Mew Island and is surmounted by a disused light tower and several prominent buildings.

Copeland Island lies 1.7 miles E of Orlock Point and is fronted by rocks, shoals, and foul ground. Copeland Sound leads between the NE side of Copeland Island and the S sides of Lighthouse Island and Mew Island. This channel is navigable with local knowledge, but is not recommended. Its E end is almost entirely obstructed by unmarked shoals, over which strong tidal currents set, causing heavy overfalls.

In thick weather, vessels should not approach these islands within depths of less than 30m.

A prominent coastguard station, with a flagstaff, stands on Orlock Point; a conspicuous water tower stands 0.5 mile SE of it. Shoals, part of which dry, and foul ground extend up to about 0.8 mile NW of Orlock Point and are marked at their seaward side by a lighted buoy.

Ballyholme Bay, lying 2.3 miles W of Orlock Point, affords good anchorage for small vessels, in depths of 6 to 8m, mud, sand, and shells. Several yacht moorings lie in the W part of this bay.

**6.19 Bangor** (54°40'N., 5°40'W.), a small harbor, lies at the head of Bangor Bay, 1 mile W of Ballyholme Bay. This harbor, which is protected by breakwaters, is used by small coastal vessels and fishing boats. It is also an extensive yachting center. Pilotage is not compulsory, but pilots are available on request from Belfast. The harbor can be contacted by VHF. Vessels of up to 85m in length and 4m draft have been accommodated.

A church, with a prominent spire, stands 0.3 mile S of the root of the breakwater. Helen's Tower, a conspicuous land-

**Bangor Harbor**

mark, stands 2.6 miles SSW of the harbor. A conspicuous monument stands on Scrabo Hill, 2.7 miles SSW of Helen's Tower. Both Helen's Tower and the monument disappear as the S shore of the lough is approached.

It is reported that a radio mast that stands on Cairngaver, 2 miles WSW of Helen's Tower, is conspicuous from the N and E parts of the lough. A prominent group of three radio masts is reported to be situated 2.5 miles W of Cairngaver.

Grey Point, located 2.5 miles WNW of Bangor, is a bluff point, 23m high. The surrounding shore in this vicinity is comparatively low.

**Tides—Currents.—**The entrance to the lough is at right angles to the course of the currents setting through North Channel. Therefore, although the outside currents may set with considerable force, the currents inside the mouth of the lough seldom exceed a rate of 1 knot at springs.

The currents within Copeland Sound, in the SE approaches to the lough, generally set in the direction of the channel. Although their rates may vary in different localities, rates of up to 4.5 knots may be observed at springs in both directions.

**Anchorage.—**Vessels seeking shelter within the lough must be governed in their choice of anchorage berth by their draft, but during E gales, better shelter is provided in the inner reaches.

Excellent sheltered anchorage is provided for large vessels between Grey Point and Carrickfergus, in depths of 9 to 11m, 0.5 mile to 1.5 miles from the S shore.

Small craft can anchor, in depths of 4 to 6m, SE of Carrickfergus, but this roadstead is rather exposed during the winter. Small craft can also anchor, in depths of 3 to 4m, within Sea Park Anchorage, about 0.8 mile SW of Carrickfergus.

Small vessels can find good anchorage, in depths of 5 to 7m, within Folly Roads, about 2.1 miles SSW of Carrickfergus and on the N side of Victoria Channel.

**Caution.—**Several wrecks lie in the approaches to Belfast Lough and may best be seen on the chart.

Submarines frequently exercise off the entrance to Belfast Lough.

Vessels with a draft exceeding 2m should stay well clear of Eisenhower Pier Lighted Beacon and the head of the pier.

## Belfast (54°37'N., 5°54'W.)

World Port Index No. 33770

**6.20** The port of Belfast lies at the head of the lough near the mouth of the River Lagan. It is approached through Victoria Channel which leads between extensive drying banks fronting both shores. The harbor, in addition to numerous cargo handling berths, includes extensive repair and ship-building facilities.

**Port of Belfast Home Page**

http://www.belfast-harbor.co.uk

**Tides—Currents.—**The tides rise about 3.1m at springs and 1.9m at neaps.

Within Victoria Channel and the mouth of the river, the flood currents are usually weak, but the ebb currents attain rates of

**Belfast Harbor**

1.5 to 2 knots at springs.

**Depths—Limitations.—**The seaward section of Victoria Channel, up to the outer oil berth, has an intended dredged depth of 9.1m over a width of 122m. A turning basin at the inner end of Victoria Channel has an intended dredged depth of 8.7m over a radius of 213m. The main harbor channel continues SW from the turning basin and has intended dredged depths which gradually decrease from 8.7m to 5.5m. Herdman Channel, which leads NW from Victoria Channel and passes to the N of West Twin Island, has an intended dredged depth of 7.4m. Musgrave Channel, which leads SE from Victoria Channel and passes to the S of East Twin Island, has an intended dredged depth of 7.3m.

The harbor includes 7,400m of total quayage, which provides cargo berths up to 579m long, with dredged depths of 4.3 to 10.4m alongside. There are also four oil berths available.

**Port of Belfast—Berth Information.**

| Berth | Length | Depth | Maximum LOA | Remarks |
|---|---|---|---|---|
| **City Berths** | | | | |
| Victotian Terminal No. 1 | 155m | 7.9m | — | Ro-ro. Single tier ramp 15m. |
| Victotian Terminal No. 2 | 190m | 7.9m | — | Ro-ro. Single tier ramp 15m. |
| Victotian Terminal No. 3 | 375m | 9.0m | — | Containers. |
| Victotian Terminal No. 4 N | 170m | 6.0m | — | Ro-ro. Twin ramp 25m. |
| Victotian Terminal No. 4 S | 140m | 6.0m | — | Ro-ro. Single tier ramp 38m. |
| **Herman Channel West** | | | | |
| N Berth | 65m | 4.5m | — | — |

| Port of Belfast—Berth Information. | | | | |
|---|---|---|---|---|
| **Berth** | **Length** | **Depth** | **Maximum LOA** | **Remarks** |
| S Berth | 65m | 4.5m | — | Ro-ro. |
| Davis Berth | 70m | 4.5m | — | — |
| **Gotto Wharf** | | | | |
| Gotto Wharf | 567m | 8.5m | — | Dry and break bulk cargo. |
| **Pollock Docks** | | | | |
| Pollock Dock No. 5 | 125m | 8.5m | — | Reported (2015) not available for cargo. |
| Pollock Dock No. 6 | 179m | 8.5m | — | Dry bulk |
| Pollock Dock No. 7 | 117m | 8.5m | — | Dry bulk, break bulf and ro-ro. |
| Pollock Dock B | 171m | 8.5m | — | Dry and break bulk. |
| Pollock Dock C | 152m | 8.5m | — | Dry and break bulk. |
| Pollock Dock D | 97m | 8.5m | — | Dry and break bulk. |
| Sinclair Wharf | 373m | 8.5m | — | Dry bulk. |
| **Stormont Terminal** | | | | |
| N Wharf | 525m | 10.2m | — | — |
| S Wharf | 300m | 10.2m | — | — |
| Stortmont Wharf Extension | 270m | 11.2m | — | — |
| York Dock 1 | 267m | 7.3m | — | Break bulk. |
| York Dock A | 267m | 7.3m | — | — |
| Barnett Dock No. 1 | 92m | 4.0m | — | — |
| Barnett Dock No. 2 | 184m | 8.5m | — | — |
| Barnett Dock A | 130m | 5.8m | — | — |
| Barnett Dock B | 76m | 4.4m | — | — |
| Belfast Quay | — | 5.8m | 100m | — |
| **Albert Terminal** | | | | |
| Quay No. 1 | 182m | 5.5m | — | — |
| Quay No. 2 | 182m | 5.5m | — | — |
| Albert Quay Ramp | — | — | — | Ro-ro. 10m. |
| **Donegal Quays** | | | | |
| No. 3 | 100m | 5.5m | — | — |
| No. 4 | 116m | 5.5m | — | Ro-ro. |
| No. 5 | 100m | 5.5m | — | Ro-ro. |
| **Queens Terminal** | | | | |
| Queens Quay | 460m | 5.5m | — | — |
| Cushnahan Quay | 76m | 2.0m | — | — |
| Victorian Quay | 225m | 3.0m | — | — |
| Musgrave Quay | 147m | 7.3m | — | Scrap metal. |
| Commissioning Quay | 170m | 8.6m | — | — |
| Kinnegar Quay | 61m | 4.5m | — | Break bulk. |

| Port of Belfast—Berth Information. | | | | |
|---|---|---|---|---|
| **Berth** | **Length** | **Depth** | **Maximum LOA** | **Remarks** |
| **Multipurpose Berths** | | | | |
| Pollock Dock No. 6 | 177m | 8.5m | — | — |
| **Tanker Berths** | | | | |
| Richardson Wharf | 152m | 8.5m | — | Chemicals. |
| Oil Berth No. 1 | 183m | 8.5m | — | Pertoluem products. |
| Oil Berth No. 2 | 229m | 8.5m | — | Pertoluem products. |
| Oil Berth No. 3 | 229m | 8.5m | — | Pertoluem products. |
| Oil Berth No. 4 | 304m | 11.3m | — | Chemicals and petroleum. Night berthing draft 10.5m. |

The port has facilities for general cargo, ro-ro, container, bulk, LPG, tanker, and ferry vessels. Vessels are only limited by draft.

In addition, there are extensive repair services. The repair facilities include several dry docks. Belfast Dry Dock has a length of 335m and a width of 50m, with a depth over the sill of 8.1m. Belfast Building Dock has a length of 556m and a width 92m, with a depth over the sill of 4.9m. For further berthing information refer to the table titled **Port of Belfast—Berth Information**.

**Aspect.—**Divis Mountain, 478m high, rises 3.7 miles W of the port and stands at the head of the lough. Two short, conspicuous radio masts, which are floodlit, stand on the summit of this mountain; a conspicuous television mast stands 0.3 mile SE of them. Another conspicuous television mast stands on Black Hill, 1.5 miles S of Divis Mountain.

A very conspicuous television tower stands on Carnmoney Hill, 3.7 miles NNW of the port. Cave Hill, 356m high, stands 2.5 miles NW of the port. It has a very jagged outline and a precipitous summit. Belfast Castle, situated on the SE slope of this hill, is prominent.

A conspicuous silo, 85m high, stands at the outer end of West Twin Island, which is situated on the N side of the channel, 1 mile within the harbor entrance. Three conspicuous chimneys, 73m high, stand near the power station situated 0.3 mile SW of the silo. Several conspicuous cranes, 110m high, stand at the shipbuilding dock 1 mile S of the silo.

The prominent buildings and tanks of an oil refinery stand on the SE side of the harbor entrance and a prominent chimney stands on the N side, 0.2 mile N of the silo. A church, with a conspicuous spire, stands close to the coast, 2.3 miles NE of the silo.

The fairway of Victoria Channel is marked by lighted buoys and lighted beacons. The channel entrance is marked by No. 1 buoy which is lighted and moored about 1.5 miles SE of Carrickfergus.

**Pilotage.—**The harbor limits lie W of a line extending between Carrickfergus and Grey Point. Pilotage is compulsory within the harbor limits for vessels over 100m in length and all vessels carrying passengers, hazardous cargo in bulk, or in ballast and not gas free. It is also compulsory for vessels over 75m in length, but less than 100m in length, from a position close W of No. 3 and No. 4 Lighted Buoys and all vessels without effective radar in visibility less than 0.25 mile.

Pilots board, as follows:

1. Vessels with a draft equal to or exceeding 10.2m—position 54°43.7'N, 5°40.5'W.
2. Vessels 100m in length and greater—position 54°42.1'N, 5°44.4'W.
3. Vessels over 75m in length, but less than 100m—position 54°40.9'N, 5°48.5'W.

Vessels should send their ETA 6 hours and 2 hours in advance. Pilot launches are painted black with orange superstructure and the word PILOT in white letters on each side.

Belfast Pilots can be contacted, as follows:

1. Telephone: 44-28-9074-0054
2. E-mail: enquiries@belfastpilots.com

**Vessel Traffic Service.—**A Traffic Information and Organization Service has been established in the approaches to the port. Vessels arriving, departing or transiting the harbor, as well as crossing Victoria Channel are required to participate in the VTS.

Vessels should request clearance, as follows:

1. 15 minutes prior to arrival at the Fairway Lighted Buoy.
2. Prior to departure from berth.
3. 15 minutes prior to crossing Victoria Channel.

All clearances will be valid for 15 minutes and timed upon issuance.

All inbound vessels shall contact Belfast Harbor Radio, as follows:

1. 2 hours prior to arrival at the Fairway Lighted Buoy.
2. 15 minutes prior to arrival at the Fairway Lighted Buoy.
3. When passing the Fairway Lighted Buoy.
4. When the pilot arrives on the bridge of the reporting vessel.
5. When passing Light Beacon No. 5.
6. When berthing or anchoring in the lough.

All outbound and shifting vessels shall contact Belfast Harbor Radio, as follows:

1. 15 minutes prior to departure.
2. When departing berth and reberthing, or anchoring if applicable.

**Donaghadee Light**

3. When passing Light Beacon No. 12.
4. When passing the Fairway Lighted Buoy.

Vessels underway and at anchor within the port limits should maintain a continuous listening watch on VHF channel 12. The service, upon request, will provide information concerning traffic, visibility, tides, and berthing.

**Contact Information.—**Belfast Harbour Radio can be contacted, as follows:

1. VHF: VHF channels 12 and 16
2. Telephone: 44-28-9055-3504
3. Facsimile: 44-28-9055-3017
4. E-mail: portcontroller@belfast-harbour.co.uk

**Caution.—**Dredging operations are constantly in progress within the harbor and channel approaches. Vessels are cautioned to proceed at slow speed when navigating in the vicinity to avoid damage to the dredge or moorings.

The intended dredged depths within the port are not always maintained due to silting.

Due to the existence of submarine cables, anchorage is prohibited in Victoria Channel and within 80m of the lighted beacons.

A fast ferry (Seacat) operates up to five times daily at full speed within Victoria Channel.

## Belfast Lough to Strangford Lough

**6.21 Foreland Point** (54°39'N., 5°32'W.), located 2 miles SE of Orlock Point, is fronted by rocks and shoals which are marked by a beacon. A shallow spit extends N for about 0.4 mile from the point.

Donaghadee Sound lies between the S side of Copeland Island and the mainland coast. The SE entrance of this passage is encumbered with several rocks. A fairway channel, which has charted depths of less than 6m, leads through the sound and is marked by lighted buoys. The tidal currents in this sound set almost in the direction of the channel. They may vary in different parts of the sound, but can attain rates of up to 4.5 knots in both directions.

**Caution.—**Only vessels with local knowledge and a speed of at least 10 knots should enter Donaghadee Sound against the strong currents. Heavy rips, amounting to overfalls at times, extend across the sound, close NE of the beacon marking Foreland Spit.

**6.22 Donaghadee** (54°39'N., 5°32'W.), a small and shallow harbor, lies 0.7 mile SE of Foreland Point and is protected by two breakwaters. The harbor basin has depths of up to 2.7m, but mostly dries. It has an entrance, 46m wide, and is used by small craft. A yacht marina lies 0.3 mile SSE of the harbor basin. The small town of Donaghadee stands close W of the harbor and is a resort. A light is shown from a prominent tower, 16m high, standing at the head of the S breakwater.

Rigg Bank, with a least depth of 11m, lies centered 2 miles E of Donaghadee. The tidal currents at a position about 0.5 mile NE of the harbor set E and NNW and attain rates of up to 2 knots at springs.

Ballyferris Point is located 4.2 miles SSE of Donaghadee. The coast between is fronted by rocks and sunken ledges which extend up to 0.5 mile offshore.

**Caution.—**A submarine cable and several disused cables extend seaward from a point on the coast 1.5 miles S of Donaghadee.

**6.23 Ballywalter** (54°33'N., 5°29'W.), a village, is situated 2 miles SSE of NNW Ballyferris Point. The shore between is fronted by sunken ledges and rocks which extend up to 0.8 mile seaward. This village is fronted by a small harbor which is formed by a drying sandy foreshore and protected by a pier at its S end. Small craft can berth alongside the N side of the pier in depths of 2 to 3m at HW. A church, with a prominent spire, stands in the village.

Skullmartin Rock, which dries, lies about 1 mile ESE of Ballywalter and is marked by a prominent beacon. A lighted buoy is moored about 1.5 miles ESE of this rock.

Burial Island, 8m high and surrounded by a rocky ledge, lies close off Burr Point which is located 3 miles SSE of Skullmartin Rock. Temporary anchorage can be taken, in depths of 8 to 12m, within Ballyhalbert Bay, which is entered NW of the island.

**Portavogie** (54°27'N., 5°26'W.), a small harbor, lies 2 miles

S of Burial Island. It is protected by breakwaters and used by numerous fishing vessels. The town stands mainly on its N side. Vessels of up to 37m in length and 3m draft can enter. Rocks and drying shoals, which extend up to 0.5 mile offshore, front the coast close N and S of the harbor. A lighted buoy is moored about 0.5 mile ESE of the entrance.

North Rocks lies on an irregular bank of rocks and gravel, which mostly dries, near the outer extremity of Kirkistown Spit. This spit extends about 1.5 miles SE from a point on the coast 1.2 miles SSW of Portavogie. A prominent beacon, 12m high, stands on the E end of North Rocks. With a NE wind, small vessels can anchor, in a depth of 7.3m, coarse sand, to the S of Burial Island and WSW of the beacon on North Rocks.

The Breast, a rocky patch, lies about 0.7 mile SSW of the beacon on North Rocks and has a least depth of 2.1m.

A dangerous rocky patch, lies about 1.5 miles SSE of North Rock. During strong breezes, the sea breaks over this patch and the currents always cause rips in this vicinity.

South Rock, which dries, is the largest of an extensive group of rocks and dangers which lie SW of The Ridge. A prominent disused light tower, 18m high, stands on the rock.

Small vessels can pass on either side of The Breast and also between South Rock and the coast.

**6.24 South Rock Lighted Buoy** (54°24'N., 5°22'W.) is moored about 2 miles ENE of South Rock. A racon is situated at the lighted buoy.

**Ballyquintin Point** (54°20'N., 5°30'W.), low and shelving, is the S extremity of the peninsula which separates Strangford Lough from the Irish Sea. Tara Hill, with a prominent old fort on its summit, stands 1.5 miles N of the point.

Butter Pladdy, a group of shallow rocks, lies about 1 mile offshore, 3.2 miles NE of the point. A drying wreck lies on this group and a lighted buoy is moored close E of it. Several isolated shoal patches, with depths of less than 3m, lie between Butter Pladdy and South Rock.

The coast to the N of Ballyquintin Point consists of a low and rocky shore backed by undulating hills. Ballywhite Mill, a conspicuous disused windmill, stands on the W side of the peninsula, 4.5 miles NNW of Ballyquintin Point. It can be seen from seaward over some parts of the coast.

## Strangford Lough Narrows

**6.25 Strangford Lough Narrows** (54°20'N., 5°30'W.) are entered between Ballyquintin Point and Killard Point, 1.2 miles SW. The Narrows lead NNW for 5 miles into Strangford Lough where several sheltered anchorages are available for large vessels, at all stages of tide, with excellent holding ground and sufficient depths. Similar anchorages are provided for small vessels in various parts of the entrance. The usefulness as a harbor of refuge is impaired by the strong tidal currents which are always prevalent. These currents attain maximum rates of 7.5 knots at springs off Strangford Point which is located on the W side of the narrows, 3.5 miles above Killard Point.

Berthing facilities are provided for small coastal vessels at Strangford and Portaferry, which lie on opposite sides of The Narrows in the vicinity of Strangford Point.

**Tides—Currents.—**The tidal currents at a position about 3 miles outside the entrance set in the direction of the coast. They are weak and probably do not exceed a rate of 0.5 knot at springs.

During the ebb current, tide races form off the entrance of The Narrows, especially with S winds. As the lough fills and empties every 12 hours, the currents set through The Narrows at a considerable speed, attaining rates in excess of 7 knots at springs. Where these currents set over a shallow spit extending from Rue Point, a violent disturbance is sometimes caused with whirlpools. This disturbance is known as The Routen Wheel and is easily avoided. However, less violent disturbances occur throughout the channel when the currents are strong. Inside the lough, the currents set at greatly reduced rates and leave an area of comparatively calm water to the SW.

**Depths—Limitations.—**There are depths of over 50m in The Narrows, but the bottom is very uneven. A least charted depth of 8.8m lies in the fairway channel with lesser depths adjacent to it.

East Channel, the main entrance route, leads between the shoals that front the entrance points and passes E of Angus Rock which lies 1 mile N of Killard Point.

West Channel, which leads over a bar and W of Angus Rock, has a least charted depth of 3.9m. It is narrow, bordered by sunken rocks, and unmarked. Small craft use this channel to avoid the strength of the tidal current in East Channel, but local knowledge is required.

When the ebb current and the wind are in opposition, a heavy breaking sea is often encountered close outside the entrance. When the ebb current slackens, this breaking sea subsides and navigation is then comparatively easy.

**Aspect.—**Approaching from seaward, conspicuous landmarks near the entrance include several radar aerials situated on Killard Point; an obelisk standing on Guns Island, which lies 1 mile SSW of Killard Point; and a windmill standing on the E side of The Narrows, 3 miles NNW of Ballyquintin Point.

A light is shown from a prominent tower, 15m high, standing on the N end of Angus Rock which lies 0.9 mile W of Ballyquintin Point.

The W side of The Narrows is of moderate elevation and backed by high hills. Within the entrance, a castle and a church stand 1.5 miles N of Killard Point and are conspicuous.

The Ballywhite Hills stand on the E side of The Narrows, 4.5 miles NNW of Ballyquintin Point. They attain heights of 100m and are conspicuous.

Beacons mark the dangers lying adjacent to the fairways and an outer approach lighted buoy is moored about 1.5 miles SE of Ballyquintin Point.

**Pilotage.—**Pilotage is not compulsory, but is advisable and available. Pilots can be contacted by VHF channel 16 and generally board about 1.3 miles S of Ballyquintin Point. Pilots should be requested on VHF channel 16 upon arrival at the bar.

Strangford Pilot Station can be contacted by telephone (44-28-4272-8297).

**Contact Information.—**Strangford Harbour can be contacted, as follows:

1. Telephone: 44-28-4488-1637
2. Facsimile: 44-28-4488-1044

**Anchorage.—**With offshore winds, vessels waiting to enter The Narrows can anchor, in depths of 12 to 15m, off Bally-

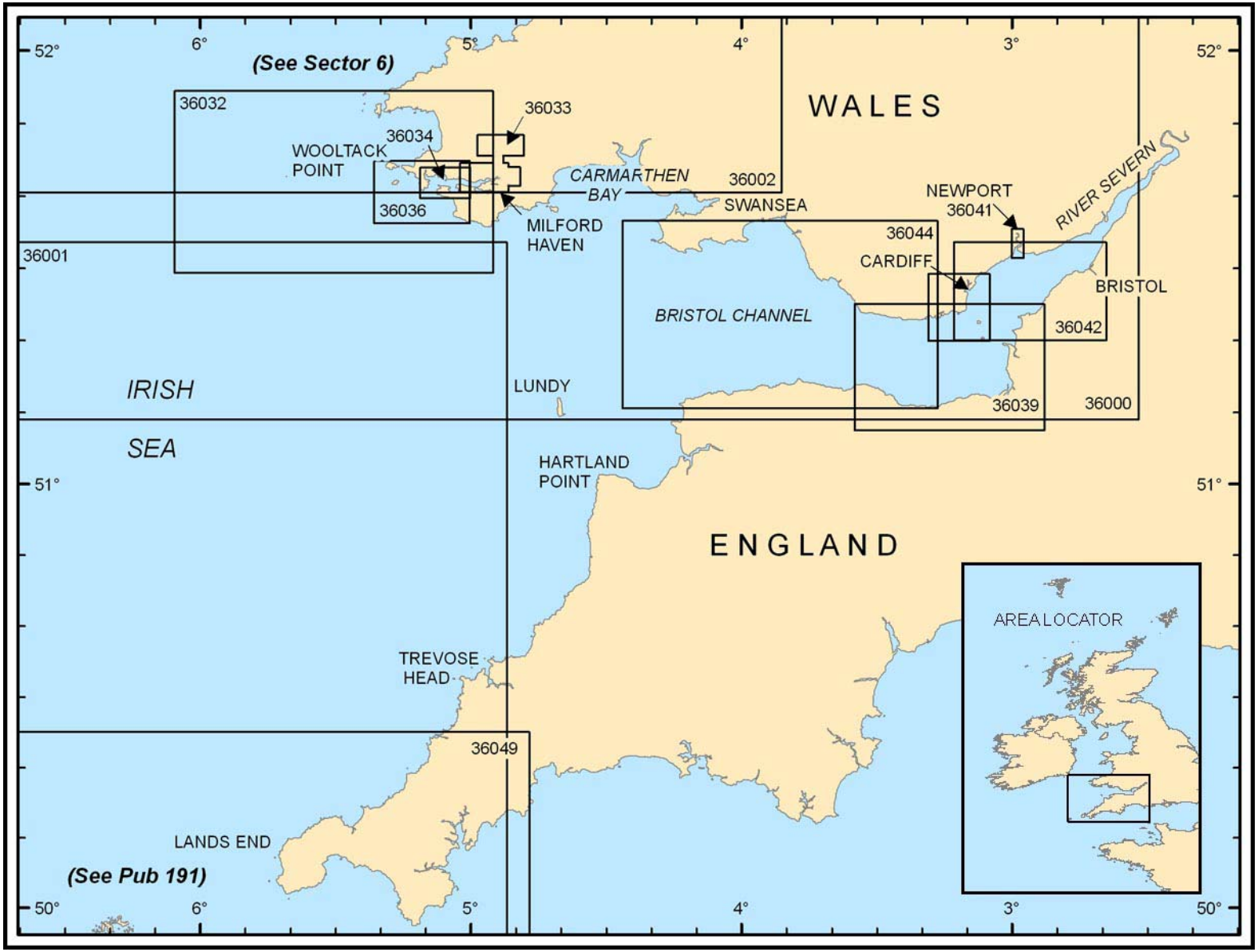
quintin Point.

**Caution.—**A vehicle ferry plies across The Narrows between Strangford and Portaferry.

A power-generating tidal turbine is located 0.3 mile NW of Rue Point. It is connected to the W shore of the narrows via a submarine power cable. The above-water portion of the turbine is marked with a daymark and a light shown at an elevation of 13m.

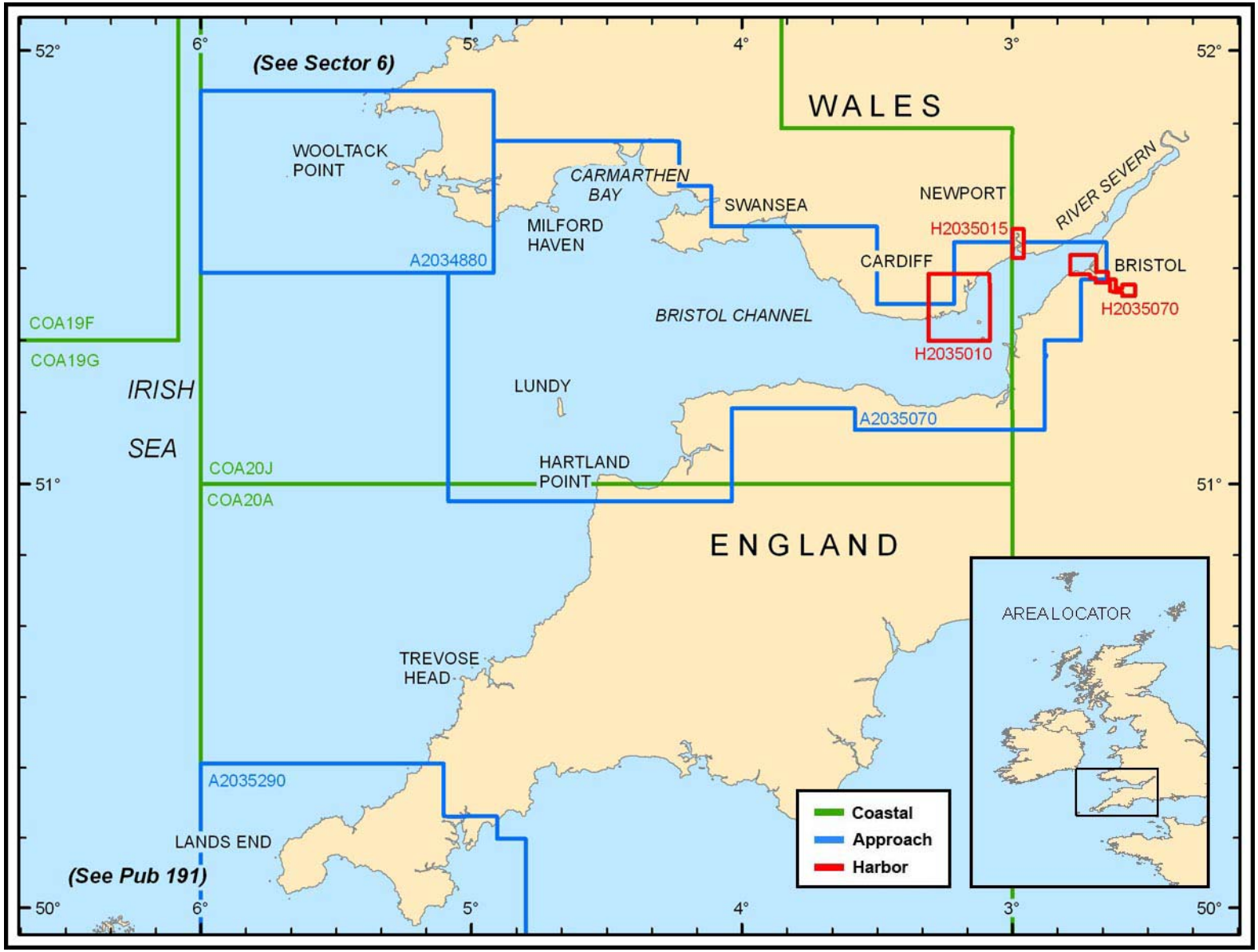
**6.26 Strangford Lough** (54°25'N., 5°36'W.), an extensive inlet with very irregular depths, contains numerous anchorages for deep-draft vessels with excellent holding ground. These anchorages are, for the most part, in deep water and somewhat exposed, with the approaches obstructed in many cases by detached drying shoals. There are depths of 10 to 60m in the entrance of the lough. Very few vessels frequent the inner reaches of the lough and those that do are usually of the smallest type. For navigating the inner reaches, the services of a local pilot must be employed. There is little commercial traffic within the lough. Due to the considerable area of unobstructed water, the lough is a popular place for numerous pleasure craft and a racing ground for small craft.

**Caution.—**Several fish farms are situated within Strangford Lough.




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

SECTOR 7 — CHART INFORMATION




Additional DNC library coverage may be found in NGA DNC 19 and DNC 20 (Limited Distribution) discs within the README\GRAPHICS folder.

SECTOR 7 — DNC LIBRARY INFORMATION

# SECTOR 7

## WEST COAST OF ENGLAND AND SOUTH COAST OF WALES, INCLUDING BRISTOL CHANNEL

**Plan**.—This sector describes the W coasts of England and Wales from Lands End to Wooltack Point (51°44'N., 5°15'W.) and includes Bristol Channel. The descriptive sequence is NE along the coast of Cornwall, NE along the S shore of Bristol Channel, E along the N shore of Bristol Channel, and NE at the head of Bristol Channel and the River Severn.

### General Remarks

**7.1 Caution.—**Submarines frequently exercise in the Irish Sea and the approaches to Bristol Channel.

Vessels operating in connection with oil and gas exploration, including seismic survey and drilling rigs, may be encountered within the waters described in this sector.

Numerous fishing vessels may be encountered within the waters described in this sector.

Lighted buoys associated with radar training may be encountered in the approaches to Bristol Channel.

Numerous wrecks lie within the waters described in this sector and may best be seen on the chart.

### England—Lands End to Hartland Point

**7.2 Lands End** (50°04'N., 5°43'W.), the W extremity of England, may be identified in clear weather from a distance of 25 miles. When first viewed from the SW or S, the land in the vicinity of this point has the appearance of two detached hummocks. From seaward, the most conspicuous objects are the steeple tower of St. Sennen church and the steeple tower of St. Burian church standing 1 mile E and 3.5 miles E, respectively, of the point. The seaward extremity of Lands End, known as the Peal, is fronted by Peal Rocks which are awash at LW.

A Coastguard station is situated at Lands End (50°04'N., 5°43'W.); an all-weather lifeboat station is situated at Sennen Cove (50°05'N., 5°43'W.).

**Caution.—**A Traffic Separation Scheme (TSS), which is IMO-adopted, has been established off Lands End and may best be seen on the chart.

Laden tankers should avoid the areas lying between the E boundary of the scheme and the coast and between the W boundary of the scheme and the Isles of Scilly.

Laden tankers over 10,000 gt using the TSS should stay at least 3 miles seaward of Wolf Rock (49°57'N., 5°49'W.) and should not use this TSS in restricted visibility or adverse weather.

For a full description of Wolf Rock, Seven Stones, the Isles of Scilly, and the S approach to the TSS, see Pub. 191, Sailing Directions (Enroute) English Channel.

**7.3 Longships** (50°04'N., 5°44'W.) consists of a group of detached rocks, 7 to 13m high, which lies centered 1 mile W of the extremity of Lands End. A light is shown from a conspicuous tower, 35m high with a helicopter platform at the top, standing on the W and highest rock.

Numerous drying rocks lie within about 0.5 mile N and NE of Longships. Carn Base, a rocky bank, lies about 2 miles SSW of Longships and has a least depth of 9.9m. During W gales, heavy seas break over this bank. A narrow channel, with a least depth of 13.7m, leads between the dangers lying close E of Longships and Lands End, but it is not recommended.

Gamper Bay lies between Lands End and Pednmen-du, 0.5 mile NNE. It is backed by prominent cliffs, up to 60m high. Whitesand Bay is entered close N of Pednmen-du and is backed by cliffs, 15 to 61m in high. Sennen Cove, lying in the S part of this bay, is protected by a stone breakwater, 200m long, which dries at its outer end. Several rocks, awash at HWS, lie close N of Pednmen-du.

**Cape Cornwall** (50°08'N., 5°43'W.), located 3.7 miles N of Lands End, is 60m high and is surmounted by the prominent chimney of an abandoned mine. A group of detached rocks, mostly awash, lies about 0.4 mile NW of the cape and two rocky islets, 22 and 27m high, lie on a shoal bank 0.7 mile SSW of it.

Several prominent radio masts and a conspicuous television mast stand 2 miles ESE and 1.8 miles NE, respectively, of the cape.

**Pendeen Point** (50°10'N., 5°40'W.) is located 2.7 miles NE of Cape Cornwall. A light is shown at an elevation of 59m from a structure, 17m high, standing on this point. The coast between Cape Cornwall and Pendeen Point is rugged, indented, and formed by cliffs, 15 to 60m high. The shore is fronted by several drying rocks.

**Caution.—Cape Cornwall Bank** (50°14'N., 5°50'W.), lying about 6.5 miles NW of Cape Cornwall, is a rocky ridge with a least depth of 22m. Isolated depths of 29 to 30m lie about 3.5 miles W of the S end of this bank.

**Bann Shoal** (50°19'N., 5°45'W.), lying about 10 miles NNW of Pendeen Point, is a rocky shoal with a least depth of 17.4m.

As the sea breaks heavily in bad weather on these banks, particularly during NW gales, their locality should be avoided, especially by small and heavily laden vessels.

**7.4 Gurnards Head** (50°12'N., 5°36'W.), located 3.2 miles NE of Pendeen Point, is high, rugged, steep, and surrounded by a mass of detached rocks. The Carracks, a large group of rocks, lies about 0.2 mile offshore, 2.3 miles NE of Gurnard Head. The largest rock is 7m high, but the others only dry up to about 1m. A wreck, with a depth of 11.9m, lies about 0.2 mile N of this group.

**St. Ives Head** (The Island) (50°13'N., 5°29'W.) is located 5 miles ENE of Gurnards Head. The coast between is rugged, indented, and has cliffs which vary between 15 and 76m in height. The head is formed by the seaward end of a small peninsula, 32m high, which is fringed by drying rocks and ledges and surmounted by an old battery and a watchtower.

Knills Monument, an obelisk, stands on a hill 1.5 miles S of

the head and is conspicuous. A number of conspicuous hotels stand 0.5 mile S of the head, but are not visible until the peninsula has been rounded.

St. Ives Bay lies between the head and Godrevy Point, 3.2 miles NE. Depths of 16 to 22m lie in the entrance and decrease gradually towards the head of the bay. The small tidal harbor of St. Ives lies on the W side of the bay and the entrance to the Hayle Estuary lies at the head. These two small tidal harbors are no longer used by commercial vessels. They are now principally used by fishing boats and pleasure craft with local knowledge.

**7.5 Godrevy Island** (50°14'N., 5°24'W.) is located close NW of Godrevy Point. A small detached islet lies close off its W side and its SE shore is fringed by detached rocks, some of which dry up to 3m. The Shore Lanner, a rocky ledge, extends about 100m seaward from its SW shore and is awash at LW. A light formerly shown from a prominent tower now disused, is now shown from a new structure close NE.

The Stones, a group of dangerous drying rocks, lies between 0.5 and 1 mile NW of Godrevy Island and is marked at the outer side by a lighted buoy. The Sound, a narrow passage, leads between The Stones and Godrevy Island. It has general depths of 8 to 14m and should only be used by small craft with local knowledge.

**Portreath** (50°16'N., 5°18'W.), a small tidal harbor, lies 4.5 miles ENE of Godrevy Island. It is closed to commercial vessels and is reported to be mostly silted up.

Carn Brea Monument stands on the summit of a hill which rises 3 miles SE of Portreath, and is conspicuous from seaward. A prominent television mast stands 1 mile SE of this monument.

The coast between Portreath and St. Agnes Head, 4 miles NE, is composed of cliffs, 46 to 61m high. A prominent white chimney, 12m high, stands on top of a cliff 1.7 miles NE of Portreath.

**St. Agnes Head** (50°19'N., 5°14'W.) is formed by a bold promontory, 91m high. It is backed by St. Agnes Hill which is 189m high and surmounted by a beacon. Several prominent buildings and chimneys are situated on the NE slope of this hill.

Cligga Head is located 2.5 miles NE of St. Agnes Head. Penhale Point, located 3 miles NNE of Cligga Head, is surmounted by several prominent mine buildings. Ligger Bay lies between these two points and is used by small craft. A dangerous wreck lies close W of Penhale Point.

**Caution.—**Vessels are cautioned against anchoring and fishing within 3 miles of the shore of Ligger Bay due to the existence of disused scientific instruments and cables.

**7.6 Towan Head** (50°25'N., 5°06'W.), 30m high, is located 3.2 miles NE of Penhale Point and is formed by the seaward extremity of a peninsula, 1 mile long, which protects the small harbor of Newquay from SW gales. This point is fronted by foul ground and an uneven bank, with a least depth of 7.6m, lies about 1 mile NW of it.

The Atlantic Hotel stands on high ground 0.5 mile SE of Towan Head and is conspicuous. A prominent war memorial, in the form of a cross, stands close W of this hotel.

Medusa Rock, with a least depth of 17.3m, lies about 3.2 miles W of Towan Head.

**Newquay** (50°25'N., 5°05'W.), a small tidal harbor, lies 0.5 miles E of Towan Head and is protected by two breakwaters. It is only used by fishing boats and pleasure craft. Good anchorage can be taken off the harbor, during offshore winds or in good and settled weather, in a depth of 9m, about 0.6 mile E of Towan Head.

Park Head, located 4.5 miles N of Newquay, is fronted by rocks and foul ground which extend up to 0.5 mile SW of it. Several prominent radio masts and the conspicuous tower of a church stand 2 miles SE of this point.

**7.7 Trevose Head** (50°33'N., 5°02'W.), 70m high, is located 3 miles N of Park Head. When first seen, this headland has the appearance of a round island as the land within it is considerably lower. A light is shown from a very conspicuous white tower, 27m high, standing on the NW part of the headland.

Several prominent cottages and buildings are situated on the neck of the headland, but are not visible when abreast of the point.

Quies Rocks, consisting of four principal above-water rocks, and The Bull, an above-water rock, lie about 1 mile W and 0.1 mile W, respectively, of the headland. A passage, with a fairway about 0.5 mile wide, leads between Quies Rocks and The Bull, but should not be used except in cases of necessity.

Diver Rock, with a least depth of 14.9m, lies about 3 miles W of Trevose Head.

**Stepper Point** (50°34'N., 4°57'W.), located 3.5 miles ENE of Trevose Head, is moderately high and bold. A light is shown from the E side of the point and a conspicuous stone tower, 12m high, stands on the W side and acts as a daymark. A flagstaff and several conspicuous buildings stand 0.5 mile S of the point.

Two wrecks, one at a depth of 11m and the other at a depth of 7.2m, lie about 0.6 mile W and 0.7 mile NNE, respectively, of the light.

**Gulland Rock** (50°34'N., 5°00'W.), 28m high, lies 2 miles W of Stepper Point and consists of two bold and rocky islets which are almost joined together. Detached rocky patches with least depths of 5.5m and 2.5m lie close E and 1 mile SE respectively, of Gulland Rock.

Inner Gulland Shoal, a rocky ridge, lies about 1 mile W of Gulland Rock and has a least depth of 10.9m. Outer Gulland Shoal, the NW and outer danger, lies about 1.5 miles NNW of Gulland Rock and has a least depth of 11.3m.

**7.8 Padstow** (50°33'N., 4°56'W.) (World Port Index No. 35170), a small harbor, lies 1.5 miles within the estuary of the River Camel which is entered between Stepper Point and Pentire Point, 1.3 miles NNE.

**Port of Padstow Home Page**

http://www.padstow-harbour.co.uk

**Tides—Currents.—**The tides here rise about 6.5m at springs and 3.0m at neaps.

In the vicinity of the harbor, the flood current attains a rate of 1.5 knots at springs and the ebb current attains a rate of 2

knots. In the narrower parts of the channel, these currents may attain rates of 3 to 3.5 knots at springs.

**Depths—Limitations.—**The harbor consists of two basins and is protected by breakwaters which form an entrance, 85m wide. It is approached through a buoyed channel, about 200m wide, with charted depths over the bar of 0.2 to 0.9m. The outer basin has 240m of usable berthing space and dries out to a bottom of soft mud. Fishing boats, pleasure craft, and coasters of up to 2,000 gt can be accommodated with drafts of up to 4.9m at MHWS and 3.9m at MHWN.

**Pilotage.—**Pilotage is compulsory for all cargo vessels over 30m in length and all vessels over 20m in length with a draft of more than 3.5m. Pilots can be contacted on VHF channel 12 or 16 and board about 0.3 mile E of Stepper Point. Vessels should send an ETA 12 hours and 2 hours prior to arrival.

**Contact Information.—**Padstow Harbor can be contacted, as follows:

1. Telephone: 44-7896-534947 (pilots)
   44-1841-532239 (port)
2. Facsimile: 44-1841-533346
3. E-mail: padstowharbour@btconnect.com

**Caution.—**The entrance channel is subject to frequent changes and should not be attempted without local knowledge.

**7.9 Rumps Point** (50°36'N., 4°55'W.), fringed by rocks, is located 0.6 mile NE of Pentire Point. The coast between is formed by prominent bold and dark cliffs backed by grassy slopes. A detached rock, with a least depth of 1.6m, lies about 0.3 mile WNW of this point.

Newland, a bold and pyramidal islet, lies 1 mile W of Rumps Point. This islet is 35m high and several drying rocks lie close E and W of it. Mouls, a pyramidal rock, lies 0.3 mile ENE of Rumps Point and is 46m high.

Port Quin Bay (Portquin Bay), entered close E of Rumps Point, is bordered by steep and nearly inaccessible rocky cliffs which have no distinguishing features. Port Quin, a small and narrow inlet, indents the NE side of this bay and a village stands on its S side. Small vessels can obtain anchorage within the W part of the bay in good holding ground.

**Port Isaac** (50°36'N., 4°50'W.), a small drying harbor, lies at the head of a creek entered 3.5 miles E of Rump Point. It is protected by two breakwaters and is used by fishing boats. A conspicuous square church tower stands on the high ground 1.2 miles S of the harbor.

Port Gaverne, a narrow drying creek, lies 0.5 mile E of Port Isaac and is only used by small craft at HW. Several houses stand at the head of this creek and become prominent when the entrance opens.

**Tintagel Head** (50°40'N., 4°46'W.), a bluff and prominent headland, is located 7.5 miles NE of Rumps Point. It is 79m high and backed by several rounded ridges which are higher than any portion of the neighboring coast. A conspicuous hotel stands on the high ground 0.2 mile E of the head and a conspicuous church, with a short tower, stands close within the cliffs 0.3 mile S of it.

Gull Rock, 41m high, lies about 0.3 mile offshore, 1.5 miles SSW of Tintagel Head.

**Boscastle** (50°41'N., 4°42'W.), a small fishing boat harbor, lies at the head of a narrow creek which dries. The creek is entered 2.7 miles NE of Tintagel Head between Willapark Point and Penally Point, 0.2 mile NE. Meachard Rock lies 0.2 mile NW of the entrance and is 37m high. A low tower and a white house are situated on Willapark Point and a flagstaff stands on Penally Point.

**7.10 Bude Haven** (50°50'N., 4°34'W.), a small harbor used by fishing boats and pleasure craft, lies 10 miles NE of Boscastle. The coast between is bold and indented by cliffs which vary in height between 37 and 213m.

**Higher Sharpnose Point** (50°54'N., 4°34'W.), located 4.5 miles N of Bude, is a prominent point which is fronted by a ledge. A group of conspicuous dish-shaped radar aerials stands near the coast 1.2 miles S of this point.

**Hartland Point** (51°01'N., 4°31'W.), located 7.2 miles N of Higher Sharpnose Point, is formed by the extremity of a dark brown tableland, 107m high, which slopes steeply to the sea; the adjoining cliffs are perpendicular. A disused lighthouse with a prominent tower stands close below the summit of the point. Several prominent white buildings, walls, and a light beacon are situated close to the tower.

A water catchment, surrounded by a white-washed wall, is situated on the N slope of the point and forms a conspicuous mark from the N. Another prominent white-washed wall marks the road which leads from the light tower towards the catchment.

The point is fronted by drying rocks and a dangerous wreck lies about 1 mile NW of it. Depths of 9 to 12m lie within 1.3 miles of the point and it should be given a wide berth.

The tidal currents along the coast between Cape Cornwall and Hartland Point follow the general direction of the coast.

**Caution.—**An outfall pipeline extends up to 0.5 mile seaward in the vicinity of Bude Haven.

Submarine cables, which may best be seen on the chart, extend seaward from points on the shore 0.3 mile N and 2.5 miles S of Bude Haven.

Numerous wrecks and isolated depths of less than 18m lie up to 5 miles offshore between Higher Sharpnose Point and Hartland Point.

During the strength of the tidal current, a race may extend up to 2 miles NW of Hartland Point.

## Lundy

**7.11 Lundy** (51°10'N., 4°40'W.), an island, 131m high, lies with its S extremity located 10 miles NW of Hartland Point and serves as an invaluable landmark for all vessels bound up Bristol Channel. It consists mostly of granite and is encircled by nearly inaccessible cliffs.

A light is shown at an elevation of 53m from a prominent tower, 16m high, standing on a small peninsula at the SE end of the island. Another light is shown at an elevation of 48m from a prominent tower, 17m high, standing at the N extremity of the island.

A prominent disused light tower, 30m high, stands on the highest part of the island, 0.5 mile N of the SW extremity. A prominent wind motor stands close E of this disused tower. The conspicuous keep of Marisco Castle stands on the summit of the SE part of the island. A church, with a prominent tower, is situated 0.2 mile NW of the castle and is the best landmark in this vicinity when approaching from the S or E.

Numerous small rocks, some of which dry, front the shores of the island and lie up to about 0.2 mile seaward. A dangerous wreck lies about 1.5 miles NNE of the light at the SE end of the island.

Rat Island, a green hummock, lies close off the SE end of the island and is joined to it by a rocky ledge which dries. Hen and Chickens Rocks, consisting of a group of rocks, dries from 1.5 to 3m and extends up to about 0.3 mile W of the N extremity of Lundy. This group should be given a wide berth.

East Bank lies centered 1 mile NE of the SE extremity of Lundy. It is composed of sand and fine broken shells and has a least depth of 9.4m.

**North West Bank** (51°12'N., 4°44'W.) lies between 1 and 2 miles W of the N extremity of Lundy. It has a least depth of 12.8m and is connected to the N part of the island by a sunken ridge with depths of 22 to 33m. There are overfalls on this bank.

**Stanley Bank** (51°13'N., 4°37'W.), with a least depth of 8.2m, lies centered 2.7 miles NE of the N extremity of the island. Heavy tide rips, at times resembling breakers, indicate the position of this bank during the strength of the current.

**Tides—Currents.—**The tidal current setting ENE divides at a position about 3.5 miles SW of the island and increases its velocity to about 5 knots at springs off the N extremity. During the strength of the current, a heavy race extends up to about 1 mile N of the N extremity of the island and a very heavy race, known as The White Horses, forms over Stanley Bank. A heavy race also forms off the S end of the island and extends up to about 1.5 miles E of the SE extremity. Similar races form when the tidal current sets WSW, but the race over Stanley Bank is less violent and the race off the S end of the island extends up to about 1 mile SW of the SW extremity.

The rates of the tidal currents to the N and S of the island decrease to normal rates for that locality about 3 miles from the island.

**Caution.—**A marine nature reserve area, the limits of which are shown on the chart, has been established within the waters surrounding the island in order to protect its marine habitats and marine life. The island itself is a designated bird sanctuary.

A measured distance (2,146.6m), indicated by beacons, lies off the SE side of the island and may best be seen on the chart.

## England—Bristol Channel—Hartland Point to Foreland Point

**7.12** Bristol Channel is entered between Hartland Point, previously described in paragraph 7.10, on the S side, and Saint Govan's Head, on the N side, 37 miles NNW.

**Pilotage.—**Information is provided for each individual port within the Bristol Channel area. The ports of Barry; Bridgwater, including Dunball and Combwich wharves; Bristol, including Avonmouth and Royal Portbury; Cardiff; Newport including Newport Docks and River Usk Wharves; Sharpness, including Chepstow, Gloucester, and Lydney all cooperate with local port services or the Bristol VTS.

**Vessel Traffic Service (VTS).—**The Bristol Channel is served by the Bristol VTS. The W limit of the Bristol VTS area consists of a line connecting the following points:

1. Brean Down.
2. Steep Holm.
3. Flat Holm.
4. Position 51°23.92'N, 3°05.65'W, located W of Monkstone Light (51°24'54.0"N., 3°06'01.2"W.), then following Cardiff harbor limit to
5. North Cardiff Lighted Buoy.
6. Newport Deep Lighted Buoy.
7. Gold Cliff.

The E limit of the Bristol VTS area consists of a line connecting the following points:

1. Gold Cliff.
2. Position 51°29.0'N, 2°54.3'W.
3. Denny Island.
4. Position 51°33.0'N, 2°40.2'W.

Bristol VTS provides an information service and traffic organization service as defined by IMO Marine Guidance Note 238. Port information will continue to be provided directly from the ports of Avonmouth and Royal Portbury. Bristol VTS can be contacted on VHF channel 12 (call sign: Bristol VTS).

See the table titled **Bristol VTS Reporting Points** for a list of Reporting Pointsto be complied with when reporting the information described below.

Inbound vessels (except pleasure and other small craft bound for a tidal berth or a berth in a non-commercial dock) should send the following information upon entry into the Bristol VTS area:

1. Vessel name.
2. Destination.
3. ETA at Portishead Point.

Vessels within the Bristol VTS area may call another vessel on VHF channel 12 and, unless passing a short message directly related to safety of navigation, shift to a working channel.

Vessels reporting at the designated reporting points must provide Bristol VTS with the following information:

1. Position.
2. Identity.
3. Intentions.

**Bristol VTS Reporting Points**

| Name | Position | Remarks |
|---|---|---|
| E of Steep Holm | Line joining Brean Down and Steep Holm | Inbound report to Bristol VTS. |
| The Holms | Line joining Flat Holm and Steep Holm | Inbound report to Bristol VTS. |
| Cardiff Port Limit | NE of Flat Holm | Inbound report to Bristol VTS. |
| SE of EW Grounds Lighted Buoy | 51°27'07.2"N, 2°59'56.4"W | Inbound and outbound report to Bristol VTS. |

| Bristol VTS Reporting Points | | |
|---|---|---|
| **Name** | **Position** | **Remarks** |
| 1 mile SW of Newport Deep Lighted Buoy | 51°29'21.6"N, 2°59'07.2"W | Inbound report to Bristol VTS. Outbound report to Newport Radio. |
| E of W Usk Lighted Buoy | 51°31'43.8"N, 2°58'31.8"W | Inbound and outbound report to Newport Radio. |
| Newport Pier Head | 51°32'54.0"N, 2°59'12.0"W | Inbound and outbound report to Newport Radio. |
| Newport Lock | 51°33'01.2"N, 2°59'13.8"W | Outbound report to Newport Radio. |
| Newport Dock and River Usk Wharves | 51°33'06.0"N, 2°59'12.0"W | Report to Newport Radio on arrival at and departure from berth and at least 30 minutes prior to departure. |
| Welsh Hook Lighted Buoy | 51°28'31.2"N, 2°51'51.0"W | Inbound and outbound report to Bristol VTS. |
| Royal Portbury Lock | 51°29'52.8"N, 2°43'30.0"W | Outbound report to Bristol VTS before leaving the lock |
| Avonmouth Lock | 51°30'19.8"N, 2°42'45.0"W | Outbound report to Bristol VTS before leaving the lock. |
| Lower Shoots Lighted Beacon | 51°33'51.0"N, 2°42'03.0"W | Inbound report to Sharpness Radio and outbound report to Bristol VTS. |
| River Avon Nelson Point (vessels less than 30m loa) | 51°29'51.0"N, 2°42'30.0"W | Outbound report to Bristol VTS. |
| River Avon Shirehampton (vessels of 30m or more loa) | 51°28'57.0"N, 2°41'00.0"W | Inbound and outbound report to Bristol VTS. |
| River Avon Sea Mills Lighted Beacon | 51°28'46.8"N, 2°39'01.8"W | Inbound and outbound report to Bristol VTS. |

Vessels at anchor in the Bristol VTS area must call the Bristol VTS 15 minutes prior to weighing anchor and again when underway.

The following information is available from Bristol VTS upon request:

1. Details of any navigational hazards recently developed.
2. Visibility at Avonmouth and River Avon.
3. Wind speed and direction at Avonmouth and Royal Portbury.
4. Weather forecasts for Bristol Channel area.
5. Tidal height at Avonmouth.
6. Shipping information (both moving and expected).
7. Docking instructions and information.

Radar surveillance is maintained between the Lower Shoots Lighted Beacon and the Holms. The use of shore staff (Linesman) for commercial vessels mooring and unmooring is compulsory.

**Contact Information—**Bristol pilots and VTS can be contacted, as follows:

1. Telephone: 44-117-9802638
2. E-mail: bristolvts@bristolport.co.uk

**Anchorage**.—Anchorage for deep-draft vessels can be found off Breaksea Point (51°23'N, 3°24'W.).

Anchorage is prohibited in the designated pilot boarding area.

**7.13 Clovelly** (51°00'N., 4°24'W.), a small harbor, is formed by a short pier which curves to the E. The harbor is used by small fishing boats and provides little shelter. The roadstead provides good anchorage in S and SW winds. The best anchorage is in a depth of 10m, mud, about 0.8 mile N of the pier. A picturesque and prominent village backs the harbor and is built on a thickly wooded slope. Clovelly Court, a large and conspicuous mansion, stands 0.5 mile NW of this village.

The Gore, a shallow and rocky ridge, extends up to 0.7 mile NNW from a point on the shore 1.5 miles E of Clovelly.

**Bideford Bar** (51°05'N., 4°15'W.), located 11 miles ENE of Hartland Point, lies off the common mouth of the River Taw and the River Torridge, which discharge into Barnstaple Bay. Northam Burrows and Braunton Burrows are a succession of low sandhills, fronted by extensive drying sands, which lie on the S and N sides, respectively, of the river mouth. The port of Bideford consists of the lower reach of the River Torridge which leads S and is bordered by the towns of Appledore and Bideford, on its W bank, and the town of Instow, on its E bank. Barnstaple stands on the River Taw, 6 miles E of the mouth, but is no longer used by commercial vessels.

**Tides—Currents.—**Tides at Appledore rise about 7.3m at springs and 3.6m at neaps. Tides at Barnstaple rise about 4m at springs and 1.4m at neaps. Tides at Bideford rise about 6m at springs and 3.6m at neaps.

The currents run with considerable strength over the bar and into the River Taw and the River Torridge, but off the bar, they are rotatory in character and feeble in strength, rarely exceeding a rate of 1 knot. Within the mouth of the river, it is reported that the tidal current to the N of Appledore can attain a rate of up to 5 knots at springs. The outgoing current from the rivers, when opposed by strong W winds, causes a high sea on the bar.

**Depths—Limitations.—**A buoyed channel crosses the bar

which is composed of sand and gravel. It leads between the drying sand banks on either side of the mouth and has a least depth of 0.6m. Within the mouth, there are numerous facilities for fishing boats and pleasure craft.

A prominent road bridge spans the river near Bideford and has a vertical clearance of 24m. Appledore, near the river entrance, is fronted by a quay which can handle coasters of up to 3,000 tons and 4.5m draft at MHWS. The main commercial quay at Bideford provides 164m of berthing space. It dries at LW and has a depth of 4.5m alongside at MHWS. Vessels of up to 96m in length, 14m beam, and 4.5m draft can be accommodated at MHWS.

Yelland Oil Terminal, situated near the entrance of the River Taw, consists of a T-shaped pier. This pier is no longer in use.

**Aspect.—**The entrance to the channel is marked by an outer lighted buoy, moored about 2 miles offshore. The entrance fairway is indicated by a lighted range which may best be seen on the chart.

**Pilotage.—**Bideford Pilotage District is bounded by a line drawn W for 2 miles from Baggy Point, then S to the coast. Pilotage is compulsory for all vessels over 350 gross tons, except those exempted by law. Pilots board between Bideford Fairway Lighted Buoy and the bar, weather permitting.

**Anchorage**.—Vessels waiting to cross the bar may anchor, in depths of 14 to 17m, about 0.5 mile W of the outer lighted buoy.

**Caution.—**The channel over the bar is subject to constant changes and local knowledge is required. A ground swell sometimes causes steep and confused seas on the bar.

**7.14 Baggy Point** (51°09'N., 4°16'W.), a bold and barren bluff, is located 3.7 miles N of Bideford Bar. Baggy Leap, a rocky shoal, lies with its outer end located 0.8 mile WNW of the point and is marked by a lighted buoy. Asp Rock, with a least depth of 4.4m, lies about 1.2 miles S of the point.

Two prominent radio masts stand 2.8 miles SE of Baggy Point.

**Morte Point** (51°11'N., 4°14'W.), located 3 miles NNE of Baggy Point, is rocky and barren, sloping from its summit in low cliffs. Morte Stone, which dries 7.3m, lying near the center of a rocky ledge which extends up to about 0.4 mile W of the point, is marked by Morte Stone Lighted Buoy and only covers for a short time at HWS.

Due to the shoals and obstructions lying in this vicinity, vessels are advised to stay in depths of at least 37m when rounding this point.

**Bull Point** (51°12'N., 4°12'W.), a prominent rocky point, is located 1.3 miles NE of Morte Point. A light is shown from a prominent structure, 11m high, standing on this point at an elevation of 54m.

A wreck, with a swept depth of 10.4m, and Rockham Shoal, with depths of less than 1.8m, lie about 0.5 mile W and 0.9 mile WSW, respectively, of the point.

**Horseshoe Rocks** (51°15'N., 4°13'W.), with a least depth of 9.2m, lies about 2.7 miles N of Bull Point and is marked by a lighted buoy, moored on its N side.

From Bull Point, the coast trends nearly straight for 3.2 miles to Ilfracombe. It is bounded by high and steep slopes which are intersected at Lee Bay, 1.1 miles E of Bull Point, by a deep and well-wooded valley. The shore is fringed with foul ground.

A prominent wind motor, 16m in high, stands on a hill 2 miles E of Bull Point.

**7.15 Ilfracombe** (51°13'N., 4°07'W.), a small drying harbor, is protected by a breakwater and used by fishing vessels and pleasure craft. It is not visible from seaward and lies on the S side of Lantern Hill. The town, which is a resort, backs the harbor and has numerous prominent white buildings. Anchorage off this harbor is reported to be inadvisable even in the summer, due to the strength of the tidal currents and the poor holding ground.

**Combe Martin Bay** (51°13'N., 4°03'W.) is entered 2.5 miles E of Ilfracombe and provides shelter. Vessels can find temporary anchorage within this bay, during good weather, in a depth of 14m.

Little Hangman, a well-defined conical hill, stands near the E entrance point of the bay. It is 213m high and conspicuous from seaward. The village of Combe Martin is situated at the mouth of the River Umber, which flows into the SE corner of the bay. Only the NW part of the village and a church are visible from the bay.

Great Hangman, a high cliff of deep red color, stands 0.9 mile E of Little Hangman. It is backed closely by a hill which is 313m high and separated by a deep gorge from another hill, 344m high, standing 1 mile E.

**Copperas Rock** (51°14'N., 4°01'W.), with a least depth of 1.4m, lies 0.5 mile N of Great Hangman. This rock is marked by a lighted buoy; the sea breaks heavily on it during strong winds.

## England—Bristol Channel—Foreland Point to Sand Bay

**7.16 Foreland Point** (51°15'N., 3°47'W.), located 9.5 miles E of Combe Martin Bay, is the most prominent point on the S side of Bristol Channel. It is fronted by rocks and rises abruptly, about 0.2 mile inland, to a hill which is 215m high and divided from the higher ground to the S by a conspicuous hollow or saddle. A light is shown at an elevation of 67m from a prominent tower, 15m high, standing on the point; a radiobeacon is situated at the light.

Foreland Ledge, an area of rocky ground, is centered 0.8 mile N of Foreland Point. It lies parallel with the coast and has a least depth of 6.9m. In bad weather, dangerous overfalls may be encountered in the vicinity of this shoal.

Sand Ridge, a dangerous and shallow shoal, lies between 0.5 mile and 1.5 miles W of Foreland Point and is composed of gravel. It has a least depth of 1.8m and is marked by a buoy, moored at the W end.

Several wrecks lie within 4 miles of Foreland Point and may best be seen on the chart.

**Tides—Currents.—**At a position about 1.2 miles N of Foreland Point, the tidal currents follow the direction of the trend of the coast and attain a maximum rate of 5 knots at springs. Farther offshore, in the fairway of Bristol Channel, both tidal currents set up and down the channel and attain a maximum rate of 4.5 knots at springs. Close outside Sand Ridge, the tidal currents set E and W at rates of 4 to 5 knots.

**Lynmouth** (51°14'N., 3°50'W.), a picturesque resort village,

**Ilfracombe Town and Harbor**

is situated at the mouth of the Lyn River, 1.7 miles SW of Foreland Point. A shelf of boulders, which dries, fronts the mouth and a narrow channel, which has been scoured by the river, leads through it to a small craft harbor, enclosed by two stone jetties. Anchorage can be taken, during offshore winds, in the roadstead off the river mouth and S of Sand Ridge. A good berth is in a depth of 8m, sand and gravel, between 0.5 and 0.7 mile offshore and out of the strength of the tidal currents.

**7.17 Gore Point** (51°13'N., 3°38'W.), located 6 miles E of Foreland Point, is low, shingly, and fronted by boulders. The coast between consists of a range of hills which rises to a height of over 350m and is partly wooded.

Porlock Bay, entered E of Gore Point, provides anchorage, in depths of 7 to 9m, partly out of the strength of the tidal currents. A valley extends inland for 3 miles from the S shore of the bay to Dunkery Hill which is 514m high. This hill is surmounted by a prominent beacon and is the highest peak visible from seaward along the S shore of Bristol Channel.

Porlock Weir, a small village, stands on the W side of Porlock Bay. It is fronted by a basin, with dock gates, which is used by small craft.

**Minehead** (51°12'N., 3°28'W.), a small drying harbor, lies 4.7 miles ESE of Porlock Bay and is used by pleasure craft. It is protected by a breakwater, curving E, over which the sea breaks at HW during gales. Tides here rise about 10.6m at springs and 8m at neaps. Local knowledge is required for entry and the harbor may be contacted by VHF. Vessels of up to 60m in length and 2.5m draft can enter.

The ruins of a promenade pier extend up to about 180m N from a point on the shore close W of the harbor. The Gables, a shingle reef, lies about 0.7 mile ENE of the harbor and dries up to 3.3m. Outfall pipelines extend up to 0.4 mile seaward in the vicinity of Minehead and may best be seen on the chart.

Conygar Tower, a conspicuous landmark, stands on a wooded hill 2 miles SE of Minehead.

Blue Anchor Head is located 4 miles ESE of Minehead. The coast between is low, flat, and recedes to form a bay which is fronted by a drying and rocky foreshore extending up to about 0.5 mile seaward. Good anchorage may be taken within Blue Anchor Roadstead, in depths of 5 to 7m, sticky blue clay, about 1.5 miles N of the point.

**7.18 Watchet** (51°11'N., 3°20'W.), a small drying harbor, lies 5.7 miles ESE of Minehead and is protected by two breakwaters.

**Tides—Currents.—**The tides rise about 11m at springs and 8.5m at neaps.

**Depths—Limitations.—**The harbor is fronted by a rocky foreshore which dries out to about 0.5 mile seaward. The entrance between the two breakwater heads is 28m wide. There are two main berths which dry at LW and have depths alongside of 5.7m at springs and 2.7m at neaps. Vessels of up to 3,900 dwt, 95m in length, and 5.5m draft can be accommodated at MHWS.

**Aspect.—**A light is shown from a prominent six-sided tower standing on the head of the W breakwater.

**Pilotage.—**See paragraph 7.12.

**Caution.—**The harbor is subject to silting and vessels of up to 61m in length are advised to allow an additional 0.3m clear-

**Foreland Point**

ance; vessels of 61 to 95m in length should allow an additional 0.6m clearance.

Due to the strength of the tidal currents setting across the entrance, close attention should be paid when entering the harbor. Visiting pleasure craft should not attempt to enter without local knowledge.

**7.19 Stoke Bluff** (51°12'N., 3°12'W.), a prominent point, is located 5 miles E of Watchet. The coast between consists of cliffs of variegated color. A church, with a prominent square tower, stands 2 miles E of Watchet. It is situated on the slope of a hill at the village of West Quantoxhead, 0.8 mile inland. Two prominent radio masts stand on a hill 1.5 miles SW of Watchet.

Stoke Spit, which consists of stones and terminates to seaward in drying sand, extends up to about 1.3 miles NW from Stoke Bluff. Kilve Patch, with a least depth of 3.7m, lies about 0.7 mile NW of the outer end of Stoke Spit.

**Culver Sand** (51°17'N., 3°15'W.), centered 5.5 miles NNW of Stoke Bluff, lies nearly parallel to the coast and is marked at its E and W extremities by lighted buoys. This bank is steep-to on its S side and is awash in places.

**Caution.—**Several floating targets and lighted buoys, which are used in connection with air-firing exercises, are moored in the vicinity of Stoke Spit.

Several disused cables lie in the waters N of Culver Sand.

**7.20 Bridgwater Bay** (51°15'N., 3°10'W.) is entered between Stoke Bluff and Brean Down, 10 miles NE. Brean Down is formed by a conspicuous bold projection, 91m high. This large bay, for the most part, is encumbered by drying mud flats which extend up to about 5 miles from the shore. Burnham-on-Sea, a resort town, is situated at the head of the bay. It stands close N of the entrance to the River Parrett which leads to the port of Bridgwater, 6 miles S. A church tower, surmounted by a turret, stands in this town and is very prominent and easily distinguishable from seaward.

Hinkley Nuclear Power Station stands on the S shore of the bay, 2.5 miles E of Stoke Bluff. The main buildings of the station are very conspicuous from seaward.

The approach channel leading to the river mouth is entered 5 miles W of Burnham-on-Sea and is marked by an outer fairway lighted buoy which is moored 2.3 miles NE of Stoke Bluff. A bar occupies the first 2 miles of the channel and has a drying depth of 0.6m. The tides rise on this bar about 10.8m at MHWS and 8m at MHWN. The S side of the channel shelves very gradually, but the N side shelves more steeply and consists of hard sand. Within the bar, the channel becomes narrower and has depths of 1.5 to 3.7m.

The fairway is marked by lighted buoys and beacons which are moved as necessary. A directional light, which indicates the deepest water in the channel, is shown from a tower standing at Burnham-on-Sea. Vessels waiting to enter the channel may obtain good, although exposed, anchorage, in depths of 5 to 7m, about 1.8 miles NNE of Stoke Bluff.

**Caution.—**The deepest water is indicated by the directional sector light. Due to the constantly changing depths, the navigational fairway marked by the buoys does not always follow the deepest available water.

Fishing stakes, some unmarked, may be encountered outside of the buoyed channel.

**7.21 Bridgwater** (51°08'N., 3°00'W.) (World Port Index No. 35100), a small port, lies 8 miles upstream of the mouth of the River Parrett. It consists of several drying wharves which front the banks of the river.

**Tides—Currents.—**The tides at Bridgwater rise about 4.6m at springs and 1.9m at neaps.

The river is subject to a slight bore, about 0.5m high, at the first of the spring flood; at neaps, it is scarcely perceptible.

**Depths—Limitations.—**There are five main wharves, 52 to 150m in length, which dry at LW and have depths of up to 6.1m alongside at MHWS. Vessels of up to 1,800 dwt, 73m in length, and 4.5m draft can be accommodated. Vessels of light draft up to 82m in length can also be handled. There are facilities for general cargo, ro-ro, and tanker vessels.

A yacht marina, consisting of an enclosed basin, lies on the W side of the river, close N of the town.

**Pilotage.—**Pilotage for the river and the port is compulsory for all vessels over 30m in length. Pilots may be contacted on VHF channel 8 and normally board off Burnham-on-Sea, between Lighted Buoy No. 2 and Brue Lighted Beacon. Inbound vessels should report to Bridgwater Pilots on VHF channel 8 when passing S of Gore Lighted Buoy. In bad weather, pilots

**Weston—Birnbeck Pier**

will board at Barry Roads (51°23'N., 3°14'W.), but require 24 hours advance notice. Vessels should pass the outer approach lighted buoy no earlier than 3 hours and no later than 2 hours before HW.

**Contact Information.—**Bridgewater Pilots and Port can be contacted, as follows:

1. Telephone: 44-1934-822666 (office)
   44-771-2773469 (mobile)
2. Facsimile: 44-1934-823111
3. E-mail: harbour.master@sedgemoor.gov.uk

**Caution.—**Overhead cables, with a vertical clearance of 32m, span the river 2.3 miles above the entrance.

Several power cables land at Bridgwater.

**7.22 Weston Bay** (51°20'N., 3°00'W.) lies between Brean Down and Anchor Head, 2.3 miles NE. The latter point is formed by the W extremity of Worlebury Hill, a ridge, which rises to a height of 103m and is surmounted by a conspicuous radio mast and a water tower. The whole of this bay is blocked by mud flats which dry up to about 1.3 miles seaward of its E shore.

Birnbeck Islet lies 0.2 mile W of Anchor Head and is connected to it by a bridge. A pier used by small craft fronts the N side of this small islet. Weston Ledge, an isolated shoal patch, lies about 0.5 mile W of the islet and has a least depth of 1.2m.

The River Axe, which is navigable only by small craft at HW, flows into the SE corner of the bay. Knightstone, a small drying boat harbor, lies 0.3 mile SE of Anchor Head and is protected by a rocky projection.

Weston-Super-Mare, a resort town, extends along the N and E sides of Weston Bay. Grand pier, constructed on iron piles, extends 0.3 mile W from the NE shore of the bay and is conspicuous.

**Steep Holm** (51°20'N., 3°06'W.), 72m high, lies 2.7 miles WNW of Brean Down. This island has steep cliffs which render it inaccessible, except at the E end which is fronted by a single drying spit.

South Patches, a shoal, lies about 1.5 miles E of the E end of Steep Holm and has a least depth of 4.3m.

**Sand Bay** (51°22'N., 2°58'W.) lies between Anchor Head and Sand Point, 2 miles NNE. It is entirely filled by sand and mud flats on which numerous fishing stakes may be encountered. Swallow Rocks, which dry, extend up to about 0.2 mile W from Sand Point.

## Wales—South Coast—Off-lying Dangers

**7.23 The Smalls** (51°43'N., 5°40'W.), a group of low rocks, forms the NW extremity of the approach to Bristol Channel and is the W and outer danger in the approach to Milford Haven. A light is shown from a prominent tower, 36m high, standing on the NW and largest rock; a racon is situated at the light.

**Hats** (51°43'N., 5°37'W.), an area of rocky ground, lies 2 miles E of The Smalls. It has a patch, with a least depth of 2.1m, which breaks in bad weather and is usually marked by tide rips except near slack water.

**Barrels** (51°43'N., 5°33'W.), an area of a rocky ground lies

4.2 miles ESE of The Smalls. Several drying rocks are located near the N end of this area and are usually marked by tide rips except near slack water.

**Grassholm** (51°44'N., 5°29'W.), a prominent island, lies 7 miles E of The Smalls and is 45m high. Mersey Rock, which dries 0.6m, lies close off its NE end and several other rocks lie close off the SW and S parts of the island. A tongue of foul ground extends 1.5 miles SE from the island and may cause tide rips at times.

**Caution.—**A Traffic Separation Scheme (TSS), which is IMO-adopted, has been established to the W of The Smalls and may best be seen on the chart. For further information, see Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean and Adjacent Seas.

Laden tankers should avoid using the area lying between this TSS and The Smalls.

Laden tankers over 10,000 gt should not use the channel lying E of Grassholm unless navigating between St. Brides Bay and Milford Haven.

An Area to be Avoided, which is IMO-adopted, lies between The Smalls and Grassholm and may best be seen on the chart. This area should be avoided by all vessels laden with oil, gas, or noxious liquids substances and all other vessels of more than 500 gt.

During bad weather, the areas of Hats and Barrels are marked by heavy overfalls and heavy seas break over them.

As the tidal currents set directly from the N and S onto Grassholm, considerable races are formed off both ends of the island. In addition, a strong eddy or indraft is formed on the opposite side to that on which the tide is setting. These eddies may extend up to 0.5 mile from the island.

Vessels navigating to the SE of The Smalls in the vicinity of the approaches to Milford Haven should use caution as deep-draft vessels with limited maneuverability may be encountered.

## Wales—South Coast—Wooltack Point to Milford Haven

**7.24 Wooltack Point** (51°44'N., 5°15'W.), dark and rugged, is backed by a prominent peak, 55m high, which stands 0.3 mile inland. Tusker Rock, 1.5m high, lies close W of the point and a drying rock lies midway between.

**Skomer Island** (51°44'N., 5°18'W.) lies centered 1.5 miles W of Wooltack Point and forms a prominent feature when viewed from the N or S. It is surrounded by deeply indented precipitous cliffs which are nearly 60m high in places. The main part of this island is nearly level, but small rocky peaks, up to 76m high, are interspersed throughout. Garland Stone, a conical rock, lies close off the N extremity of the island and is 29m high. Mewstone, a conical and green-topped islet fronted by rocks, lies close off the S extremity and is 57m high. The Neck, a small promontory, forms the E extremity of the island and is connected by a low and narrow isthmus. Midland Isle, 45m high, lies close E of The Neck and is separated from it by a narrow passage with a least depth of 2.7m.

Jack Sound leads between Midland Isle and Wooltack Point. The fairway of this channel is 180m wide and has depths of more than 10m, but is bounded on both sides by drying rocks and shoals. Blackstones, a group of above-water rocks which never cover, lies 0.2 mile S of Midland Isle. Crab Stones, another group of rocks, extends E from Midland Isle and dry up to 5.6m. Several dangerous sunken rocks lie close SE and SSE of the outer rock of Crab Stones.

The Bench, a cluster of rocks which never cover, lie about 0.3 mile offshore, 0.8 mile S of Wooltack Point. Gateholm Island, 37m high, lies 1.5 miles SE of Wooltack Point and is fringed by shelving rocks which connect it to the mainland at LW.

**Skokholm Island** (51°42'N., 5°16'W.) lies 2.5 miles SSW of Wooltack Point. It has precipitous sides and attains a height of 50m near the SW end. A light is shown from a prominent white tower, 54m high, standing at the SW end of the island.

An isolated rock lies close off the E end of the island which is formed by a low neck. A spit, composed of sunken rocks, extends about 0.3 mile NNE from this isolated rock and has a least depth of 2.1m. Several shoal patches lie SE of the isolated rock. The outer patch lies about 0.4 mile offshore and has a least depth of 6.3m. Several rocky patches lie off the W end of the island. The outer patch lies about 0.5 mile W of the W extremity and has a least depth of 9.4m.

Broad Sound, a wide and deep channel, leads between Skokholm Island and Skomer Island, but is partially obstructed by The Knoll, a rocky bank, which lies in mid-channel and has a least depth of 7.6m.

**Tides—Currents.—**Wildgoose Race forms W of Skomer Island and Skokholm Island during the strength of the tidal currents. It is especially violent near the time of springs, with a strong wind blowing against or across the current, and is dangerous for small craft. A race of much less violence extends NE from Skokholm Island when the currents are setting strongly.

A strong current, with various and sudden eddies, is reported to set through Jack Sound and attain rates of 6 to 7 knots.

## Milford Haven (51°43'N., 5°02'W.)

World Port Index No. 34880

**7.25** Milford Haven, formed by the broad and deep outlet of the River Cleddau, is entered between Saint Ann's Head and Sheep Island, 2 miles ESE. The port is principally a major oil terminal for deep-draft tankers. Pembroke Dock, a cargo terminal, is situated at the E end of the haven. South Hook LNG Terminal and Dragon LNG Terminal make this an important port for LNG operations.

**Tides—Currents.—**The tides in Milford Haven rise about 6.3m at MHWS and 2.7m at MHWN.

The tidal currents within the entrance set nearly parallel to the channel. The incoming current generally attains a rate of l.5 knots and the outgoing current a rate of 1.7 knots. Within the approaches, the tidal currents set approximately at right angles to the line of approach and confused seas are often experienced off the entrance where the tidal currents meet.

**Depths—Limitations.—**Main Channel has a depth of 16.3m. East Channel has a controlled depth of 9.9m and is entered between Rows Rocks and Sheep Rock. This channel leads E of Chapel Rocks and close W of Thorn Rock. It is available to all vessels of suitable size and draft.

West Channel, the main deep-water entrance channel, has a least depth of 15.8m. It is entered between St. Ann's Head

**Milford Haven**

Shoal and Middle Channel Rocks and leads W of Chapel Rocks.

The entrance to the haven is exposed to the S and W and a heavy swell can be experienced. This condition should be taken into consideration when assessing underkeel clearance requirements. The minimum clearance allowed is generally 10% of the deepest draft.

Murco Marine Terminal consists of a T-head jetty which extends 800m SSE from the N shore of the haven and has a berthing face, 700m long.

Texaco Marine Terminal (Valero Marine Terminal) consists of two jetties which extend N from the S shore of the haven. The E jetty, a T-head, extends N for 360m and has a berthing face 1,100m long. The W jetty, an L-head, extends N for 385m and has 1,150m of berthing space along its seaward side. It is connected to the E jetty by a walkway. There are three outer berths.

Semlogistics and Dragon LNG Terminal consists of three T-head jetties which extend S from the N shore of the haven. The middle and main deep-water jetty has a depth of 16.9m alongside and can accommodate tankers of up to 165,000 dwt.

South Hook LNG Terminal consists of a T-head jetty with two active outer berths, extending 1,000m S from Little Wick.

The above terminals also provide facilities for LPG vessels.

Milford Dock, a wet dock, lies on the N side of the haven, 3.2 miles E of the entrance. It has 1,220m of quayage with a dredged depth of 10.4m in the main part and a depth of 6.7m in the N and S parts. The dock is entered through a lock which is 165m long, 19.8m wide, and has a depth of 7.6m over the sill. The approach channel leading to the lock is dredged to a depth of 0.9m. Vessels of up to 130m in length, 18.9m beam, and 7.5m draft can enter. The dock is used by small cargo vessels and has extensive facilities for fishing vessels. A drydock and a marina are situated within the wet dock.

| Milford Haven—Berth Information. | | | | | | |
|---|---|---|---|---|---|---|
| | | | Maximum Vessel | | | |
| Berth | Length | Depth | LOA | Draft | Beam | Remarks |
| Milford Docks | | | | | | |
| J Wall | 180m | 5.5m | — | — | 19.0m | General cargo and fish. |
| K Wall | 150m | 7.5m | — | — | 19.0m | General cargo and fish. |

| Milford Haven—Berth Information. | | | | | | |
|---|---|---|---|---|---|---|
| | | | Maximum Vessel | | | |
| Berth | Length | Depth | LOA | Draft | Beam | Remarks |
| **Port of Pembroke** | | | | | | |
| **Port of Pembroke (Gate1)** | | | | | | |
| Quay 1 | 180m | 7.3m | 168m | 6.3m | — | Aggregates and general cargo. |
| Quay 2 | 100m | 5.5m | 96m | 2.9m | 36m | Aggregates and general cargo. |
| Quay 2 | 65m | 3.0m | 30m | 2.9m | — | Aggregates and general cargo. |
| **Pembroke Dock Ferry Terminal (Gate 4)** | | | | | | |
| Ro-ro Dock | 190m | 7.2m | 185m | 6.0m | — | Can accommodate vessels up to 6,000 dwt |
| **Pembroke Dock (Carr Jetty)** | | | | | | |
| Long Arm | 115m | 9.7m | 151m | — | — | Aggregates and general cargo. Maximum loa of 170m in favorable weather. |
| Short Arm | 50m | 5.4m | 50m | — | — | Aggregates and general cargo. |
| Offshore Jetty | — | 5.9m | — | — | 30m | Reported (2015) out of service. |
| **Hobbs Point** | | | | | | |
| Floating pontoon | 30m | — | 180m | 5.6m | — | — |
| **Tanker Berths** | | | | | | |
| **South Hook LNG Terminal** | | | | | | |
| No. 1 | 107m | 16.9m | — | 12.7m | — | Can accommodate vessels up to 190,000 dwt |
| No. 2 | 107m | 18.1m | — | 12.7m | — | Can accommodate vessels up to 190,000 dwt.. |
| **Valero Terminal (Ex-Chevtex)** | | | | | | |
| No. 1 | 123m | 19.9m | 365m | — | — | Petroleum products. Can accommodate vessels up to 275,000 dwt. |
| No. 2 | 98m | 14.5m | 270m | — | — | Petroleum products. Can accommodate vessels up to 275,000 dwt. |
| No. 3 | 62m | 11.6m | 240m | — | — | LPG and petroleum products. Can accommodate vessels up to 350,000 dwt. |
| No. 4 | 37m | 5.2m | 75m | 5.8m | — | LPG and petroleum products. Can accommodate vessels up to 250,000 dwt. |
| No. 5 | 37m | 5.9m | 93m | 4.9m | — | Petroleum products. Can accommodate vessels up to 6,000 dwt. |
| No. 6 | 120m | 20.3m | 365m | 18.3m | — | Petroleum products. Can accommodate vessels up to 270,000 dwt. |

| Milford Haven—Berth Information. | | | | | | |
|---|---|---|---|---|---|---|
| | | | Maximum Vessel | | | |
| Berth | Length | Depth | LOA | Draft | Beam | Remarks |
| No. 7 | 75m | 14.2m | 240m | — | — | Petroleum products. Can accommodate vessels up to 60,000 dwt. |
| No. 8 | 75m | 15.3m | 240m | 14.3m | — | Petroleum products. Can accommodate vessels up to 30,000 dwt. |
| **Sem Logistics Terminal** | | | | | | |
| No. 2 | 112m | 16.8m | 283m | 15.8m | — | LPG and petroleum products. Can accommodate vessels up to 165,000 dwt |
| No. 3 | 60m | 10.4m | 153m | 9.3m | — | LPG and petroleum products. Can accommodate vessels up to 13,000 dwt. |
| **Murco Terminal** | | | | | | |
| No. 1 | 135m | 16.8m | 320m | 16.7m | — | Petroleum products. Can accommodate vessels up to 275,000 dwt. |
| No. 2 | 70m | 11.4m | 201m | 10.9m | — | LPG and petroleum products. Can accommodate vessels up to 30,000 dwt. |
| No. 3 | 37m | 7.0m | 122m | 6.3m | — | LPG and petroleum products. 5,000 dwt |
| **Dragon LNG Terminal** | | | | | | |
| No. 192 | 192m | 13.2m | 300m | 12m | 50m | LNG. Can accommodate vessels up to 150,000 dwt. |

Pembroke Dock lies on the S side of the haven, 1.5 miles E of the Semlogistics Terminal. The ro-ro ferry terminal berth has a dredged depth of 6.7m.

Carr Jetty, at the NW end of the Dockyard Port and W of the ro-ro terminal, fronts a small naval base. It is constructed of solid stone, There are landing steps on its SW and E sides. The jetty is connected to the dockyard at its root by open piers.

HM Morrings and Marine Salvage Depot lies on the W side of Pembroke Dock.

Extensive marina facilities for yachts are situated on the N shore of the haven, NNE of Pembroke Dock.

The controlling depths, for all states of the tide, are 16m up to the Texaco Marine Terminal (Valero Marine Terminal) and 12.4m up to Semlogistics Terminal. Generally, VLCCs with drafts of up to 20m can be docked on most high waters. The local authorities should be consulted for the latest information concerning depths and other pertinent conditions. For berthing information see the table titled **Milford Haven—Berth Information.**

**Aspect.—St. Ann's Head** (51°41'N., 5°10'W.), a bold promontory, is 37m high and forms the W entrance point of the haven. Its steep cliff face has a distinctive reddish-brown color. A light is shown at an elevation of 48m from a tower, 13m high, which stands near the cliff edge and is attached to several prominent buildings. A conspicuous disused light tower, used as a coastguard station, is situated close NW of the light.

St. Ann's Head Shoals, with depths of 5.5 to 11m, extends up to about 0.5 mile S and SW of the point and is marked by a lighted buoy. A detached shoal, with a least depth of 4.4m, lies about 0.5 mile ENE of St. Ann's Head and is marked by a lighted buoy.

Middle Channel Rocks, a rocky shoal bank, lies about 0.7 mile SE of St. Ann's Head and has a least depth of 5.3m. A lighted beacon stands on the rocks at the NW side of this bank and a lighted buoy is moored about 0.2 mile SW of it. The Rows Rocks, a rocky shoal, lies close E of the E side of Middle Channel Rocks and has a least depth of 8m.

**Sheep Island** (51°40'N., 5°07'W.), the E entrance point of the haven, lies 2 miles ESE of St. Ann's Head and is fronted by foul ground. This island is 36m high and connected to the mainland by a drying ledge. A small islet lies close off its W side.

Sheep Rock, with a least depth of 7.1m, lies about 0.5 mile WSW of the W end of Sheep Island and is marked by a lighted buoy. Several shoal patches, with depths of less than 10m, lie within 0.3 mile S and SW of the island.

Chapel Rocks, a rocky shoal bank, lies about 0.8 mile NW of Sheep Island. It has a least depth of 3.7m and is marked by

lighted buoys. Thorn Rock, with a least depth of 3.3m, lies about 1 mile NE of Chapel Rocks and is marked by a lighted buoy.

Several oil refinery complexes, with associated tank farms and prominent chimneys, are situated along the shores of the haven and may best be seen on the chart. A prominent power station stands on the S side of the haven, 5.5 miles E of the entrance, and has a conspicuous chimney, 216m high. A prominent road bridge, with a vertical clearance of 37m, spans the haven 8 miles E of the entrance. The river above this bridge is only used by small craft.

The entrance channels are marked by lighted buoys. The W entrance channel and haven fairways are indicated by lighted ranges which may best be seen on the chart. The centerline ranges of the W entrance channel are fitted with high intensity lights which are used in daylight, in reduced visibility, or at any time upon request.

**Pilotage.—**Pilotage is compulsory for all vessels over 50m in length with certain exemptions. Pilots can be contacted on VHF channel 11, 12, or 16. Vessels should remain at least 5 miles off St. Ann's Head until radio contact has been established with the pilot vessel. Pilots board about 4 miles SW of St. Ann's Head Light.

**Vessel Traffic Service.—**A Vessel Traffic Service (VTS) has been established within the approaches to the haven. This service is mandatory for all vessels over 20m in length entering or operating in Milford Haven and approaches. Milford Haven Port Control is the call sign of the VTS control station.

Vessels inbound should send an ETA at least 12 hours in advance with any subsequent amendments at least 2 hours before arrival.

Vessels should then confirm their ETA by VHF when within 20 to 30 miles of St. Ann's Head.

Vessels within 1 hour of their arrival off St. Ann's Head should contact the VTS control station on VHF channel 1 and subsequently maintain a listening watch on VHF channel 12 as directed.

Inbound and outbound vessels must report to the VTS control station when passing the reporting points listed in the table titled **Milford Haven—Reporting Points**.

All vessels should report to the VTS control station when entering the entrance channels. All vessels underway within the haven must maintain a listening watch on VHF channel 12 watch as directed. Vessels anchoring within the haven should report to the VTS control station and maintain a VHF listening watch on channels 12 and 16. Vessels may also request information concerning wind speed and height of tide from the VTS control station. Within the limits of the port, vessels having a draft greater than 12m should exhibit the shapes and lights for a vessel constrained by draft. During restricted visibility, such vessels should also make the appropriate sound signals. Other vessels are requested to give a wide berth to vessels exhibiting the above shapes or lights or making the above sound signals.

Controlled Zones and Exclusion Zones are allocated to specific vessels underway within the port, as follows:

1. Controlled Zones extend 1 mile ahead and astern of the specific vessel and within the confines of the main channel. Navigation within the Controlled Zone for vessels of 20m in length or more requires prior permission from the Port Authority, is confined to the region astern of the specific vessel, and must be away from the specific vessel.
2. Exclusion Zones extend ahead to the limit of the line of sight from the specific vessel within the confines of the channel. The limit will be determined by a patrol vessel stationed ahead of the specific vessel. The zone astern is determined by the stern of an escort tug, where provided, or 100m astern of the specific vessels if no tug is provided. Navigation within the Exclusion Zone by other vessels is prohibited.

VLCCs of 65,000 gt or over are to enter port between 1.5 hours before and on HW at Milford Haven. These conditions must also be met with favorable weather, tide, and underkeel clearance at the Pilot's discretion.

Milford Haven operates a port control service that includes harbor surveillance radar covering the haven up to the Cleddau Bridge and the seaward approaches for up to 6 miles.

**Milford Haven—Reporting Points**

| Point | Name | Position | Remarks |
|---|---|---|---|
| A | West Approach | 51°39'18.0"N, 5°18'00.0"W | Inbound only |
| B | South Approach | 51°36'15.0"N, 5°14'06.0"W | Inbound only |
| C | East Approach | 51°36'15.0"N, 5°08'40.2"W | Inbound only |
| D | West Channel (St. Ann's Lighted Buoy) | 51°40'14.4"N, 5°10'13.8"W | Inbound and outbound |
| E | East Channel (Sheep Lighted Buoy) | 51°40'08.4"N, 5°08'39.0"W | Inbound and outbound |
| F | Thorn Rock Lighted Buoy | 51°41'43.2"N, 5°07'43.2"W | Inbound only |
| G | Qatar Lighted Buoy | 51°41'48.6"N, 5°05'19.2"W | Outbound only |
| H | Cunjic Lighted Buoy | 51°42'01.2"N, 5°02'36.6"W | Inbound and outbound |
| K | Wear Spit | 51°41'43.2"N, 4°58'48.0"W | Inbound (when bound for Pembroke Dock) and outbound |
| J | Milford Docks | 51°42'33.0"N, 5°02'17.4"W | Inbound and outbound |

**Contact Information.—**Milford Haven Pilots and Port Control can be contacted, as follows:

1. Telephone: 44-1646-696136
   44-1646-696137
2. Facsimile: 44-1646-696110
3. E-mail: portcontrol@mhpa.co.uk

**Anchorage.—**Anchorage is reserved for large vessels of up to 12m draft in Dale Roads which lies in the W part of the haven and N of the fairway channel. This roadstead is exposed to wind and swell and has an uneven rocky bottom which does not always provide a good holding area. Smaller vessels may anchor in Dale Shelf Anchorage, which lies W of Dale Roads, in Sandy Haven Anchorage, which lies NE of Dale Roads, or in Stack Anchorage, which lies ESE of Dale Roads. Several wrecks and obstructions lie in the vicinity of these anchorage areas and may best be seen on the chart.

When anchoring, mariners should take care not to obstruct the range light marking West Channel.

**Caution.—**Vessels in the vicinity of the approaches to the haven should navigate with caution as deep-draft vessels with limited maneuverability may be encountered. A bar extends into the channel at South Hook. Deep-draft vessels may need to reduce speed to minimize the squat effects on the vessel.

Deep-draft vessels are advised not to anchor in the approaches to the entrance channels.

A disused explosive dumping ground area, which may best be seen on the chart, lies 7 miles WSW of the entrance to the haven.

Several submarine cable areas lie in the vicinity of the entrance and within the haven and may best be seen on the chart.

A spoil ground area lies close seaward of the entrance to the haven and can best be seen on the chart.

Several unlighted mooring buoys are situated within the haven and adjacent to the fairway.

Vessels with a draft of over 12m are advised not to anchor within a radius of 5 miles from the light on Middle Channel Rocks. Passing vessels are also advised to keep at least 5 miles off the light on Middle Channel Rocks.

## Wales—South Coast—Milford Haven to St. Govan's Head

**7.26 Freshwater West Bay** (51°39'N., 5°05'W.) is entered between Sheep Island and Linney Head, 4 miles SE. It provides sheltered anchorage during offshore winds, in depths of not less than 16m; inside this depth, the bottom is foul. The N side of the bay is formed by bold cliffs, but the E side has a sandy foreshore.

**Turbot Bank** (51°37'N., 5°08'W.) lies 2.5 miles W of Linney Head. This shoal bank has a least depth of 9.6m and is marked by a lighted buoy. During bad weather, tide rips and a dangerous short sea may be encountered in this vicinity.

**Linney Head** (51°37'N., 5°03'W.) is formed by dark and perpendicular cliffs, 45m high, and has a flat summit. A rock, which dries 4m, fronts the head and a shoal patch, with a depth of 6.7m, lies about 0.5 mile SW of it.

Crow Rock, which dries 5.5m, lies 0.5 mile SSE of Linney Head and is marked by a ruined beacon. The Toes, consisting of several shallow rocks, extends up to 0.2 mile NW and 0.5 mile SE of Crow Rock.

Pen-y-holt Stack is located 0.4 mile ESE of Linney Head. It is prominent, 23m high, and stands on the foul ground fronting the coast.

**Caution.—**Numerous lobster pots may be encountered in Freshwater West Bay and within 1.5 miles of Linney Head.

## Wales—Bristol Channel—St. Govan's Head to Swansea Bay

**7.27** Bristol Channel is entered between St. Govan's Head and Hartland Point which is located on the S coast, 37 miles SSE.

**St. Govan's Head** (51°36'N., 4°55'W.), located 5.5 miles ESE of Linney Head, is formed by a perpendicular and bare limestone cliff, 37m high. The land behind the head is nearly level and the conspicuous tower of St. Petrox church, situated 2.5 miles N, can be identified from seaward. The old chapel and the well of St. Govan, the former being a small and crude structure with a belfry, are situated on a shelf halfway up the cliff, 0.5 mile W of the head. The spire of Warren church, standing 3.2 miles NW of the head, is also prominent.

Rocky shoal patches, with depths of 8.5m, lie about 1.2 miles E and 1.3 miles ESE of the head. Several shoal patches, with depths of 12.8 to 16.5m, lie within 5 miles of the head.

**St. Gowan Shoals** (51°33'N., 4°57'W.) consist of several patches with depths of less than 18m. The outermost of these patches has a depth of 5.7m and lies about 4 miles SW of St. Govan's Head. There are overfalls over this uneven shoal area and the sea breaks over it in heavy weather.

St. Gowan Lighted Buoy, equipped with a racon, is moored about 4.8 miles SW of St. Govan's Head and vessels should pass to the S of it.

**Caution.—**A tidal race extends up to about 0.6 mile seaward of St. Govan's Head.

Numerous inshore trawlers may be encountered in the vicinity of St. Govan's Head during the summer months.

A submarine cable leads through the Celtic Sea to mid Bristol Channel and lands at Bridgwater.

**7.28 Stackpole Head** (51°37'N., 4°54'W.), located 1.2 miles NE of St. Govan's Head, has a bold and sharp outline and its extremity is almost detached. Vessels can anchor, in a depth of 11m, about 0.5 mile N of this head, but S winds soon raise heavy seas in the roadstead.

Old Castle Head, located 4.5 miles ENE of Stackpole Head, is the S termination of a distinctive summit which is 56m high and rises close inshore. This head should be given a wide berth as the tidal currents set directly onto it and produce overfalls and a short, broken sea.

Lydstep Point, located 1 mile ENE of Old Castle Head, is formed by a narrow ridge of limestone, 43m high. Shoal patches, with depths of 2.8 and 4.2m, lie about 0.8 mile E of this point.

Giltar Point is located 1.8 miles ENE of Lydstep Point and a line of vertical cliffs extends up to 1.3 miles W of it. The coast extending N from this point consists of high sand dunes which are fronted by drying sands.

Between St. Govan's Head and Caldey Island, the tidal currents set directly and attain maximum rates of 3 knots at springs and 2 knots at neaps.

**Caldey Island** (51°38'N., 4°41'W.), 56m high, lies 1 mile SE of Giltar Point. It is mostly bounded by cliffs of moderate height, the highest being on the S and NE sides. A prominent monastery, with a round tower, stands near the center of the island. A light is shown at an elevation of 65m from a conspicuous tower, 16m high, standing near the SE end of the island.

Offing Patches, consisting of several small areas of foul ground, lies within 1 mile of the S side of the island and has a least depth of 6.8m. Drift Rock, with a least depth of 9.1m, lies about 1.3 miles SE of the light and the tidal current, setting W, occasionally causes a considerable sea over this rock.

A ledge of rocky shoals, with a least depth of 3.7m, fronts the E side of the island. Spaniel Shoal, the E and outer of these dangers, lies about 0.5 mile E of the E end of the island and is marked by a buoy.

Eel Spit, a rocky ridge, extends about 0.3 mile N from the N extremity of the island and has a least depth of 1.8m. Highcliff Bank, with a least depth of 1.9m, extends 0.8 mile N from the N side of the island and is marked by a buoy.

St. Margaret's Island, bounded by cliffs, lies 0.2 mile W of the NW end of Caldey Island to which it is connected by a drying reef. Caldey Sound lies between the mainland coast and St. Margaret's Island. This channel provides temporary anchorage, in a depth of 15m, but the holding ground is poor.

Man of War Roads lies centered 0.6 mile NE of the E end of Caldey Island and affords shelter from winds between SSW and NNW. Vessels can anchor, in depths of 11 to 13m, sand over sticky clay, with little tidal current. Caldey Roads, lying between Eel Spit and Highcliff Bank, affords anchorage, in depths of 5 to 9m.

**Caution.—**Several submarine cables lie between the N coast of Caldey Island and the mainland.

**7.29 Carmarthen Bay** (51°41'N., 4°34'W.) is entered between Caldey Island and Worms Head, 14 miles ESE. The common estuary of the River Tywi and the River Taff lies at the head of this bay and Burry Inlet is located on the E side.

Trawlers Dread is located in the approach to the bay. This rocky shoal patch lies about 5.5 miles ESE of Giltar Point and has a least depth of 12.8m.

**Tenby** (51°41'N., 4°42'W.), a small resort town, is situated 1.3 miles NNE of Giltar Point. It stands on a bold promontory which terminates E in Castle Hill, a narrow peninsula of rock, on which stands a monument. A church, with a conspicuous spire, stands near the center of the town. A small island, 28m high, lies close SE of Castle Hill and is connected to it by a drying ridge of sand. A small tidal harbor, which dries, fronts the town and is used by fishing vessels and pleasure craft. Tenby Roads, lying NE of Castle Hill, affords good anchorage, in depths of 5 to 7m, sand over mud.

The Yowan, an isolated shoal patch, lies about 2.3 miles ESE of Tenby and has a least depth of 4.4m. Woolhouse Rocks, formed by a narrow reef which dries, lies about 1.5 miles SE of Tenby and is marked by a buoy.

**Saundersfoot** (51°43'N., 4°42'W.), a small town, is situated 2.3 miles N of Tenby. It is fronted by a small tidal harbor which is formed by two piers and used by fishing vessels and pleasure craft. A prominent castle stands on high ground, 0.7 mile N of the harbor.

Monkstone Point, fronted by two small islets, is located 0.9 mile SSE of Saundersfoot. Three prominent radio masts stand close SW of this point.

**7.30 Cefn Sidan Sands** (51°43'N., 4°26'W.), an extensive area of drying sand banks, lies in the NE part of the bay and fronts the common river estuary. These sandbanks are clearly defined in bad weather by a heavy sea breaking on them. A bar lies at the W end of the sandbanks, but no attempt should be made to cross it without local knowledge as the depths and channels change frequently. The town of Carmarthen stands on the W bank of the River Tywi, 10 miles above the bar, and can be reached by small craft.

Burry Holms, 31m high, is located 2.7 miles NNE of Worms Head. This grassy islet lies close off the W end of the Gower Peninsula, to which it is connected by a drying spit of sand and rock. Foul ground, with depths of 5 to 11m, lies between 1.5 and 2.5 miles W of the islet. Hall Rock, with a least depth of 6.4m, lies near the W extremity of this foul ground area.

Burry Inlet is entered on the E side of the bay N of Burry Holms. This inlet, for the most part, is encumbered with shifting sands and the depths and channels change frequently. Burry Port, a small drying harbor, lies 1.5 miles ENE of the N entrance point of the inlet and is used by fishing boats and pleasure craft.

It was reported (1990) that the harbor at Llanelli, lying 3 miles E of Burry Port, had fallen into disrepair and was no longer open to commercial traffic.

**Rhossili Bay** (51°35'N., 4°19'W.) lies between Burry Holms and Worms Head, 2.7 miles SSW. The shore of the S half of this bay is formed by prominent limestone cliffs, 30m high, which are backed close inland by hills, 189m high. Anchorage can be obtained within this bay, sheltered from S winds. Small vessels can anchor, in a depth of 5m, stiff mud, about 0.5 mile NE of Worms Head. Larger vessels can anchor, in a depth of 9m, about 1 mile N of the same point.

**Worms Head** (51°34'N., 4°20'W.), the SE entrance point of Carmarthen Bay, is formed by the W extremity of an island, 53m high, which lies close W of Rhossili Point and has three conspicuous hummocks.

**Caution.—**Several buoys, which mark exercise and practice firing ranges, are moored in the vicinity of Carmarthen Bay and may best be seen on the chart.

An outfall pipeline extends 1.5 miles ESE from a point on the shore close SW of Tenby.

**7.31 Port Eynon Point** (51°32'N., 4°12'W.) is located 4 miles SE of Rhossili Point. The coast between consists of rugged, broken, and nearly perpendicular cliffs which vary in height from 30 to 61m. The shore is fronted by drying rocks and a reef, which dries, fronts the S side of Rhossili Point.

Port Eynon Point is 43m high, perpendicular, and surmounted by a small monument. Two small and low islets lie on a drying rocky ledge which extends 0.2 mile E from this point.

**Helwick Sands** (51°32'N., 4°18'W.) extend W for about 7 miles from a position about 0.3 mile S of Port Eynon Point. The W part of the sands, known as West Helwick, has a least depth of 1.3m and the E part, known as East Helwick, has a least depth of 3.2m. Helwick Swatch, a narrow passage, leads across the sands about midway between East Helwick and West Helwick and has a least depth of 5.5m. Helwick Pass, an-

other narrow passage, separates the E end of the sands from Port Eynon Point and has a least depth of 2.4m in the fairway. These passages should only be used by vessels with local knowledge.

A lighted buoy is moored 0.4 mile S of Port Eynon Point and marks the E end of the sands. A lighted buoy, equipped with a racon, is moored close W of the W end of the sands.

**Caution.—**Vessels should give Helwick Sands a wide berth as they are steep-to at the S side and the flood current sets NE towards them. In addition, a heavy sea is often formed in the vicinity when strong W winds blow against the tidal current.

**7.32 Port Eynon Bay** (51°32'N., 4°11'W.) is entered between Port Eynon Point and Oxwich Point, a bluff point, 2.3 miles ENE. The shore is fronted by a sandy bank which dries to about 0.3 mile seaward. A dangerous wreck, marked by a buoy, lies in the NW part of the bay. With offshore winds, small vessels can find anchorage, in a depth of 7m, good holding ground, about 0.8 mile ENE of Port Eynon Point. Vessels should give both entrance points of the bay a wide berth.

**Oxwich Bay** (51°33'N., 4°07'W.) lies between Oxwich Point and Pwlldu Head, 3.2 miles ENE. Cefn Bryn, a ridge of high ground, stands at the head of the bay and has the appearance of a cone when seen from the E. The shore of the bay is bordered by drying sands and the E side is backed by broken cliffs, 61 to 76m high. A rock, with a least depth of 2m, lies about 1.5 miles W of Pwlldu Head.

**Caution.—**Submarine cables extend seaward from the W side of Oxwich Bay and may best be seen on the chart.

## Swansea Bay

**7.33 Swansea Bay** (51°35'N., 3°54'W.) is entered between Mumbles Head and Sker Point, a low and dark point, 9 miles SE. The shores of the bay are mostly low and are bordered by an extensive drying flat which consists of sand, with patches of stone, covered by mud. Shallow depths extend some distance beyond the flat and a depth of 5m lie up to 1.5 miles seaward of the head of the bay. The ports of Swansea and Neath lie at the head of the bay and Port Talbot lies at the E side.

**Mumbles Head** (51°34'N., 3°58'W.), the outer of two islets, lies on a rocky flat which extends up to 0.5 mile E of The Mumbles, the SE extremity of the mainland. Cherrystone, a detached rock, lies at the E end of this flat and dries. A light is shown from a prominent tower, 17m high, standing on the summit of Mumbles Head at an elevation of 35m.

Mumbles Pier extends 230m NE from a point on the mainland 0.2 mile NW of Mumbles Head. It is used by pleasure craft, but is in poor condition. Mumbles Hill, 60m high, rises steeply from the coast close W of the pier and is prominent. Numerous yacht and small craft moorings lie within the waters of the bay which front the S shore to the NW of the pier.

**White Oyster Ledge** (51°31'N., 4°00'W.), with a least depth of 8.5m, lies near the center of a bank with depths of less than 18m. In fog, this bank is sometimes useful in determining the position of a vessel. A lighted buoy is moored about 4 miles S of Mumbles Head and marks the S end of the bank.

**Mixon Shoal** (51°33'N., 3°58'W.), composed of fine sand, lies centered 0.5 mile SSW of Mumbles Head. This shoal dries in places, is steep-to on its SE side, and is marked by a lighted buoy.

**Outer Green Grounds** (51°33'N., 3°55'W.), an area consisting of numerous detached shoal patches, lies centered 2 miles E of Mumbles Head and is marked by a lighted buoy at the SE side. This area has least depths of 4.4 and 5.1m, which lie near its NW end.

**Green Grounds** (51°35'N., 3°56'W.), an area of shallow foul ground with detached patches of rock and stones, encumbers the greater part of the W side of the bay and is marked on its S side by a lighted buoy, moored about 0.8 mile E of Mumbles Head.

**7.34 Scarweather Sands** (51°28'N., 3°50'W.) lie across the S approach to Swansea Bay and extend to a position 6.5 miles WSW of Sker Point. The sands, which dry up to 3.3m near their middle and E parts, are marked on the E side by a buoy, on the S side by a lighted buoy, and on the W side by a lighted buoy which is equipped with a racon. In bad weather, a heavy sea generally breaks over Scarweather Sands; the area should be given a wide berth.

Hugo Bank lies about 0.5 mile NE of the center of Scarweather Sands. This shoal, which dries, is marked on its S side by a buoy.

Kenfig Patches lies close N of Hugo Bank. This shoal, which dries near its SE end, is marked on the SE side by a lighted buoy.

North Kenfig Patches, consisting of several rocky shoals, lies about 2.5 miles NW of Sker Point and has a least depth of 3.4m.

**Caution.—**Several outfall pipelines, which extend up to 2.3 miles seaward, lie in the NE part of the bay and can best be seen on the chart.

A wreck, with a depth of 7.1m, lies about 3.7 miles ESE of Mumbles Head and is marked by a lighted buoy.

The banks lying in the vicinity of Swansea Bay change frequently due to shifting sands.

**7.35 Mumbles Outer Roadstead** (53°34'N., 3°57'W.) lies centered 1 mile ESE of Mumbles Head and provides good anchorage, in depths of 9 to 15m. Care must be taken to avoid an isolated patch, with a depth of 8m, which lies near the middle of this roadstead.

Conspicuous landmarks in the vicinity of the bay, which may be identified from some distance seaward, include the ruins of Oystermouth Castle, 52m high, standing 1.3 miles NW of Mumbles Head; the white tower of the guildhall standing 3 miles NNE of Mumbles Head; the tower of a hospital standing 3.7 miles NNW of Mumbles Head; a television mast standing on Kilvey Hill, 1.2 miles NNE of the entrance to Swansea; the numerous flares, chimneys, and cooling towers of the chemical works situated close SE of Neath; and the numerous chimneys, cooling towers, and silos situated near the steel works, close S of Port Talbot.

Between Mumbles Head and Scarweather Sands, the tidal current sets E with a maximum rate of about 4 knots at springs and about 3 knots at neaps. From Mumbles Head, this current sets towards Swansea and Neath. The tidal current sets W from Neath and Swansea towards Mumbles Head at a rate of 3 to 4 knots at springs, and, at times, causes a strong race within 0.5 mile of the latter point.

## Swansea (51°37'N., 3°57'W.)

World Port Index No. 34950

**7.36** The port of Swansea lies at the mouth of the River Tawe and is entered via a dredged channel which leads NNE between two breakwaters. The harbor lies at the E side of the river entrance and consists mainly of several wet docks which are entered through a lock.

**Port of Swansea Home Page**

http://www.abports.co.uk/custinfo/ports/swansea.htm

**Tides—Currents.—**The tides rise about 8.5m at springs and 4.1m at neaps.

**Depths—Limitations.—**The entrance channel is dredged to a depth of 4.2m over a width of 122m. The lock, which leads into Kings Dock, is 267m long, 27.4m wide, and has depths over the sill of 12.4m at springs and 10.1m at neaps. An approach jetty, 300m long, extends SSW from the lock entrance and forms a lead-in.

Kings Dock has 3,586m of total quayage, with depths of 10.1m alongside, and is used by container, general cargo, and bulk vessels.

Queens Dock, mainly used by tankers, has a depth of 10.7m and is entered from Kings Dock through a passage, 30.5m wide, which is spanned by a lift bridge and a floating oil boom.

Prince of Wales Dock, mainly used by fishing vessels, has a depth of 8.1m and is entered from Kings Dock through a passage, 21.3m wide. It can accommodate vessels of up to 122m in length, 20.7m beam, and 7.3m draft.

Vessels of up to 30,000 dwt, 200m in length, 26.5m beam, and 9.9m draft can enter Kings Dock at HW.

A ro-ro ferry berth is situated outside the wet docks at the E side of the river, close N of the lock entrance. It is 145m long and has a dredged depth of 4.9m alongside.

A yacht marina and a small craft basin lie at the W side of the river and are entered through a lock, 40m long and 12.5m wide, which forms a passage through a barrage.

**Aspect.—**The E side of the entrance fairway is indicated by a lighted range and marked by lighted buoys which may best be seen on the chart. For conspicuous landmarks, see Swansea Bay.

**Pilotage.—**Pilotage is compulsory for all vessels over 85m in length and for all vessels over 20m in length carrying 12 or more passengers, explosives, or dangerous or noxious substances.

Vessels without local knowledge should not attempt to enter or leave this port without the services of a pilot. Vessels requiring a pilot should request one 24 hours in advance. The vessel's ETA should be passed to Swansea Docks Radio 3 hours in advance and when passing Mumbles Head. Vessels can contact the pilot vessel 4 hours either side of HW by VHF.

Pilots generally board about 1.1 miles SE of Mumbles Head Light. The pilot vessel is only underway as needed.

**Contact Information.—**Swansea Pilots can be contacted, as follows:

1. Telephone: 44-1792-332286
2. Facsimile: 44-1792-332299
3. E-mail: swapilot@abports.co.uk

The pilots and port both monitor VHF channel 14.

Vessels must contact the port by VHF on passing position 51°33.5'N, 3°57.0'W in order to receive docking instructions.

Swansea Docks Radio can be contacted, as follows:

1. Telephone: 44-870-6096699 (UK only)
2. Facsimile: 44-1792-332255
3. E-mail: swansea@abports.co.uk

**7.37** **Neath** (51°37'N., 3°50'W.) (World Port Index No. 34970) occupies Baglan Bay and the lower reaches of the River Neath which flows into the NE corner of Swansea Bay.

**Depths—Limitations.—**An approach channel leads NE over an extensive area of drying sand and mud, which fronts the river mouth, and lies between two training walls, 76m apart. It dries and has least depths of 7.1m at springs and 4m at neaps.

A yacht basin lies on the W side of the river and is fronted by small craft moorings. Five main wharves lie along the river banks and provide 680m of total berthing space. Vessels of up to 5,000 dwt, 125m in length, and 5.8m draft can be accommodated alongside at springs. A chemical tanker berth, consisting of a jetty with dolphins, is situated in Baglan Bay at the river entrance. It can accommodate vessels of up to 2,000 dwt and 5.8m draft.

Winds from the SW tend to increase the depths in the approach channel and winds from the NE tend to decrease them. At times, the river is subject to heavy freshets.

**Aspect.—**The approach channel is bordered by training walls which are marked by buoys and lighted beacons. Its seaward entrance is marked by lighted buoys. For conspicuous landmarks, see Swansea Bay beginning in paragraph 7.33.

**Pilotage.—**Pilotage is compulsory for all vessels within the port limits. Pilots can be contacted on VHF channel 16 or 77 and generally board in position 51°35'N, 3°53'W. Notice of ETA can be given directly to the pilot vessel or pilots when on station.

**Caution.—**Submarine pipelines lie across the entrance channel in the vicinity of the river mouth. They are marked by beacons and may best be seen on the chart.

## Port Talbot (51°35'N., 3°49'W.)

World Port Index No. 34980

**7.38** Port Talbot lies at the S side of the mouth of the River Avon which flows into the E side of Swansea Bay. The harbor, which is an ore and coal terminal, is protected by two breakwaters. The wet docks, entered through a lock within the river mouth, are accessed 2 hours either side of high water.

**Port Talbot Home Page**

http://www.abports.co.uk/custinfo/ports/port.htm

**Tides—Currents.—**The tides rise about 8.6m at springs and 3.8m at neaps.

**Depths—Limitations.—**The approach fairway is 183m wide and is dredged to a depth of 11.2m. The Tidal Harbor, consisting of a bulk jetty with two berths, extends from the E

part of the harbor and has a dredged depth of 15m on the N side and 16.5m on the S side. The fairway has least depths of 18.3m at springs and 16.2m at neaps. At the tidal harbor, vessels up to 180,000 tons, 300m in length, and 17m draft have been accommodated at the berth.

**Aspect.—**The approach channel is marked by a lighted range and lighted buoys which may best be seen on the chart. For conspicuous landmarks, see Swansea Bay beginning in paragraph 7.33.

**Pilotage.—**See paragraph 7.36.

**Signals.—**A traffic signal is displayed from a tower on the S breakwater. It consists of three lights in a vertical line. Green indicates vessels may enter the Tidal Harbor and red indicates entry is prohibited.

**Contact Information.—**Port Talbot can be contacted, as follows:

1. Telephone: 44-870-6096699 (UK only)
2. Facsimile: 44-1639-885172
3. E-mail: swansea@abports.co.uk

**Caution.—**A ground swell causes a heavy sea at the harbor entrance.

Several dangerous wrecks lie in the vicinity of the entrance channel and may best be seen on the chart.

## Swansea Bay to Barry

**7.39 Porthcawl** (51°28'N., 3°42'W.), a small resort town, is situated 2.5 miles SE of Sker Point. The coast between is low, rocky, and flat for up to 1 mile inland. The town is fronted by a small tidal harbor which is protected by breakwaters. Prominent buildings stand close W and 1.5 miles NW of the harbor. A conspicuous hotel stands 0.4 mile NW of the harbor. A conspicuous water tower stands at Newton Down, 3 miles E of Sker Point.

A small bay lies E of the harbor and is fronted by an extensive sandy drying foreshore. Tusker Rock, which dries, lies 1.7 miles SE of Porthcawl. This drying rock is located at the S edge of a shoal flat and is marked on its S side by a lighted buoy. Fairy Rock, awash, lies about 0.7 mile NW of Tusker Rock and is marked on its W side by a buoy.

**Nash Point** (51°24'N., 3°34'W.), located 7 miles SE of Porthcawl, is a prominent bluff. A conspicuous disused light tower stands close to the edge of the cliff, 0.2 mile SE of the point. A light is shown from a conspicuous tower, 37m high, standing on flat land, 0.4 mile ESE of the point at an elevation of 56m.

The coast extending up to 4.5 miles NW of the point consists of bold cliffs, 30 to 60m high, backed by higher land.

**7.40 Nash Sands** (51°25'N., 3°36'W.), composed of sand and gravel, extends WNW for 7.5 miles from a position lying 0.5 mile W of Nash Point. The W part of this bank has a least depth of 2.7m and the E part dries. It is marked at the W and E ends by lighted buoys and on the S side by a buoy. Nash Passage lies between the E end of the bank and a rocky ledge which fronts Nash Point. This channel is about 200m wide and has a least depth of 6.1m in the fairway.

**Caution.—**During the ebb tide, a very strong race occurs close off the outer breakwater at Porthcawl and attains a rate of 6 knots at springs.

Both tidal currents set obliquely, NW and SE, across Nash Sands. To the S of the sands, the currents set ESE and WNW at rates of up to 4 and 5 knots at springs and 3 knots at neaps.

*Courtesy of Jürgen Tronicke*

**Nash Light**

Nash Sands are subject to frequent change and should be given a wide berth.

**7.41 Breaksea Point** (51°23'N., 3°24'W.), located 6 miles ESE of Nash Point, is composed of low sandhills and forms the W side of the River Thaw, which is shallow. A ledge of limestone boulders and rocks, which dries, fronts the point and extends up to about 0.3 mile seaward.

A conspicuous chimney, 132m high, stands on the point and a light is shown from a low concrete tower standing offshore, 0.5 mile SSW of it. Four prominent chimneys stand near a cement works which is situated on the E bank of the river, 1 mile NNE of the point.

Saint Hilary radio mast, 229m high, stands on a hill, 4.5 miles N of the point, and is very conspicuous from seaward. An aeronautical lightbeacon is shown from this mast. Wenvoe

radio mast, 242m high, stands on a hill, 6.5 miles NE of the point, and is also conspicuous from seaward. An aeronautical lightbeacon is also shown from this mast.

**Rhoose Point** (51°23'N., 3°20'W.), located 2.5 miles E of Breaksea Point, is composed of limestone cliffs, 10m high. Conspicuous chimneys stand 0.3 mile N and 0.3 mile WNW of this point. A prominent radio mast, 28m high, stands at the airport, 1.2 miles N of the point.

Barry Island, connected with the mainland, lies 2.3 miles E of Rhoose Point. Barry Harbor is entered between this island and Cold Knap Point, 0.3 mile W. It is silted up and usable only by small boats at HW. A large resort-camp building stands on Nell's Point, the SE extremity of the island.

**Breaksea Light Buoy** (51°20'N., 3°19'W.), equipped with a racon, is moored about 3 miles SSE of Rhoose Point.

**Directions.—**The main channel fairway, for vessels transiting Bristol Channel, lies in the deep water to the N of Breaksea Light Buoy and to the N of One Fathom Bank. It then leads E and NE, passing SE of Flat Holm. A secondary channel, used by light-draft vessels not requiring a pilot, leads S of the light buoy and S of One Fathom Bank.

**Caution.—**Due to strong tidal currents and traffic congestion, vessels are strongly advised not to anchor within the pilot boarding ground located N of Breaksea Light Buoy.

An isolated shoal patch, with a least depth of 8.2m, lies about 0.5 mile SE of the lighted buoy.

Between Nash Point and Breaksea Point, the tidal currents set at rates of about 3 knots at springs. During the strength of the tide, considerable overfalls may be encountered off Breaksea Point.

## Barry (51°24'N., 3°16'W.)

World Port Index No. 34990

**7.42** The port of Barry lies between the NE side of Barry Island and the mainland. It consists of two wet docks which may be entered through a lock and a tidal basin. Barry and Cardiff are jointly administered from Cardiff.

**Port of Barry Home Page**

http://www.abports.co.uk/custinfo/ports/barry.htm

**Tides—Currents.—**The tides rise about 10.5m at springs and 4.9m at neaps.

Tidal information is available on request.

**Depths—Limitations.—**The entrance between the breakwater heads is 107m wide. A tidal basin lies close within the heads and the entrances to the wet docks are situated in its NW part. Several yacht and small craft moorings lie on the W side of this tidal basin.

A channel, with a least depth of 2m, leads into the harbor and through the tidal basin. There are two entrances to the wet docks. Lady Windsor Lock, which is generally used, and No. 3 Dock Basin which is used in the event of a breakdown of the lock or in the case of a vessel which is too large for the lock.

Lady Windsor Lock is 197m long, 19.8m wide, and has an average depth of 12.2m over the outer sill at HW. No. 3 Dock Basin provides an entrance which is 183m long, 24.3m wide, and has an average depth of 9.4m over the sill at HW.

No. 1 Dock has 1,580m of total berthing space with a least depth of 9.2m alongside. No. 2 Dock has 2,838m of total berthing space with a least depth of 9.2m alongside. In addition, No. 3 Dock Basin has 622m of berthing space. There are facilities for general cargo, ro-ro, tanker, chemical, refrigerated, and LPG vessels within the port. Vessels of up to 27,000 dwt, 178m in length, 22.9m beam, and 9m draft can be accommodated in the harbor.

**Aspect.—**Merkur Lighted Buoy, which marks several wrecks, is moored 1.6 miles SSW of the port entrance; vessels should pass to the S and E of it. A prominent light tower, 9m high, stands on the head of the W breakwater.

**Pilotage.—**Pilotage is compulsory for all vessels or tows over 85m in length and for all vessels over 20m in length carrying 12 or more passengers, explosives, or dangerous or noxious substances.

Vessels should send an ETA at Breaksea Lighted Buoy at least 24 hours in advance. The pilots can be contacted on VHF channel 6. Contact should be established with the pilots no later than 3 hours prior to arrival at the boarding location.

The pilots board, as follows:

1. Vessels with a draft of 12.5m or over—position 51°20.9'N, 3°23.3'W.
2. Vessels with a draft of less than 12.5m—position 51°20.9'N, 3°19.0'W.
3. Alternate area when advised by the harbor authority—position 51°21.5'N, 3°15.5'W.

The pilot boarding areas are contained within a prohibited anchorage area.

**Regulations.—**Vessels should request permission from Barry Radio on VHF channel 11 before:

1. Approaching or passing through the entrance to the breakwaters.
2. Sailing from any berth within Barry Docks.

**Contact Information.—**Barry Port can be contacted, as follows:

1. Telephone: 44-870-6096699(UK only)
2. Facsimile: 44-1446-700100
3. E-mail: barry@abports.co.uk

**Anchorage.—**During moderate weather, anchorage can be taken within Barry Roads. A good berth lies in depths of 7 to 10m, gravel and clay, about 0.5 mile SE of the entrance to the port. Anchorage may also be taken off Breaksea Point, but vessels must remain clear of the approach to the pilot boarding place.

Explosive Anchorage Areas, the limits of which are shown on the chart, lie centered 1.8 miles SSW, 3.5 miles ESE, and 4 miles SE of the port entrance. Vessels intending to load or unload explosives in these anchorage areas must inform the port authority 48 hours, or as soon as practicable, in advance.

**Caution.—**Several dangerous wrecks, which may best be seen on the chart, lie in the vicinity of Barry Roads and the designated anchorage areas. In addition, numerous wrecks lie in the approaches to the port.

An outfall pipeline, marked by a lighted buoy, extends 1.1 miles SSE from the W side of Barry Harbor. Another outfall pipeline extends 0.5 mile SE from a point on the shore, close E of the port entrance.

Vessels navigating in Barry Roads should give the port entrance a wide berth.

Flat Holm

## Wales—South Coast—Barry to Cardiff

**7.43 Lavernock Point** (51°24'N., 3°10'W.), located 3.5 miles E of Barry, consists of a prominent cliff, 15m high. A small church, with a belfry, stands on the point. The coast between is bordered by low cliffs and rounded slopes. Sully Island lies 0.3 mile offshore, 1.2 miles WSW of Lavernock Point. It stands out conspicuously, although it is only 16m high, and is connected to the coast by a rocky ledge which dries.

A coastal bank, fringed in places with detached patches, extends about 1.5 miles seaward from shore between Rhoose Point and Lavernock Point, and has depths of 7 to 10m. Patches of foul ground and several wrecks lie on this bank and the bottom is very uneven. Sully Ledge, with a least depth of 6.4m, lies within this coastal bank, about 1.7 miles SW of Sully Island. Alldridge Shoal, with a least depth of 5.8m, lies about 0.5 mile SSE of Sully Island and several patches, with depths of 4 to 6m, lie between it and Sully Ledge.

Lavernock Spit, with a least depth of 2.7m, extends SSW for about 1.5 miles from Lavernock Point and is marked by a lighted buoy. Ranny Spit, marked by a lighted buoy, is the E extremity of an area of shoal ground which extends about 0.5 mile E from Lavernock Point. This area is steep-to on its E side and composed of stones, which dry in places.

**Penarth Head** (51°27'N., 3°10'W.), 65m high, is located 2 miles N of Lavernock Point. The shore between consists mostly of rocky ledges and stones which are fringed by drying sands. The nearly perpendicular cliff, which forms the head, is veined by gypsum and a church, with a conspicuous tower, stands on the summit. A pier, about 200m long, extends seaward from a point on the shore 0.3 mile S of the head.

The coast to the N of Penarth Head recedes to form the low and marshy estuary of the River Ely and the River Taff. The port of Cardiff lies on the N side of this estuary.

Penarth Harbor, consisting of a wet basin, lies at the mouth of the River Ely and is no longer used by commercial shipping. The basin contains a marina, with extensive facilities for yachts, and is entered through a lock.

**7.44 Off-lying dangers.—One Fathom Bank** (51°21'N., 3°12'W.), with a least depth of 6.7m, lies centered 4 miles SW of Lavernock Point. It is composed of sand and gravel and marked by a lighted buoy. The depths over this bank are subject to constant change due to dredging and tidal actions. A detached shoal, with a least depth of 7.6m, lies about 0.5 mile E of the E end of One Fathom Bank. In addition, several isolated patches, with depths of less than 10m, lie between One Fathom Bank and Breaksea Lightfloat.

**Fairway Shoals** (51°22'N., 3°10'W.), a shoal bank, lies about 2 miles S of Lavernock Point. It has a least depth of 4.1m and is composed of sand and rock.

**Flat Holm** (51°23'N., 3°07'W.), 26m high, lies 2.5 miles SE of Lavernock Point. Several prominent buildings stand on the N side of this island and a light is shown at an elevation of 50m from a conspicuous tower, 30m high, standing on the SE side.

Rocky ledges, which dry, front the shores of the island and a bank, with a least depth of 2.7m, extends up to about 0.5 mile W from the W side.

Mackenzie Shoal, with depths of less than 5m, extends up to 1.3 miles SW from the SW side of Flat Holm and is marked by a lighted buoy. New Patch, with a least depth of 2.7m, lies about 0.4 mile NE of Flat Holm. An extensive bank of uneven ground, with depths of less than 9m, extends NE from the vicinity of New Patch and forms the W side of the main channel leading to Newport and Avonmouth.

Tail Patch, with a least depth of 2.7m, lies about 3.2 miles E of Flat Holm. This shoal patch is marked by a lighted buoy and is located near the outer edge of the coastal bank which extends up to 3 miles seaward from the S shore of Bristol Channel.

The Wolves, consisting of three rocky drying heads, lies about 1 mile NW of Flat Holm and is marked by a lighted buoy.

Flat Holm Shelf, a rocky shoal, lies about 0.3 mile NW of Flat Holm and has a least depth of 2.9m. A narrow passage, with a least depth of 9.1m, leads between this shoal and The Wolves.

Centre Ledge, with a least depth of 3.3m, lies 1.3 miles N of Flat Holm. It is located at the NE end of a bank which extends NE from The Wolves and has depths of less than 9m.

**Monkstone** (51°25'N., 3°06'W.), a drying rock, lies 2.3 miles NNE of Flat Holm, near the edge of the coastal bank. A light is shown from a conspicuous tower, 13m high, standing on this rock.

Steep Holm, lying 2.2 miles S of Flat Holm, has previously been described with the S coast of Bristol Channel in paragraph 7.22.

Cardiff Grounds, a bank, dries and is constantly changing. It lies nearly parallel to the coast and extends NNE for about 3.5 miles from a position located 1.2 miles E of Lavernock Point. This bank is hook-shaped and its N end curves S to within 1 mile of Monkstone. Lighted buoys are moored off the NE and SW ends of the bank and off the middle of the NW side.

## Cardiff (51°27'N., 3°10'W.)

World Port Index No. 35010

**7.45** The port of Cardiff lies at the E side of the mouth of the River Taff and consists of several large wet docks which can be entered via a lock. The entrance lock is 260m long and 27.5m wide. Entry to these docks is restricted to a period of 4 hours before and 3 hours after HW. The port can be contacted during tidal hours on VHF channels 68, 09, and 13 (call sign: Cardiff Radio).

**Port of Cardiff Home Page**

http://www.abports.co.uk

**Tides—Currents.—**The tides rise about 11.1m at springs and 5.1m at neaps.

Off Lavernock Point, the flood current sets E at a rate of 4.5 knots. Vessels intending to useots and the ebb current sets W at a rate of 5 knots. These currents usually cause a considerable overfall in this vicinity.

In Cardiff Roads, the flood current sets NE at a rate of 1.5 knots at springs and 1 knot at neaps. The ebb current sets SW at a rate of 2.5 knots at springs and 1.5 knots at neaps.

**Depths—Limitations.—**An entrance channel leads through the flats fronting the estuary to the harbor entrance. The depth of this channel is subject to change; for the latest info the Harbormaster should be contacted.

Queen Alexandra Dock is entered through a sea lock, 259m long and 27.4m wide, which has depths over the outer sill of 12.8m at springs and 9.9m at neaps. The dock has 2,188m of total berthage and a normal depth of 11.75m. Vessels up to 198m in length, 27m beam, and 10m draft can enter Queen Alexandra Dock, subject to Harbormaster approval.

Roath Dock has 1,402m of total berthage and a normal depth of 11.75m. It is entered from Queen Alexandra Dock through a passage which is 27.4m wide and has a depth of 10.4m over the sill. Vessels up to 198m in length, 25.7m beam, and 10m draft can enter Roath Dock, subject to Harbormaster approval.

Roath Basin is 190m long and has a normal depth of 11.3m. It is entered from Roath Dock through an inner lock which is 183m long, 24.4m wide, and has a depth of 10.3m over the sill. Vessels of up to 173.7m in length, 22.8m beam, and 7.3m draft can enter this basin.

The passage which connects the wet docks and the inner lock is both spanned by swing bridges. Roath Basin can also be entered through a sea lock which is 105m long, 24.4m wide, and has a depth of 10.7m over the sill at springs. It is reported that this lock is not normally used.

There are facilities for general cargo, ro-ro, bulk, container, passenger, and tanker vessels.

**Aspect.—**A conspicuous building, 101m high, stands 2 miles NNW of the outer lock entrance and a prominent silo stands at the NE end of Roath Dock. A prominent group of oil tanks is situated on the SE side of the outer lock. The approach channel is marked by lighted buoys and indicated by a sectored light which may best be seen on the chart.

**Pilotage.—**Pilotage is compulsory for all vessels and tows over 85m in length and for all vessels over 20m in length carrying 12 or more passengers, explosives, or dangerous or noxious substances.

Vessels should send an ETA at Breaksea Lighted Buoy at least 24 hours in advance. The pilots can be contacted on VHF channel 6. Contact should be established with the pilots no later than 2 hour prior to arrival at the boarding location.

The pilots board, as follows:

1. Vessels with a draft of 12.5m or over—position 51°20.9'N, 3°23.3'W.
2. Vessels with a draft of less than 12.5m—position 51°20.9'N, 3°19.0'W.
3. Alternate area when advised by the harbor authority—position 51°21.5'N, 3°15.5'W.

The pilot boarding areas are contained within a prohibited anchorage area.

**Regulations.—**All vessels entering Cardiff Docks should contact Cardiff Radio on VHF channel 68, as follows:

1. On passing position 51°24.2'N., 3°09.0'W.
2. Before arrival at Outer Wrach Lighted Buoy to await docking instructions.
3. Vessels intending to use the Barrage Seaward Approach Channel should proceed to Outer Wrach Lighted Buoy and call Barrage Control on VHF channel 18 for locking information.

**Contact Information.—**Cardiff Port Authority can be contacted, as fellows:

1. Telephone: 44-870-6096699 (UK only)
2. Facsimile: 44-29-20835001
3. E-mail: cardiff@abports.co.uk

**Anchorage.—**The outer anchorage roadstead lies between Centre Ledge and Monkstone Rock. It has depths of 11 to 15m; the bottom is rocky in places. Less water was reported (1999) in the N part of this roadstead. Anchorage can be affected by the strong tidal currents.

Good anchorage, in depths of 10 to 18m, can also be taken about 0.5 mile SE of Centre Ledge. For suitable vessels, a small anchorage area lies between Flat Holm and New Patch.

Cardiff Roads and Penath Roads, lying on the NW side of Cardiff Grounds, afford sheltered anchorage, in a limited space, in depths of 6 to 10m. The S entrance to this roadstead leads over a sand bar, with a least depth of 4.1m, and several shallow wrecks lie at its E side.

Anchorage in the approach channel is prohibited.

**Directions.—**The port should be approached via the fairway which leads N of One Fathom Bank, NW of Fairway Shoals and The Wolves, and then N between Ranny Spit and the SW end of Cardiff Grounds. Vessels may also approach from the E via the fairway which leads between Centre Ledge and New Patch and then turns N.

**Caution.—**A very strong flood current sets NE across the passage leading between Ranny Spit and the SW end of Cardiff Grounds. Care is necessary to avoid being swept towards the shoal banks in this vicinity.

## Wales—South Coast—Cardiff to Newport

**7.46** **Peterstone Flats** (51°30'N., 3°02'W.) are the continuation of the shallow flats which extend NE from Cardiff Grounds. These flats occupy the whole of the N side of the approach to Newport and extend up to 2.5 miles offshore.

A bank, with depths of less than 5m, extends up to about 4 miles offshore and fronts the entire stretch of coast between Cardiff and Newport. This stretch of coast is backed by low and level ground for a considerable distance inland and is protected by embankments.

**Welsh Hook** (51°31'N., 2°55'W.), a spit, lies off the SE side of the entrance to Newport and dries up to 4.3m. Usk Patch, which dries up to 2.2m, lies at the W extremity of this spit and forms the E side of the channel which leads NE and NNW across the flats to the mouth of the River Usk.

**E & W Grounds Lighted Buoy** (51°27'N., 3°00'W.), equipped with a racon, is moored 4.2 miles NE of Monkstone. It marks the main channel at a junction, known as The Bridge, where the fairway divides into two branches, Newport Deep and Bristol Deep.

Newport Deep passes along the E side of Peterstone Flats and leads N to Newport. Bristol Deep leads E to the port of Bristol.

**Caution.—**Several dangerous wrecks lie within 1.5 miles of E & W Grounds Lighted Buoy and may best be seen on the chart.

Depths in the vicinity of The Bridge are constantly changing and care should be taken when navigating in this area.

Several outfall pipelines, marked by buoys, extend up to 0.7 mile seaward from the stretch of shore lying between Cardiff and Newport.

## Newport (51°33'N., 2°59'W.)

World Port Index No. 35015

**7.47** The port of Newport lies within the mouth of the River Usk and includes two large wet docks, which are entered through a lock, and several river berths which dry. Newport Docks is entered through a sea lock 305m long and 30.5m wide during a period of 4 hours before and 4 hours after HW. Vessels entering the port should establish contact on VHF channels 71 and 69.

**Port of Newport Home Page**

http://www.abports.co.uk/custinfo/ports/newport.htm

**Tides—Currents.—**The tide rises about 11.7m at springs and 5.8m at neaps. The flood current attains a rate of about 3 knots in the river.

**Depths—Limitations.—**A shallow entrance channel leads over the flats and into the lock. It has depths 0.7m below charted datum, but less water may be encountered. The Harbormaster should be contacted for the latest depth information. The lock is 305m long and 30.4m wide.

An overhead power cable spans the mouth of the river at Fifoots Point (52°32.8'N., 2°58.8'W.). It has a safe vertical clearance of 56m.

Alexandra South Dock, which is entered via the lock, normally has a depth of 11.1m. Alexandra North Dock normally has a depth of 8.2m and is entered from Alexandra South Dock through a passage, 17.4m wide. These two wet docks provide 8,019m of total berthing space and have facilities for container, general cargo, reefer, timber, bulk, and ro-ro vessels. The maximum size vessel that can be accommodated is 244m long, 30m beam, and 10.4m draft.

Bellport, a former dry dock, is entered at the E side of the river, 2 miles above the entrance. A private container wharf, 213m long, is situated in the dock and has depths alongside of 8.5m at springs and 5.2m at neaps. Vessels of up to 2,200 dwt can be handled.

Several more small wharves, with depths of 7 to 10m alongside at springs, are situated along the river as far as Newport Bridge, 3.5 miles above the entrance.

**Aspect.—**A power station with three conspicuous chimneys, the tallest being 133m high, stands on the E side of the river entrance. The conspicuous pylons of the overhead power cable are 115m high and stand on each side of the river entrance. A sector light, indicating the approach channel, is shown from a prominent tower, 11m high, standing 0.9 mile SE of the entrance to the lock. The fairway of the entrance channel is marked by lighted buoys.

**Pilotage.—**Pilotage is compulsory for all vessels or tows over 85m in length and for all vessels over 20m in length carrying 12 or more passengers, explosives, or dangerous or noxious substances.

Vessels should send an ETA at Breaksea Lighted Buoy at least 24 hours in advance. The pilots can be contacted on VHF channel 6. Contact should be established with the pilots no later than 2 hour prior to arrival at the boarding location.

The pilots board, as follows:

1. Vessels with a draft of 12.5m or more—position 51°20.9'N, 3°23.3'W.
2. Vessels with a draft of less than 12.5m—position 51°20.9'N, 3°19.0'W.
3. Alternate area when advised by the harbor authority—position 51°21.5'N, 3°15.5'W.

The pilot boarding areas are contained within a prohibited anchorage area.

**Regulations.—**Vessels over 50 gt and all vessels carrying fare-paying passengers should contact Newport Radio on VHF channel 71 at least 1 hour before arrival at Newport Deep Lighted Buoy, on passing West Usk Lighted Buoy, on passing Newport Pier Head (for vessels bound for river wharves), Newport Lock, and on arrival at the berth. Complete reporting instructions are found in paragraph 7.12.

Vessels navigating the River Usk and wishing to pass the transporter bridge must contact Newport Radio.

**Contact Information.—**Newport Radio can be contacted, as follows:

1. Telephone: 44-870-6096699 (UK only)
   44-1633-204451
2. Facsimile: 44-1633-221285
3. E-mail: newport@abports.co.uk

**Anchorage.—**Newport Deep, extending N of E & W Grounds Lighted Buoy, provides good anchorage, in depths of 6 to 9m. The holding ground is thick clay and mud, and the tidal currents are not strong. Deep draft vessels may anchor at Barry Roads, in deep water anchorage while awaiting berth at Newport.

**Caution.—**A transporter bridge, with a vertical clearance of 54m, spans the river, 2.5 miles above the entrance.

A road bridge, with a vertical clearance of 13m under the center of the arch, spans the river, 3.5 miles above the entrance.

Several submarine pipelines and cables lie across the river and can best be seen on the chart.

Two power cables, with vertical clearances of 53m, span the river close S of the transporter bridge.

## Head of Bristol Channel

**7.48 English Grounds** (51°26'N., 2°57'W.), which include Clevedon Flats, fronts the S shore between Sand Point and Clevedon, 5.5 miles NE. This bank extends up to about 3.5 miles offshore and has depths of less than 5m, with a considerable part of it drying. North West Elbow and North Elbow, the NW and N edges of the bank, are marked by lighted buoys which are moored on the S side of the main fairway channel.

**Welsh Grounds** (51°31'N., 2°52'W.) fronts the low-lying N shore between Gold Cliff, located 3 miles E of Newport, and Sudbrook Point, 7 miles NE. This bank extends S for about 3 miles from the shore. Middle Grounds is composed of West Middle and North Middle Ground and forms the SW extension of Welsh Grounds.

Bristol Deep, the main fairway channel, lies between English Grounds and Welsh Grounds and leads E and NE to Bristol. The Bridge, the junction of Bristol Deep and Newport Deep, lies close SW of West Middle Ground.

**Denny Island** (51°32'N., 2°47'W.), a conspicuous rock, 6m high, lies on the SE side of Welsh Grounds.

Denny Shoal, a large portion of which dries, lies 1.7 miles SE of Denny Island on the N side of the approach to the River Avon.

**7.49 Black Nore Point** (51°29'N., 2°48'W.) is located 9 miles NE of Sand Point. A disused light, 11m high, stands on this point and the prominent tower of a school is situated close S of it.

Two conspicuous radio masts, which can be seen from a considerable distance, stand 0.5 mile inland, 4.5 miles SW of the point.

Portishead Point, marked by a light, is located 1.2 miles NE of Black Nore Point. A conspicuous building stands 0.7 mile SSW of this point.

Portishead Dock, which is entered through a lock, lies 0.5 mile E of the point. It has been converted to a marina and has no commercial importance.

The mouth of the River Avon lies 2 miles NE of Portishead Point.

**Caution.—**Spoil ground areas, which may best be seen on the chart, lie close E and 0.7 mile SE of Denny Island.

Welsh Grounds and the banks extending W from it dry to considerable heights and are constantly changing. These banks are composed of sand which is hard and firm during the falling tide, but becomes unstable when the tide starts to rise.

Denny Shoal is subject to frequent changes. At times, this shoal has moved S and encroached into the fairway channel.

Vessels approaching the head of Bristol Channel should remember that many of the dangers bordering the fairway, which appear formidable on the chart, disappear as such with the considerable rise of tide.

Three disused oil berths, with abandoned submarine pipelines, lie within Redcliff Bay, which is entered 0.5 mile SW of Black Nore Point.

## Bristol (51°30'N., 2°42'W.)

World Port Index No. 35070

**7.50** The Port of Bristol includes the Royal Portbury Dock, Avonmouth Docks, the River Avon, and the Bristol City Docks. The City of Bristol is centered on the NE bank of the river about 7 miles above the entrance. Vessels should contact Avonmouth Radio on VHF channel 14.

**Port of Bristol Home Page**

http://www.bristolport.co.uk

**Tides—Currents.—**The tides at Avonmouth rise about 12.2m at springs and 6m at neaps.

In the vicinity of the E & W Grounds Lighted Buoy, the flood tidal current divides, partly taking an E course into Bristol Deep and partly taking a NE course into Newport Deep. The ebb currents from these channels unite in the same area.

The flood and ebb currents attain maximum rates of 4 knots at springs and 2.5 knots at neaps. In King Road, the flood current attains a maximum rate of 5 knots at springs and the ebb a rate of 4 knots. Eddies are sometimes formed off Portishead Point during the flood current.

**Depths—Limitations.—**Bristol City Docks, which are entered 6 miles above the river mouth, are generally no longer used by commercial shipping. Marinas, with extensive facilities for pleasure craft and yachts, are situated within these docks.

Avonmouth Docks lie on the NE side of the river mouth and are entered through a lock which is 266.7m long and 30.5m wide, with depths over the sill of 13.9m at springs and 10.5m at neaps. The dock has 3,755m of total quayage, with depths of 8.5 to 11m. An oil basin lies at the NW side of this wet dock. Except when vessels are entering or leaving, this basin is closed at its entrance by a movable oil boom in order to retain any spillage. Vessels of up to 210m in length, 30.1m in width, and a draft of 11m can be accommodated in this dock.

Royal Portbury Dock lies on the SW side of the river mouth. It is entered through a lock which is 365.7m long, 42.7m wide, and has depths on the outer sill of 17.7m at springs and 14.5m at neaps. This wet dock has 2,074m of total quayage and depths of 14.5m, although depths may be less due to silting. Vessels of up to 300m in length, 41m in width, and a draft of 14.5m can be accommodated in this dock.

The port includes facilities for ro-ro, container, general cargo, bulk, timber, tanker, and LPG vessels.

**Aspect.—**Conspicuous chimneys stand 0.3 and 0.7 mile ESE of the N end of Royal Edward Dock. Several conspicuous silos stand at a molasses terminal situated 0.3 mile ESE of the SE corner of Royal Portbury Dock. A group of white spherical tanks standing 0.2 mile N of the N end of Royal Edward Dock is conspicuous. In addition, numerous prominent grain silos and tanks stand in the vicinity of Avonmouth Docks.

A prominent overhead conveyor system is situated at the SE side of Royal Portbury Dock. A prominent signal station, with a radar mast, stands on the N side of the lock entrance at Avonmouth Docks. The Avonmouth Bridge spans the river 1.5 miles above the entrance.

**The Severn Bridge**

Several lighted ranges aid vessels in their approaches to the lock entrances and may best be seen on the chart.

**Pilotage.—**Pilotage is compulsory for vessels of 85m or more in length, vessels carrying dangerous substances in bulk, tows where the length of the vessel(s) towed is 50m or more, vessels carrying explosives of 1 metric ton or more in quantity, and all passenger vessels.

Pilots are provided by the Bristol Pilotage Service and can be contacted by VHF channel 6. The pilots board, as follows:

1. Vessels with a draft of 12.5m or more—position 51°20.9'N., 3°23.3'W.
2. Vessels with a draft of less than 12.5m—position 51°20.9'N., 3°19.0'W
3. Alternate area when advised by the harbor authority—position 51°21.5'N., 3°15.5'W.

The pilot boarding areas are contained within a prohibited anchorage area.

Vessels should send an ETA at least 10 hours in advance for arrival at the boarding area N of Breaksea Light Buoy. Vessels should then establish contact with the pilot station by VHF channel 6, 1 hour before arrival at the boarding place.

**Vessel Traffic Service.—**The Port of Bristol maintains a Vessel Traffic Service (VTS). See paragraph 7.12 for details.

**Contact Information.—**See paragraph 7.12 for details.

**Anchorage.—**Newport Deep, extending N of E & W Grounds Lighted Buoy, provides good anchorage, in depths of 6 to 9m. The holding ground is thick clay and mud, the tidal currents are not strong, and there is little sea. Deeper water may be found nearer to the lighted buoy.

**Directions.—**Bristol Deep lies between English Grounds and Welsh grounds and extends E and NE to the vicinity of Portishead Point. King Road extends between Portishead Point and the mouth of the River Avon. This channel is bounded on its N side by Welsh Grounds and Denny Shoal.

**Caution.—**The fairway channel leading through King Road is constantly changing and extreme care should be taken when navigating in this area.

A prohibited anchorage area, the limits of which are shown on the chart, lies within King Road and the approaches to the locks.

## The River Severn

**7.51** The River Severn, which is about 220 miles long, is the second largest river in England. The small ports of Chepstow, Lydney, and Gloucester, with the latter including Sharpness, lie along this river. The River Wye flows into the NW side of the River Severn, 7 miles above Avonmouth Docks; both rivers are spanned by the Severn Bridge, a large suspension road bridge. This bridge has vertical clearances of 34m over the River Severn and 13m over the River Wye. An overhead power cable spans both rivers close S of the bridge and has vertical clearances of 39m over the River Severn and 16m over the River Wye.

The Second Severn Crossing Bridge, with a vertical clearance of 35m, spans the River Severn about 2.5 miles S of the Severn Bridge. All traffic must pass between the main supports. Mariners should be aware that on certain angles of approach to the Second Severn Crossing Bridge, both visual and radar navigation may be affected by “blind sectors” caused by the bridge structures.

A bar extends between the shoal banks and across the main

channel of the river. It lies about 0.5 mile N of the entrance to Avonmouth Docks and has a least depth of 3.9m. A channel, 6.5 miles long, leads between the extensive drying banks which front the shores, to the Severn Bridge. Above the bridge, the main channel is encumbered by banks, rocky shelves, and patches which dry up to 1.5m in places. The River Severn is navigable by commercial vessels as far as Sharpness, 8.5 miles above the bridge. Above Sharpness, navigation is not suitable by other than small craft at HW.

**Tides—Currents.—**The tides off Sharpness rise about 9.3m at springs and 5.8m at neaps.

In the vicinity of the Severn Bridge, the tidal currents attain maximum rates of 7 knots at springs and 3 knots at neaps. Off the entrance to Sharpness, the flood tidal current attains a maximum rate of 6 knots at springs while the ebb current attains a rate of 4 knots.

The River Severn is subject to a bore which usually commences about 2 miles above Sharpness. It is not considered dangerous to boats provided that they are afloat in the middle of the river. Under favorable conditions, this bore can reach a height of 2m and attain a rate of 1.3 knots.

**Caution.—**Due to the shifting nature of the sands and the strength of the tidal currents, vessels should not attempt to navigate above Avonmouth Docks without local knowledge or the services of a pilot.

**7.52** The **River Wye** (51°37'N., 2°40'W.) discharges into the River Severn at Beachley Point. Chepstow is situated 2 miles above the river entrance where a railroad bridge spans the river. Two overhead cables, with a minimum vertical clearance of 16.8m, span this river between Chepstow and the Severn Bridge.

At Chepstow, there are depths in the river of 14m at MHWS and 10.9m at MHWN. There are two wharves which can accommodate vessels of up to 900 dwt, 60m in length, 9m beam, and 4.3m draft. It was reported (1993) that these wharves were in a state of disrepair.

**Lydney Harbor** (51°43'N., 2°30'W.) lies on the W bank of the River Severn, 8 miles above the mouth of the River Wye. The town stands NW of the harbor and 1 mile inland. The harbor consists of a tidal basin and two wet docks. The basin is 82m long and has an entrance, 10.1m wide. The lower wet dock, which is 238m long and 32m wide, is entered from the basin by a lock, 7.3m wide. The upper wet dock, which is 259m long and 26.8m wide, is entered from the lower dock by a canal. This canal is 0.6 mile long and 22m wide.

The lock has a depth of 4m over the upper sill, the lower dock has a depth of 3.9m, and the upper dock has a depth of 3.6m. Vessels too large to enter via the lock can use the combination of the tidal basin and the lock.

It was reported (2005) that the harbor facilities have been refurbished to working order. The harbor is reported to be rarely used by commercial vessels, with most traffic being yachts and small craft.

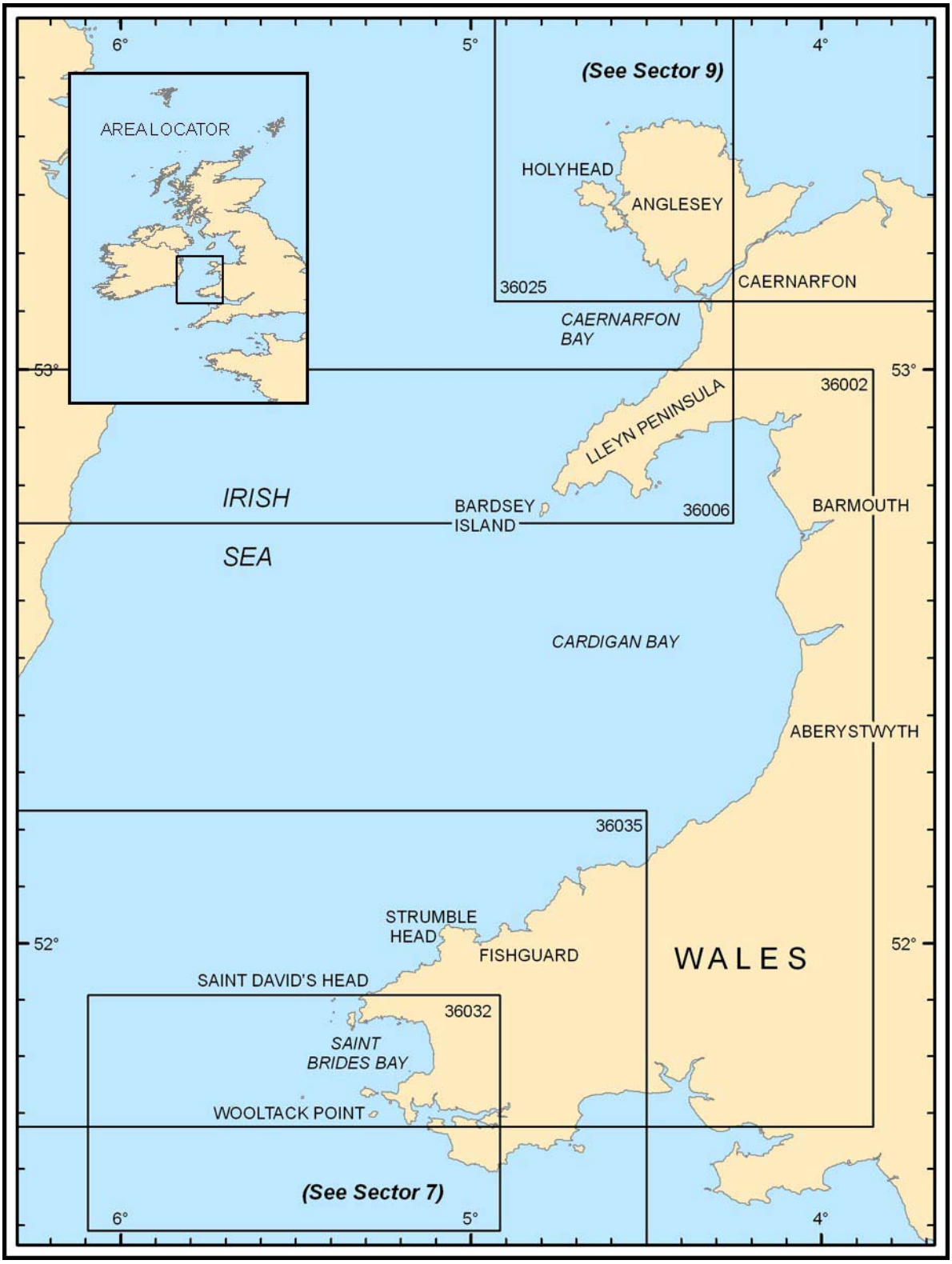
**7.53** **Sharpness** (51°43'N., 2°29'W.) lies on the SE side of the river opposite Lydney Harbor. This harbor consists of a tidal basin and a wet dock. The Port of Gloucester includes the wet docks at Sharpness and at Gloucester which are connected by the Gloucester and Sharpness Canal.

Entry to the wet dock at Sharpness is via a tidal basin and a lock. The tidal basin entrance, which is 17.4m wide and protected by two piers, has a depth of 8.8m over the sill at MHWS. The basin is 166m long and 76m wide. It is used as a lock when vessels exceeding 91m in length are being docked.

The lock, which is entered from the tidal basin, is 97.5m long, 17.4m wide, and has a depth of 6.7m over the upper sill. The wet dock has 4,000m of quayage and a depth of 6.7m (fresh water). There are facilities for ro-ro, general cargo, bulk, and container vessels. In addition, a marina is situated within the wet dock. Vessels of up to 8,000 dwt, 16.7m beam, and 6.5m draft can be accommodated on suitable tides.

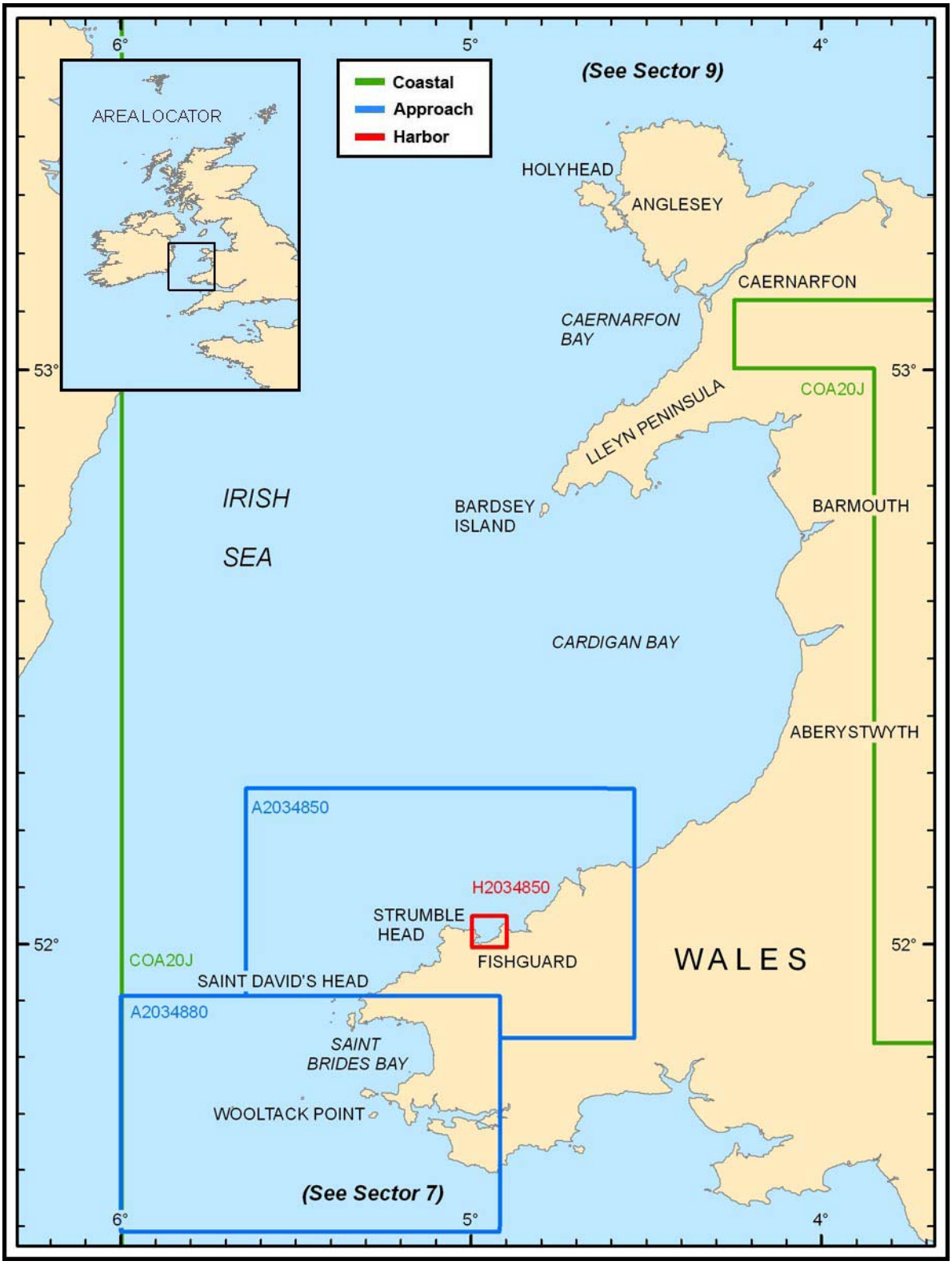
**The Gloucester and Sharpness Canal** (51°43'N., 2°29'W.), which is 16.5 miles long, has an average width of 26.2m and depths of 3.6 to 4.2m. The minimum width of the canal is 10.4m between the masonry piers of the narrowest bridge. It is spanned by several swing bridges, with a minimum vertical clearance of 32m. Vessels not exceeding 64m in length, 10m beam, and 3.5m draft can navigate the canal. The wet dock at Gloucester has 3,000m of quayage, but is only used by small craft and barges and is reported (1993) to be no longer open to commercial traffic.

**Pilotage.—**Pilotage for Sharpness is compulsory for vessels 30m loa and over, vessels carrying dangerous or polluting cargo, and vessels carrying more than 12 passengers. Vessels should send an ETA at least 24 hours in advance. Pilots can be contacted on VHF channel 6 and board from launches, operated from Barry, about 1 mile N of Breaksea Lighted Buoy.




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

SECTOR **8** — CHART INFORMATION

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SECTOR 8 — DNC LIBRARY INFORMATION

# SECTOR 8

## WEST COAST OF WALES—WOOLTACK POINT TO HOLYHEAD BAY

**Plan.—**This sector describes the W coast of Wales from Wooltack Point to Carmel Head and includes Holyhead Bay, the E side of Saint George's Channel, Cardigan Bay, and Caernarfon Bay.

### Wooltack Point to St. David's Head

**8.1 Saint Brides Bay** (51°49'N., 5°13'W.) lies N of Wooltack Point and is entered between Skomer Island, previously described in paragraph 7.24, and Ramsey Island, 6.5 miles N. It is free from dangers except near the N and S shores. The sea bed is formed of mainly fine sand and mud with excellent holding ground, but the bay is much exposed to provide anything but temporary anchorage. Small craft may take anchorage, sheltered from S winds, in a depth of 6m, within Goultrop Roads, at the SE corner of the bay; however, anchorage is not advised in this area during W winds.

Stack Rocks, 23m high, lie 0.5 mile offshore, 3.7 miles NE of Wooltack Point. Hand Marks, a rocky bank, lies l.2 miles W of Stack Rocks and has a least depth of 9.1m.

**Solva** (51°52'N., 5°12'W.), a small harbor, lies on the N side of the bay. It is suitable only for small craft which can take the bottom at LW. The harbor mostly dries and a small wharf on the N side has a depth of 5m alongside at HWS. The entrance channel is indicated by range beacons, divided by Black Rock, an islet, which is fronted by drying rocks on its W side. St. Elvis Rock, another small islet, lies close W of the E entrance point of the harbor. The Mare, an above-water rock, lies 0.5 mile S of Black Rock and Greenscar, a grass-topped islet, lies close W of it and is 33m high. Black Scar, another small islet, lies 0.2 mile WSW of Greenscar and rocky ground extends about 0.5 mile SW from it.

Anchorage can be taken, in a depth of 13m, between Greenscar and the entrance to the harbor, but this roadstead is subject to a heavy SW swell after W storms.

In Saint Brides Bay, the tidal currents are not strong, but both N and S currents outside the bay sweep round it and cause a constant W set out of the bay, either on its N side or the S side.

**Caution.—**A Research Area, the limits of which are shown on the chart, lies within Saint Brides Bay. Oceanographic instruments may be found in this area and vessels are cautioned against anchoring within it.

**8.2 Ramsey Island** (51°52'N., 5°20'W.) is surrounded by high and precipitous cliffs except at a small bay which indents its W side. Carn Llundain, 134m high, rises on the SW side of the island and is the highest peak. Carnysgubor, 95m high, stands near the NW extremity of the island and is also prominent. Several small islets and rocks lie up to 1 mile S of the island.

Ramsey Sound lies between Ramsey Island and the mainland. This channel has deep water, but the bottom is very irregular. The fairway has a least width of 0.2 mile abreast The Bitches, a rocky ledge, which extends from the E side of the island. The sound can be used by vessels with local knowledge, but the passage to the W of Ramsey Island is preferred.

**Bishops and Clerks** (51°52'N., 5°24'W.) are a group of islets and rocks which extend up to 2.5 miles W and NW of Ramsey Island.

South Bishop, fronted by sunken rocks, is the SW islet of the group. A light is shown from a conspicuous tower, 44m high, standing on this islet. A radiobeacon is situated at the light.

Daufraich, a flat islet, lies 0.7 mile NE of South Bishop. Drying rocks lie up to 0.5 mile NE of this islet and there are heavy overfalls and tide rips in their vicinity. Llech Isaf, lying 0.5 mile W of Ramsey Island, dries 3.7m. Llech Uchaf, located 0.4 mile N of Llech Isaf, is 1.5m high. Several areas of foul and uneven ground, with heavy overfalls, lie in the vicinity of these rocks.

Carreg Rhoson lies on a narrow ridge 1.7 miles NNE of South Bishop. High rocks extend SW and NE of this islet and overfalls occur in their vicinity.

North Bishop, fronted by high rocks and foul ground, is the NW islet of the group. It is 38m high and lies 2.3 miles NW of the N extremity of Ramsey Island.

Carreg-Trai, a group of drying rocks, lies 1.2 miles E of North Bishop and is generally indicated by breakers.

There are navigable channels through the Bishops and Clerks, but none should be attempted at night, in low visibility, or without local knowledge. The best channel, although narrower than some, leads between the W coast of Ramsey Island and Llech Uchaf.

**Caution.—**The main shipping route, which is formed by a traffic separation scheme, lies 10 miles W of South Bishop Light and may best be seen on the chart.

**8.3 Bais Bank** (51°57'N., 5°21'W.), a narrow ridge of fine sand and broken shells, extends 5 miles NE from a position 1.2 miles NNW of North Bishop. It has a least depth of 7m which lies near the center. The bank may generally be identified by tide rips and during gales, the sea breaks heavily over it.

To the W of Ramsey Island, the tidal currents are strong and set at rates up to 5 knots at springs and 3 knots at neaps. The current setting N bends E around Ramsey Island and unites with the current setting N from Ramsey Sound. This united current flows onward towards St. Davids Head. The current setting S splits close N of Ramsey Island with one part running through Ramsey Sound and the other to the W of Ramsey Island. These currents attain rates near Bishops and Clerks of 5 knots at springs. In addition, heavy overfalls, whirls, and eddies are formed close to all of the patches of uneven ground in this vicinity.

The currents rate decrease as they move N. Off St. Davids Head, rates of 3 knots at springs and at the N end of Bais Bank, rates of 2 knots are experienced.

## St. David's Head to Fishguard

**8.4 St. David's Head** (51°54'N., 5°19'W.), although not more than 30m high at its W extremity, is a prominent point. Carn Llidi, 179m high, stands 0.8 mile E of the head. This conspicuous hill is cone-shaped with steep sides. Pen Berry, 173m high, stands 2.5 miles ENE of St. David's Head and is another conspicuous hill. Although its summit is rugged when seen from the W, this hill somewhat resembles Carn Llidi and care is required not to mistake them.

Between St. David's Head and Pen Berry, the coast is formed by perpendicular and steep-to cliffs. Several hamlets and farms may be seen on the higher background.

**Cardigan Bay** (52°30'N., 4°30'W.) is considered to lie between St. Davids Head and Bardsey Island, 55 miles NNE. The E and NE parts of the bay contain several dangerous shoals. The two most important are Cynfelin Patches, which extend up to 6.5 miles from the shore, and St. Patricks Causeway, which extends up to 11 miles from the shore. Both of these shoals are awash in places at LWS.

**Caution.—**Trawlers may be encountered within Cardigan Bay, especially during the spring. Inshore trawlers may be encountered at any time in depths of 20 to 35m. Scallop dredges may also be encountered within these depths and sometimes in concentrations. Pots may be found moored up to 10 miles offshore.

**8.5 Strumble Head** (52°02'N., 5°04'W.), located 11.7 miles NE of St. David's Head, is the NW extremity of the N projection of Pen Caer, a large promontory. This headland is formed by a barren, rugged mass of rock and is very conspicuous. Two bare and rocky islets lie close off the W spur of the headland and are fronted by drying rocks. Ynys Meicel, the E islet, is attached to the mainland; a light is shown at an elevation of 45m from a conspicuous tower, 17m high, standing on it.

Garn Fawr, standing 1.5 miles S of the headland, is prominent. This hill is 211m high and has a rugged and rocky summit with steep faces.

Strumble Bank lies 1.4 miles ENE of Strumble Head and heavy seas break over it in bad weather. This bank has a least depth of 17.4m and there are overfalls and tide rips in its vicinity.

**Pen Anglas** (52°01'N., 4°59'W.), located 3 miles E of Strumble Head, is a low, rugged, and rocky point. It is surmounted by a small obelisk and forms the NW entrance point of Fishguard Bay. Tide rips are sometimes formed over the uneven ground extending off this point.

Between St. David's Head and Strumble Head, the tidal currents follow the general direction of the shore, setting NE and SW. They attain maximum rates of a little over 2 knots. Between Strumble Head and Pen Anglas, the current setting NE, after passing the headland, makes an eddy which extends about 0.5 mile from the shore. At a position about 1 mile offshore, the currents attain rates of 3 knots at springs and 1.5 knots at neaps. It was reported (1987) that the tidal current 1 mile N of Strumble Head attained a rate of 6 knots at springs.

## Fishguard (52°01'N., 4°59'W.)

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**8.6** The port of Fishguard lies at the SW side of Fishguard Bay which is entered between Pen Anglas and Dinas Head, 3 miles E. The shores of the bay consist of moderately high rocky cliffs, backed by rugged summits. There is a ferry terminal for cross-channel operation to the Republic of Ireland.

**Tides—Currents.—**The tide rises about 4.0m at springs and 1.4m at neaps.

**Depths—Limitations.—**The harbor, which has general depths of 4 to 6m, is protected on its N and E sides by breakwaters. A main quay provides 549m of berthage and has depths up to 6m alongside. There are facilities for general cargo, ro-ro, container, and vehicle and passenger ferry vessels. Vessels of up to 200m length, 28m breadth, and 6.5m draft can be taken to berth.

**Aspect.—**Dinas Head, the E entrance point of the bay, is a prominent headland with a distinctive wedge-shaped appearance. It is the N and highest part of Dinas Island, a peninsula connected to the mainland by a low swamp.

Mynddmelyn, 305m high, stands 2.5 miles SSE of Dinas Head. This conspicuous mountain has a nipple rock on its summit and forms the beginning of a rocky ridge which trends E for 3 miles. This ridge terminates in Carn Ingli which has a rugged top and is 351m high. A prominent white hotel stands on the W side of the harbor and a ruined castle is situated on a point, 0.7 mile S of the head of the N breakwater.

A light is shown from a prominent tower, 20m high, standing on the head of the N breakwater. A lighted range, which may best be seen on the chart, indicates the approach to the main quay.

**Pilotage.—**Pilotage is compulsory for vessels over 500 gt or with drafts over 4.26m. Pilots can be contacted on VHF channel 14 or 16 and board about 0.8 mile E of the head of the N breakwater.

Vessels should send an ETA at least 12 hours in advance with amendments up to 4 hours before arrival. Messages may be passed by radio through Ilfracombe (GIL).

**Contact Information.—**Fishguard Port can be contacted, as follows:

1. Telephone: 44-1348-404414
2. Facsimile: 44-1348-404446

**Anchorage.—**Anchorage is not advised when there is a possibility of onshore winds. Vessels may anchor, in depths of 14 to 16m, about 0.7 mile NE of the head of the N breakwater. Vessels should remain at least 0.5 mile from the breakwater in order not to obstruct traffic.

**Caution.—**An area, within which anchoring is prohibited, lies in the harbor and may best be seen on the chart.

The harbor is susceptible to seiches which can cause fluctuations in the sea level.

Vessels should give the head of the N breakwater a wide berth as its foundation extends up to 60m seaward.

A wreck, with a swept depth of 14m, lies about 1 mile NNW of the head of the N breakwater.

An area lying adjacent to the main quay is fouled by hauling-off wires and associated concrete clumps.

High-speed craft operate out of Fishguard.

**Fishguard Harbor**

## Fishguard to Bardsey Island

**8.7 Newport Bay** (52°02'N., 4°52'W.) lies between Dinas Head and Pen-y-bal, 2.3 miles E. The shore between Dinas Head and the mouth of Afon Nyfer, which discharges into the SE part of the bay, consists of slate rock. Pen-y-bal is a high and steep-to point. Carregedrywy, an above-water rock, lies 0.2 mile N of Pen-y-bal and is connected to the mainland by a drying ledge. Foel Goch stands close within the cliffs 1.5 miles NE of Pen-y-bal. This hill is prominent, round-topped, and 184m high.

Newport Sands are a large tract of fine, smooth, and hard drying sand which extends up to 0.5 mile N from the mouth of Afon Nyfer. Newport, a resort village, is situated on the S side of the river. A small harbor, used by yachts and fishing boats, lies at the S side of the river mouth. An outfall pipeline extends 0.4 mile NW from close W of the river mouth. Vessels may anchor in any part of the bay, but during onshore winds, a considerable sea sets into it and at times breaks furiously on the sands.

**Cemaes Head** (52°07'N., 4°44'W.), 187m high, is located 6.5 miles NE of Pen-y-bal. It is formed by a bold cape which rises steeply above the cliffs. Foul ground, with depths of 11 to 13m, extends up to about 1 mile N of this head and should be given a wide berth.

Between Newport Bay and Cemaes Head, the tidal currents set NE and SW at rates of 1.5 knots at springs with indrafts running into the bays.

**8.8 Port Cardigan** (52°07'N., 4°42'W.), a resort bay, lies between Cemaes Head and Cardigan Island, 1.5 miles ENE. The latter island is 51m high, steep-to, and has a dangerous wreck lying close NW of its W side. Freni Fawr, a mountain, stand 10 miles SSE of the bay. It is 393m high and very conspicuous from seaward.

There are depths of 14 to 18m in the entrance of the bay. These decrease gradually towards the head where the Afon Teifi discharges through a sand-encumbered estuary. The bottom of the bay is generally sandy and there are no off-lying dangers. A harbor, used by yachts and fishing boats, is formed by the estuary of the river. The entrance channel has a least depth of 0.3m over the bar and is subject to considerable changes. A conspicuous hotel stands at the E side of the bay. Shelter from SW gales may be obtained under the lee of Cemaes Head and there is good holding ground, but strong winds from between WNW and NNE cause a heavy sea in the bay.

**Pencribach** (52°09'N., 4°34'W.), a table headland, is located 5 miles E of Cardigan Island. It is 132m high and surmounted by several pylons and structures.

**New Quay Head** (52°13'N., 4°22'W.), with a high and rugged face, is located 15 miles NE of Cemaes Head. Pen-y-Castell, 92m high, rises close S of this point and is prominent. Carreg Draenog, a large rock, lies 0.5 mile W of the point and is very prominent from the NE and SW. Carreg Walltog, another large rock, lies close W of the point and is connected to the shore by a drying ledge.

Between Port Cardigan and New Quay Head, the tidal currents are not strong and their general direction is parallel to the coast.

New Quay Bay is entered between New Quay Head and Ina Point, 1 mile ESE, and its head is backed by clay cliffs. Foul ground and rocks extend 0.3 mile NW from Ina Point and an outfall pipeline extends 0.7 mile NNW from the vicinity of these dangers. A small drying harbor, used by yachts and fishing boats, lies in the W part of the bay and is protected by a breakwater.

Aberaeron (Aberayron), a small drying harbor, lies 3 miles NE of Ina Point at the mouth of the Afon Aeron. It is protected by a breakwater, fronted by a shingle bar, and used by fishing boats and yachts. Good anchorage, with offshore winds, in a depth of 19m, sand, can be obtained between 1 and 2 miles off the harbor. Closer in, the bottom is reported to be foul with large stones.

The coast between Ina Point and Aberaeron consists generally of perpendicular slate cliffs which vary in height between 6 and 37m. The land close behind these cliffs abruptly rises to a height of about 60m.

**Caution.—**Targets, buoys, and moorings supporting scientific instruments are occasionally moored within 20 miles of Pencribach. They are associated with firing exercises and their positions are frequently changed. Care should be taken when navigating in the area to the N of the headland, especially at night and in poor visibility.

**8.9 Aberystwyth** (52°25'N., 4°05'W.), a tourist resort, is situated 12 miles NE of Aberayron. It stands on the N side of the Afon Rheidol at its confluence with the Afon Ystwyth. A small harbor, used by pleasure craft and fishing vessels, lies close within the mouth of the Afon Rheidol and is fronted by a bar which dries. It is protected from the SW by a breakwater, which is partly submerged, and the entrance is formed by the outlet of the two rivers. Vessels up to 33m in length and 3.2m draft can enter at HW, but local knowledge is required. A bridge spans the Afon Ystwyth near the root of this breakwater.

A monument stands on the summit of a detached hill, 124m high, which rises between the mouths of the two rivers. Castle Point, surmounted by the ruins of a castle, is located 0.4 mile N of the breakwater and is the W extremity of a low promontory. A prominent church, with a square tower, and the extensive buildings of a college stand close E of this point. A conspicuous television mast, 341m high, stands about 3 miles S of Aberystwyth.

**Sarn Wallog** (52°27'N., 4°05'W.) is a narrow drying spit, consisting of shingle and gravel interspersed with large stones, which extends 0.3 mile seaward from a point on the shore located 2.7 miles N of Aberystwyth.

Sarn Cynfelyn, a narrow shoal, extends about 2.3 miles WSW from Sarn Wallog and has a least depth of 2.7m.

Cynfelyn Patches, with a least depth of 1.5m, lies close W of Sarn Cynfelyn and extends up to 6.5 miles offshore. The W extremity of this shoal area is marked by a buoy. A channel, 0.3 mile wide, separates Sarn Cynfelyn and Cynfelyn Patches and has a least depth of 6.4m in the fairway.

**Borth** (52°29'N., 4°03'W.), a resort town, is situated 5.2 miles N of Aberystwyth. It occupies 1 mile of coastline and has numerous conspicuous buildings.

Between New Quay Head and Borth, the tidal currents have no great strength and only attain rates of 1 knot at springs and 0.5 knot at neaps.

**Aberdovey** (52°33'N., 4°03'W.), a small harbor, lies on the N side of the large estuary of the River Dovey, 7.5 miles N of Aberystwyth. The land on the N side of this estuary rises steeply to hills of up to 270m in height, but the land on the S side consists of low and marshy ground. The estuary is encumbered by drying sand banks and fronted by a bar. A channel, marked by buoys, leads over the bar and into the river. It has a least depth of 0.9m and is used by small craft with local knowledge. Tides here rise about 5m at springs and 2.8m at neaps. The harbor is mostly used by yachts and is no longer used for commercial shipping. Small craft of up to 45m in length and 3m draft can be accommodated at HW. A small fishing boat basin lies on the S side of the estuary.

**8.10 Pen Bwch Point** (52°37'N., 4°08'W.) is located 5 miles NNW of Aberdovey. Foel Wyllt, an isolated and rounded hill, stands 3.5 miles E of this point. It is 306m high and prominent from seaward.

Sarn-y-Bwch extends about 4 miles WSW from Pen Bwch Point and has depths of less than 1m. This extensive shoal is composed of large, loose stones and dries, in patches, up to nearly 1 mile offshore. Its SW extremity is marked by a buoy.

Llangelynin Shoal, with a least depth of 4.5m, lies about 1 mile offshore, 2.5 miles N of Pen Bwch Point.

**Barmouth** (52°43'N., 4°03'W.), a small harbor, lies on the N side of the mouth of the Afon Mawddach which discharges into the sea 6.5 miles NNE of Pen Bwch Point. It is used by yachts, pleasure craft, and fishing boats. The prominent town, which backs the harbor, is a popular resort. The S entrance point of the river is formed by a long and narrow spit. The N entrance point is fronted by a small and sandy islet. A railway bridge spans the river at the E end of the town. Fegla Fawr, a remarkable low and rounded hill, stands on the S side of the harbor, close E of the bridge. Cader Idris, a prominent mountain, stands 4.7 miles E of the bridge and is 891m high.

The river mouth is fronted by a bar which is subject to considerable change. A channel, marked by a lighted buoy, leads over the bar and has a least depth of 0.3m. Vessels can anchor, in depths of 6 to 10m, W of the bar. An outfall pipeline, marked at its seaward end by a lighted buoy, extends 0.9 mile WSW from a point on the shore, 0.6 mile NW of the N entrance point.

Between Aberdovey and Barmouth, the tidal currents are not strong, having rates of less than 1 knot at springs.

**8.11 Mochras Point** (52°49'N., 4°09'W.), located 7 miles NNW of Barmouth, is a low and sandy point consisting of sandhills. These hills front the seaward side of an area of reclaimed marshland. A spit of sand and stones, with a least depth of 1.2m, extends 1.3 miles SW from the point.

**St. Patricks Causeway** (Sarn Badrig) (52°45'N., 4°14'W.) extends about 11 miles SW from a section of the coast close S of Mochras Point. This extensive shoal dries in places and is marked at its SW end by a lighted buoy. It is comparatively steep-to on its SE side, but a number of shoals, with depths of 7 to 9m, lie between Barmouth and the SW extremity. The outer part of the NW side of this shoal is also comparatively steep-to, but North Shoals, with depths of 2 to 8m, extend up to about 2.5 miles NW from its middle and inner parts.

Although the maximum strength of the tidal current at springs is only 1 knot in this vicinity, heavy ripples and overfalls form over St. Patricks Causeway. In strong winds, a heavy breaking sea is often formed in this area.

**8.12 Tremadog Bay** (52°50'N., 4°15'W.) occupies the NE head of Cardigan Bay and is entered between Mochras Point and Trwyn Cilan, 14 miles W. The bay provides extensive anchorage, in depths of 18 to 20m, near its center over a mud bottom, but this roadstead is untenable with strong SW winds. The bay is foul at its W side.

Mochras Lagoon, a broad and sandy drying inlet, is entered 1 mile NE of Mochras Point and is used by numerous yachts during the summer months. Harlech Castle, with conspicuous ruins, stands on a steep grassy slope, 2 miles N of the entrance to the lagoon

**Porthmadog** (52°55'N., 4°08'W.) lies 12 miles NNW of Barmouth on the N side of the estuary of the Afon Dwyryd and the Afon Glaslyn. This small harbor is used by fishing boats and pleasure craft. The estuary is encumbered by broad expanses of drying sands and fronted by a bar. Tides here rise about 4.2m at springs and 1.3m at neaps. A channel, marked by buoys, crosses the bar. It has a least depth of 0.6m in the fairway, but is subject to change. An outer approach lighted buoy is moored about 1.7 miles WSW of the mouth of the estuary.

Moel-y-Gest, a prominent and isolated hill, stands on the N

side of the entrance and is 259m high. A conspicuous white house stands in the vicinity of the N entrance point. The conspicuous ruins of a castle stand on the summit of a promontory at Criccieth, 3 miles WNW of the N entrance point.

**Pwllheli** (52°53'N., 4°24'W.), a small harbor, lies at the mouth of the Afon Erch, 9 miles W of Porthmadog. There are extensive facilities for yachts and the harbor is also used by fishing boats. The small town backing the harbor is a tourist center.

Outer Shoal, with a least depth of 3.6m, lies 1.7 miles SE of Pwllheli. Gimblet Shoal, with a least depth of 2m, extends about 2.3 miles SSE from Pwllheli. During SW gales, seas break over these two shoal areas.

Abersoch, an extensive yacht basin, lies on the S side of the Afon Soch, 5 miles SW of Pwllheli. A conspicuous windmill, without arms, stands on high ground, 2.3 miles NNW of the basin.

**8.13 Trwyn Cilan** (52°47'N., 4°32'W.), the W entrance point of Tremadog Bay, is a bold promontory.

The **St. Tudwals Islands** (52°48'N., 4°28'W.), consisting of two small islands, lie centered 0.5 mile E of the E side of this promontory. A light is shown from a tower, 11m high, standing on the W island at an elevation of 46m, and several drying rocks, lying 0.3 mile SE of the E island, are marked by a buoy.

St. Tudwals Sound leads between the W island and the mainland. This channel has a least depth of 11m in the fairway, but the tidal currents are strong and a short cross sea arises when the wind is against the tide. St. Tudwals Roads lies close N of the islands and is divided into two parts by a narrow sand bank with depths of less than 5m. These roadsteads are somewhat protected from the N and W, but with strong winds from the S and E, heavy seas are raised. There is good holding ground within the outer part of the roads, in a depth of 11m, sand and shells, about 0.8 mile NE of the E island. The inner part of the roads also affords good anchorage, in depths of 6 to 9m, NNW of the W island. Either anchorage may be entered without difficulty from the S through St. Tudwals Sound, but at LW, vessels with drafts of over 5.5m should approach the outer part of the roads from the E.

**Caution.—**During May to October, several yacht racing buoys may be moored within Tremadog Bay.

**8.14 Porth Neigwel** (52°48'N., 4°35'W.) is entered between Trwyn Cilan and Trwyn Talfarach, 4.5 miles WNW. This large bay affords temporary anchorage during offshore winds, in depths of 18 to 22m, about 1 mile offshore. However, the bay should be used only during offshore winds as the current sets into it and the prevailing SW winds quickly cause a heavy sea.

Aberdaron Bay is entered 2 miles WSW of Trwyn Talfarach and is sheltered from the W. This bay is not recommended as an anchorage as the holding ground is bad and it is exposed to S winds which cause a heavy sea. Two small islets lie close S of the E entrance point of the bay.

A conspicuous radio tower, 50m high, surmounts the summit of Mynydd Rhiw. This peak stands 3.5 miles NE of the head of Aberdaron Bay and is 302m high. A radio direction finding station is situated at the tower.

**Braich-y-Pwll** (52°48'N., 4°46'W.), a bold and rocky point, is located 8.5 miles W of Trwyn Cilan. It is steep-to and lies at the SW extremity of the Lleyn Peninsula. Two prominent hills rise close within the point.

Devil's Ridge lies 4.5 miles SE of Braich-y-Pwll. This bank has a least depth of 8.5m and violent turbulence, which is dangerous to small craft, has been observed over it.

## Bardsey Island to Holyhead Bay

**8.15 Bardsey Island** (52°45'N., 4°48'W.) lies 2.3 miles SSW of Braich-y-Pwll and is fronted by foul ground on its W side. A conspicuous hill, 165m high, rises steeply at the E side of the island, but the S part is low. The ruins of an abbey are situated on the N part of the island. A light is shown from a prominent tower, 30m high, standing at the S end of the island at an elevation of 39m. Bastram Shoal, dangerous and rocky, lies between 1 and 3.2 miles SSE of Bardsey Island. This shoal has very irregular depths, the least being 6.3m. Violent turbulence has been reported over this shoal and heavy seas are formed in its vicinity during strong winds.

**The Devil's Tail** (52°38'N., 4°41'W.), a narrow ridge of rock, extends 5 miles SSW from a position 6.5 miles SE of Bardsey Island. The ridge has a least depth of 23m, but depths of 40m lie within about 100m of its shallowest part, causing areas of violent turbulence and a heavy race during the strength of the tide.

Caswenan Rock, a pinnacle rock, lies about 1 mile SSW of Bardsey Island. It has a least depth of 17.8m and is usually marked by a tide rip.

Ship Ledge, with a least depth of 10.4m, lies about 0.3 mile E of the SE extremity of Bardsey Island. Heavy overfalls form, at times, over an area, with an uneven bottom and depths of 27 to 35m, lying about 1 mile W of Bardsey Island.

Maen Bugail, a small rock, lies about 0.3 mile N of the N end of the island and dries 4m. A heavy tide race extends nearly 0.5 mile N from this rock.

**Bardsey Sound** (52°47'N., 4°46'W.) lies between the island and the mainland. The channel fairway has depths of 24 to 48m and is used by coastal vessels with local knowledge.

The tidal current setting S through St. Tudwals Sound rounds Trywn Cilan and sets NW into Porth Neigwel. It also makes a circuit of Aberdaron Bay and then follows the line of the coast towards Braich-y-Pwll. Both the NW and SE currents run towards the shore and into the bays, especially during S winds. When the wind is opposed to the tidal current, it causes a turbulent sea near St. Tudwals Sound and over all the dangers in the vicinity of Bardsey Island. In addition, a strong tide race is formed around Braich-y-Pwll.

The current setting NW splits on meeting Bardsey Island. One portion rounds the S point of the island and sets outside the shoals lying on its the W side while the other portion sets round the N part of the island, inside Maen Bugail. These two portions of the current unite at a position about 1.5 miles from the island and from this junction, a strong eddy sets back towards the island. Similarly, the current setting SE also splits on meeting the island. One portion sets along the W shore of the island while the other portion sets through Bardsey Sound. These two portions of the current unite at a position about 2 miles SE of the island and from this junction, a strong eddy sets back towards the SE side of the island.

**8.16 Caernarfon Bay** (Caernarvon Bay) (53°05'N., 4°35'W.) is entered between Bardsey Island and Holy Island, 32 miles N. The SE part of the bay is formed by the NW coast of the Lleyn Peninsula which is bold, rocky, mainly steep-to, and rises to mountainous country inland. Snowdon, the tallest peak, stands 10 miles inland. Its summit is 1,083m high and is sometimes covered by clouds. The NE part of the bay is formed by the SW coast of the island of Anglesey. The shore of this island is indented by many small bays and fronted by ledges and rocks which extend up to 1.5 miles offshore. The island of Anglesey is separated from the mainland by the Menai Strait, a narrow and navigable waterway. Holy Island lies close off the W coast of Anglesey and forms the S side of Holyhead Harbor.

**Port of Caernarfon Bay Home Page**

http://www.caernarfonharbour.co.uk

**The Tripods** (52°49'N., 4°46'W.), a steep-to bank, extends 1.5 miles N and lies with its S end located 1 mile NNW of Braich-y-Pwll. It is formed of sand and shells and has a least depth of 10.1m. The tidal currents, which attain rates of up to 3 knots at springs, produce overfalls on this bank and a heavy sea is formed when the wind is against tide.

Maen Mellt, a rock 6m high, stands about 0.5 mile offshore, 3.5 miles NE of Braich-y-Pwll.

**Trwyn Porth Dinllaen** (52°57'N., 4°34'W.), located 11.5 miles NE of Braich-y-Pwll, is the N extremity of a rocky point which projects 0.6 mile N from the coast. Careg-y-Chwislen, a drying rock fronted by shoals, lies 0.2 mile ENE of the point and is marked by a beacon. A light is occasionally shown from the coastguard station situated on NE side of the point. Porth Dinllaen, a shallow bay, lies close SE of Trwyn Porth Dinllaen and provides anchorage to pleasure craft during offshore winds. Several small craft moorings are situated within the bay.

At more than 2 miles NW of Bardsey Sound, the tidal currents set NNE and SSW, taking the trend of the shore. Between Bardsey Sound and Trwyn Porth Dinllaen, the tidal currents near the shore set NNE and SSW at rates of up to 2 knots at springs.

**Trwyn-y-Tal** (53°00'N., 4°26'W.), a rocky promontory, is located 5.5 miles NE of Trwyn Porth Dinllaen.

Bwlch-yr-Eifl stands 1 mile SE of this promontory and is the most conspicuous of a lofty and steep range of mountains which slope gradually towards the sea. When the higher peaks are hidden by clouds, this mountain may be easily identified by a white patch, formed by stone quarries, which extends up two-thirds of its height from sea level. After rounding Holy Island from the N, this mountain usually shows with two sharp peaks. However, in very clear weather, it may show as three very sharp peaks, the middle and tallest being 562m high. Bwlch-yr-Eifl slopes rapidly down to a cliff at Trwyn-y-Gorlech, located 1.5 miles SW of Trwyn-y-Tal. The whole form of this mountain is so conspicuous a feature that it is impossible to mistake and it therefore serves as an infallible landmark.

Penrhyn Glas, located 1.2 miles SW of Trwyn-y-Gorlech, is formed by a conspicuous perpendicular cliff, 120m high. A conspicuous radio mast stands on a peak, 6.3 miles ENE of Trwyn-y-Tal.

**Fort Belan** (53°07'N., 4°20'W.), located 8.5 miles NE of Trwyn-y-Tal, lies at the N end of a promontory which forms the S side of the entrance to the Menai Strait. Dinas Dinlleu, 31m high, stands 2.5 miles S of Fort Belan. This small hill interrupts the monotony of the low coast in this vicinity. A conspicuous hotel stands close N of Dinas Dinlleu and a church, with a prominent spire, is situated at Llandwrog, 1 mile inland. The spire is reported to show plainly with the afternoon sun.

Caer Arianrhod, a drying patch, lies about 0.8 offshore, 3.5 miles SSW of Fort Belan.

Abermenai Point, marked by a light, is located 0.2 mile N of Fort Belan and is the N entrance point of the Menai Strait. It is formed by a low-lying sandy spit which is backed by an extensive area of drying flats. Mussel Bank, a drying bank of stones, lies on the N side of the entrance channel, 0.7 mile W of the entrance, and is marked by a lighted buoy.

**8.17 Menai Strait** (53°08'N., 4°19'W.), which separates the island of Anglesey from the mainland, is 20 miles long, narrow throughout, and less than 280m wide in places. The passage through the strait is available for vessels up to 80m in length.

The Britannia Bridge, a rail and road bridge, crosses the strait 5.5 miles NE of Caernarfon and has a vertical clearance of 26m under the center of its S span. A suspension bridge, with a vertical clearance of 29m, crosses the strait 0.8 mile E of the Britannia Bridge. An overhead cable, with a vertical clearance of 21m, spans the strait close W of the Britannia Bridge.

The reach of the strait lying between the two bridges is known as The Swellies. It is encumbered by numerous rocks and the tidal currents here attain rates of up to 7 to 8 knots at springs. Local knowledge is essential, even for small craft, and passage through The Swellies should only be attempted near the time of high water slack.

Port Dinorwic, a small harbor, lies on the SE side of the strait, 3 miles SW of the suspension bridge. It is used by yachts and small craft and consists of a tidal basin and a wet dock which is operated as a marina.

Caernarfon (Caernarvon), a small drying harbor, lies on the S side of the strait, 2 miles within the SW entrance. Tides here rise about 4.6m at springs and 2.1m at neaps. An old castle and the walls surrounding the town are in a good state of preservation and are prominent from seaward. The harbor no longer handles commercial traffic and is used only by pleasure craft and fishing vessels. Good anchorage can be taken within the strait, in depths of 5 to 9m, W of the harbor.

**Depths—Limitations.—**Caernarfon Bar, with a depth of about 1m, lies 3 miles W of the entrance and obstructs the approach to the strait. The depth over this sandy bar is constantly changing and local knowledge is required. Depths of 5.5m at MHWS and 3.5m at MHWN were reported to lie over the bar. A channel, marked by buoys, leads from inside the bar to the entrance and passes between extensive drying sand banks.

**Tides—Currents.—**At the SW end of the strait, tides rise about 4.7m at springs and 3.6m at neaps. At the NE end of the strait, tides rise about 7.7m at springs and 6.1m at neaps. The tidal currents in the strait are caused primarily by the differences in sea level at the ends, but are modified by local conditions. The rate of these currents at springs is about 3 knots in the wider parts. At the SW entrance, the rate of the currents at springs

is about 5 knots, but they increase to about 8 knots in The Swellies.

**Pilotage.—**Pilotage is compulsory within Menai Strait between Puffin Island and Caernarfon for all vessels over 1,500 gross tons, all vessels carrying hazardous cargo, and all passenger vessels over 20m in length. Pilotage is also compulsory in Swellies Channel for all vessels holding a passenger certificate and carrying passengers, and all vessels over 3.5m draft and/or 50m in length and/or 500 gross tons.

Due to the constant changes in the channels and the great strength of the tidal currents, local knowledge is essential.

Vessels requiring a pilot for the SW entrance to Menai Strait should send an ETA to Caernarfon 24 hours in advance. Pilots can be contacted on VHF channel 6, 12, or 16.

Pilots board, as follows:

1. Northbound vessels—position 53°06.40'N, 4°26.00'W.
2. Southbound vessels—position 53°19.32'N. 4°02.70'W

**Contact Information.—**Menai Strait Pilots can be contacted, as follows:

1. Telephone: 44-1286-672118 (office hours)
   44-1286-672772 (after hours)
2. Facsimile: 44-1286-678729
3. E-mail: enquiries@caernarfonharbour.co.uk

**Caution.—**Numerous shellfish beds lie along the shores of the Menai Strait.

Numerous small craft moorings lie along the shores of the strait.

Several marinas lie along the shores of the strait and numerous pleasure craft and yachts may be encountered in the vicinity of the approaches and entrances.

The buoys marking the approach channel are moved to match the frequent changes of the adjacent banks.

**8.18 Llanddwyn Island** (53°08'N., 4°25'W.) lies about 0.3 mile offshore, 3 miles WNW of Fort Belan. In reality, this island is a peninsula which is connected by a narrow isthmus to the S coast of Anglesey. A light is shown from a tower standing on the SE end of the island. A tower also stands on the SW end of the island and should not be mistaken for the light tower. The W and S sides of the island are fronted by rocks. A cove, lying on the E side of the island, provides shelter to small craft in good weather or offshore winds. The coast between the island and the S extremity of Holy Island, 9 miles NW, is indented by many small bays and inlets. Ledges and detached rocks, some of which dry, front the shore and extend up to 1.5 miles seaward in places. Vessels are advised to give this section of the coast a wide berth.

**Holy Island** (53°18'N., 4°39'W.) is separated from Anglesey by a narrow drying channel and forms the S side of Holyhead Bay. Holyhead Mountain, 218m high, stands on the NW end of the island and is conspicuous from all directions.

A cluster of rocks extends up to 0.7 mile SW from the SW extremity of the island and is marked by a beacon. A sunken rock lies at the outer end of this cluster and causes a tide race. Maen Piscar, a dangerous drying rock, lies about 0.8 mile offshore, 1.5 miles NW of the SW extremity of the island.

Careg Hen, a steep-to and isolated rock, lies 2.8 miles WSW of the SW extremity of the island and forms the outer danger in this vicinity. It has a least depth of 5.6m and is generally distinguished by overfalls. The sea occasionally breaks over it in bad weather.

**8.19 South Stack** (53°18'N., 4°42'W.), a rocky islet, lies close W of the W extremity of the island, to which it is connected by a aluminum footbridge. A light is shown at an elevation of 60m from a conspicuous tower, 28m high, standing on this islet. This light may be obscured over some sectors. A conspicuous radio mast stands 1 mile E of the light.

North Stack, an islet, is located 1 mile NE of South Stack and lies close W of the NW extremity of the island. A disused signal station, consisting of a prominent white house is situated on the point close E of this islet.

At positions 5 miles and 7 miles seaward of South Stack, the currents attain rates of up to 3.5 knots and 2.5 knots, respectively.

Both N and S tidal currents run with strength in the vicinity off South Stack and North Stack, producing dangerous races. These currents attain rates of up to 5 knots at springs and 3 knots at neaps. To the N of South Stack, the main axis of the N current takes a NE direction towards The Skerries. The S current, after passing North Stack and South Stack, divides into two parts. One part continues its course towards Bardsey Island while the other inshore part quickly decreases in strength and makes a circuit of Caernarfon Bay.

**Caution.—**A submarine cable, which may best be seen on the chart, extends seaward from a point on the W side of Holy Island, 2.2 miles SE of South Stack.

Submarines, both surfaced and dived, frequently exercise in the area W of Holy Island.

## Holyhead Bay

**8.20 Holyhead Bay** (53°19'N., 4°38'W.) is entered between North Stack and a bold precipitous promontory 6 miles NE. Holyhead Harbor lies at the S side of the bay. The E side of the bay is formed by the NW coast of Anglesey. The bay affords anchorage during offshore winds, but is seldom used due to better shelter being available at all times within the harbor.

**Carmel Head** (53°24'N., 4°34'W.), the N entrance point of Holyhead Bay, is the NE extremity of a bold and precipitous promontory of which Penbrynyreglwys is the summit. Two white stone beacons, 10m in high, stand on the NE side of Penbrynyreglwys and indicate Coal Rock. Mynydd-y-Garn, 168m high, stands 1.5 miles SE of the head. A monument surmounts this prominent hill.

Carmel Rocks, with a least depth of 4.9m, lies about 1 mile WSW of Carmel Head and is marked by heavy tide rips, except for a short time at slack water.

Langdon Ridge, a large rocky shoal, lies about 4.5 miles NE of North Stack and is marked by a lighted buoy. This shoal consists of two distinct ridges, with a least depth of 9.1m, and is usually indicated by heavy overfalls.

Bolivar Rock, with a least depth of 2.2m, lies near the outer end of the foul ground which extends up to about 0.7 mile W from the E side of the bay. A buoy, moored 3 miles S of Carmel Head, marks the W side of this rock. Foul ground, with depths of less than 5m, also extends up to 0.8 mile seaward of the SE coast of the bay.

*Courtesy of Jürgen Tronicke*

**South Stack**

**South Stack**

**Caution.—**An IMO-adopted Traffic Separation Scheme is centered 8 miles NW of Holyhead Bay and may best be seen on the chart.

The Skerries, a group of rugged islets and rocks, lies in the N approach to Holyhead Bay, 1.5 miles NW of Carmel Head, and is fully described in paragraph 9.1.

## Holyhead (53°19'N., 4°38'W.)

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**8.21** Holyhead Harbor, lying in the S part of Holyhead Bay, is a terminal for vehicle and passenger ferries which run to and from the Republic of Ireland. It is protected by a main breakwater which extends in a double curve 1.2 miles ENE from the shore.

**Port of Holyhead Home Page**

http://www.holyheadport.com

**Tides—Currents.—**Tides rise about 4.9m at springs and 2.4m at neaps.

The tidal currents, which set NNE and SSW across the entrance, are weak within the bay.

**Depths—Limitations.—**The port consists of Outer Harbor, New Harbor, and Inner Harbor.

Outer Harbor lies S of the head of the main breakwater and has a depth of 12m. Aluminum Jetty extends 900m into the harbor from Salt Island.

| Port of Holyhead—Berth Information | | | |
|---|---|---|---|
| **Berth** | **Length** | **Depth** | **Remarks** |
| Terminal 1 | 180m | 5.5m | Ferry and ro-ro |
| Terminal 2 | 129m | 4.5m | Ferry and ro-ro |
| Terminal 3 | 220m | 8.0m | Cruise and ro-ro |
| Terminal 5 | 220m | 8.0m | Cruise and ro-ro |
| **Anglesey Aluminum Metal Terminal** | | | |
| Jetty | 184m | 13.0m | Aluminum and petroleum coke |
| **Tanker Berths** | | | |
| Terminal 4 | 180m | 6.5m | Petroleum products |

New Harbor lies W of Salt Island and is completely sheltered by the main breakwater, extending into the harbor from the W side of Salt Island. Space within this harbor is limited due to numerous moorings.

Inner Harbor, has extensive facilities for general cargo, container, and ro-ro ferry vessels. A basin for fishing vessels lies at the S side of the entrance to this harbor. For further berthing information see the table titled **Port of Holyhead—Berth Information.**

**Aspect.—**A conspicuous chimney stands 2 miles SSE of the head of the main breakwater. A conspicuous tower, part of a convent, stands on the W side of Inner Harbor. A prominent monument stands on the E side of Inner Harbor. A light is shown from a prominent stone tower, 21m high, standing on the head of the main breakwater.

**Pilotage.—**Pilotage is compulsory for all vessels over 40m in length. Pilots can be contacted on VHF channel 14 or 16 and usually board about 1.5 miles NW of Holyhead Breakwater Light.

Weather permitting, pilots may board farther offshore on request.

**Regulations.—**Vessels should send an ETA at least 24 hours in advance. Non-ferry vessels should contact the Harbor Control not less than 1 hour before entering and again at 3 miles from the breakwater to request permission to enter.

Vessels intending to berth at the Aluminum Jetty should send an ETA 7 days, 48 hours, and 24 hours in advance.

**Contact Information.—**Holyhead Port Control can be contacted, as follows:

1. Telephone: 44-1407-606700
2. Facsimile: 44-1407-606622
3. E-mail: portcontrol@stenaline.com

**Anchorage.—**Vessels may anchor in Outer Harbor, which is a harbor of refuge, in depths of 6 to 13m. The bottom is hard and overlaid with mud, but the holding ground is good. In E winds, which raise an uncomfortable sea, better shelter may be obtained in the E part of this area. Small vessels may obtain anchorage within New Harbor, but space is very limited.

**Caution.—**Anchorage is prohibited within the limits of all the port fairways.

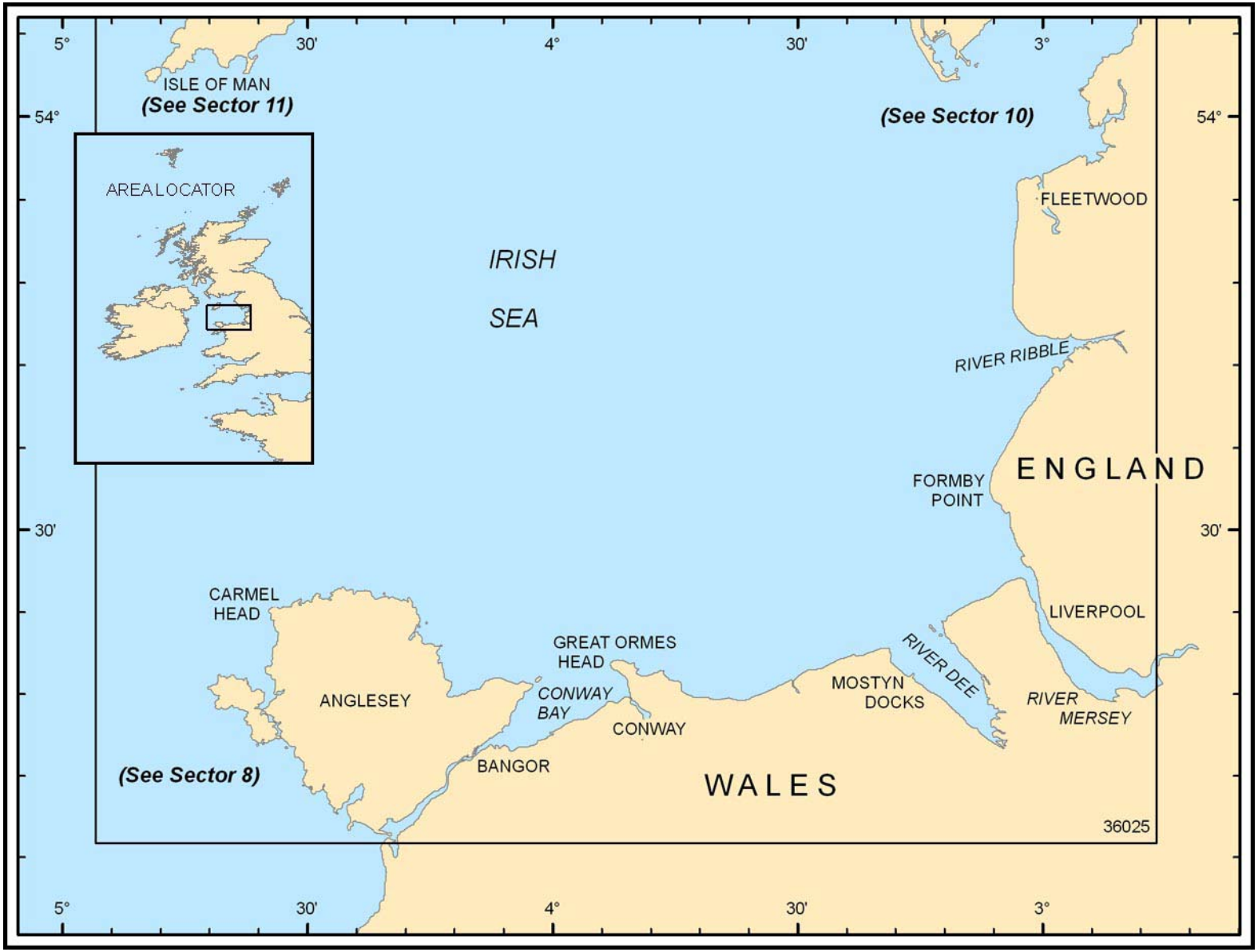
High-speed craft operate out of Holyhead.

A wreck, with a swept depth of 8.5m, lies about 0.8 mile NE of the head of the main breakwater and is marked by a lighted buoy.

Care must be exercised when rounding the main breakwater as drying boulders extend up to 60m from its inner part.

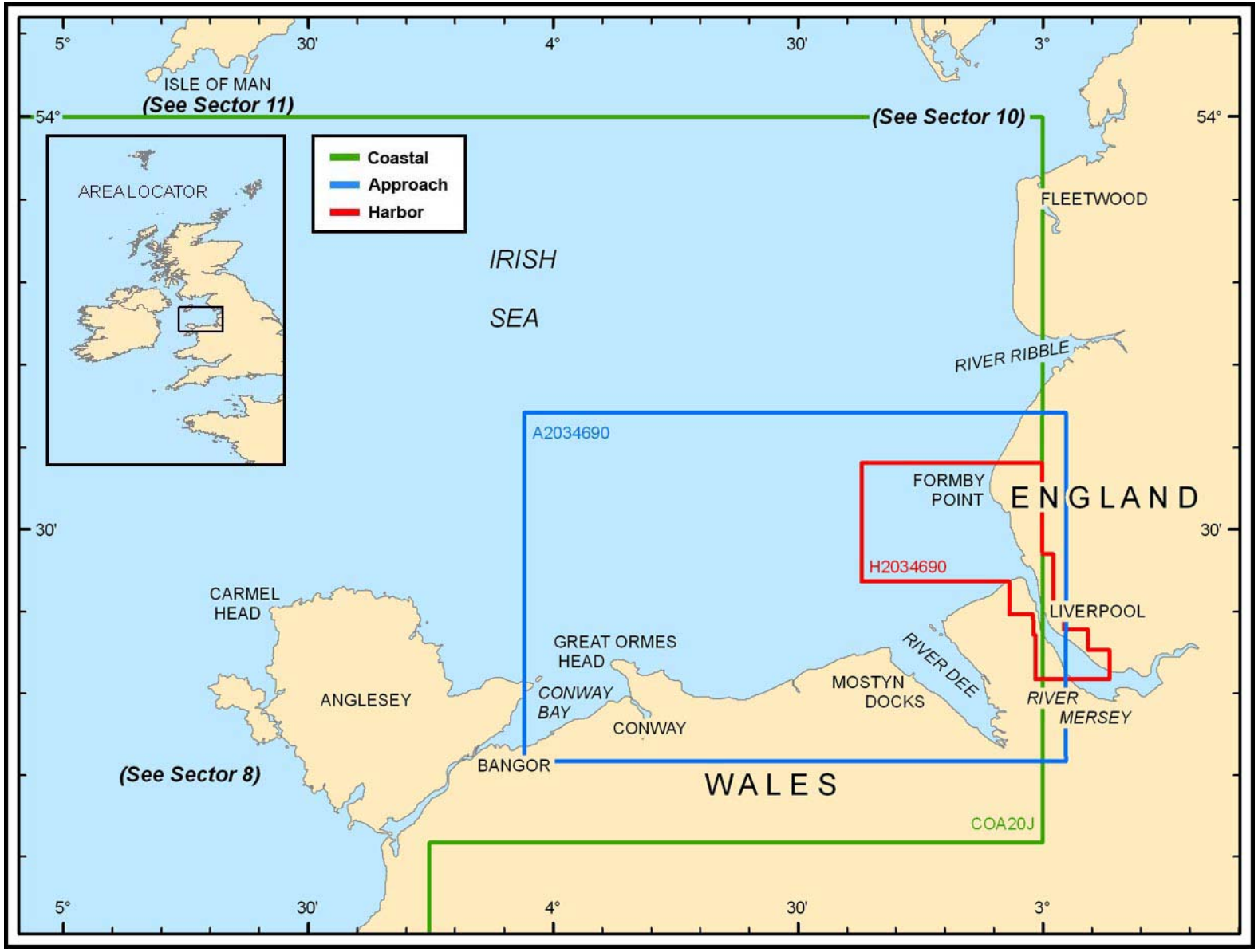
Surging may be experienced by vessels alongside the berths within Inner Harbor due to large ro-ro ferry vessels entering and leaving.

A Traffic Separation Scheme is in force in the approaches to or departure from Holyhead.




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

SECTOR **9** — CHART INFORMATION

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SECTOR 9 — DNC LIBRARY INFORMATION

# SECTOR 9

## NORTH COAST OF WALES AND WEST COAST OF ENGLAND—CARMEL HEAD TO FORMBY POINT

**Plan.—**This sector describes the N coast of Wales and the W coast of England from Carmel Head to Formby Point (53°33'N., 3°03'W.) and includes The Skerries, the SE side of the Irish Sea, Liverpool Bay, and the River Dee and the River Mersey.

### Off-lying Dangers

**9.1 The Skerries** (53°25'N., 4°36'W.) are a cluster of dark-colored rugged islets which lie 1.5 miles NW of Carmel Head on the N side of Holyhead Bay. They are separated from each other at high water by narrow gullies, with some detached rocks.

A light is shown from a prominent tower standing on the highest islet of the group. A racon is situated at the light.

East Platters, a reef which dries 1.5m in places, lies about 0.5 mile SE of The Skerries. Middle Rock, with depths of 8.1m, lies about midway between East Platters and Carmel Head. Passage Rock, with a depth of 8.2m, lies about 0.2 mile N of Carmel Head.

West Platters, two rocks, lie close S of The Skerries. The rapid tidal currents in this area cause heavy overfalls at the above dangers and all the inshore patches in the vicinity.

**Tides—Currents.—**Tide races off Bardsey Island (52°46'N., 4°47'W.), Braichy-y-Pwll (52°48'N., 4°46'W.), South Stack (53°18'N., 4°42'W.), and North Stack (53°19'N., 4°41'W.) can be dangerous to small craft. Heavy tide rips can be experienced in the vicinity of Langdon Ridge, between The Skerries and Carmel Head (53°24'N., 4°34'W.) and The Tripods.

Between The Skerries and Carmel Head, the currents begin, as follows:

| Interval from HW Holyhead | Direction |
|---|---|
| +0550 | NE |
| - 0010 | SW |
| **Note.—**The maximum spring rate in each direction is between 5 and 6 knots. | |

One mile NW of The Skerries, the currents begin, as follows:

| Interval from HW Holyhead | Direction |
|---|---|
| - 0505 | NE |
| +0120 | SW |
| **Note.—**The maximum spring rate in each direction is 4.5 knots. | |

Off Carmel Head, rates of up to 7 knots may be experienced.

In the vicinity of The Skerries, there are races over and near all the rocks and shoals; eddies may be encountered E and SE of The Skerries and Carmel Head. Tidal currents are given on the chart.

West Mouse is an islet lying 0.7 mile NNE of Carmel Head. Foul ground, with several patches of less than 5.5m, extends about 0.3 mile W and SW of the islet. St. Vincent Rock, at the NW corner of this foul ground, has a depth of 3.2m. There is a heavy overfall SW of this foul ground during the ebb current. A beacon, 7m high, stands on West Mouse.

Ethel Rock, with a depth of 5m, lies near the middle of a rocky bank, with a depth of less than 18m, in a position about 2 miles N of Carmel Head. A buoy, marked "Ethel Rock," is moored near the NW edge of the above bank.

Coal Rock, awash, lies near the NE end of a rocky bank, about 1 mile NNE of West Mouse. The two beacons, which stand on the NE side of Penbrynyreglwys, in range with the beacon on West Mouse indicate the position of Coal Rock. A buoy, marked "Coal Rock," is moored close SW of the cape.

**Caution.—**The passage inside The Skerries is unsuitable for deep-draft vessels and should not be used by any vessel at night.

A Traffic Separation Scheme (TSS), which is IMO-approved, has been established off The Skerries for vessels rounding the NW coast of Anglesey. The scheme has a separation zone, 2 miles wide, which may best be seen on the chart. Laden tankers should avoid the area lying between the SE boundary of the scheme and the coast.

A dangerous wreck, loaded with potentially dangerous explosives, lies close off the NW side of East Platters in position 53°25.1'N, 4°35.9'W. A prohibited area, with a radius of 500m, is centered on the wreck.

The historic wreck of Royal Yacht Mary lies close off the W extremity of the Skeries. A restricted area, with a radius of 100m, is centered on the wreck.

### Carmel Head to Great Ormes Head

**9.2 Skerries Light** (53°25'N., 4°36'W.) is shown 24 hours; a racon is situated at the tower.

**Carmel Head** (53°24'N., 4°34'W.) has been previously described in paragraph 8.20.

Trwyn Cemlyn is a low and narrow point lying about 2 miles ENE of Carmel Head. Harry Furlong Rocks consist of a drying ledge which extends for about 0.3 mile N from Trwyn Cemlyn. The outer and highest portion of this ledge dries 3.9m and is marked by Furlong Buoy.

Victoria Bank, with a least depth of 1.6m, lies about 0.7 mile NW of Trwyn Cemlyn. It is steep-to and is usually marked by a tide rip. A buoy, marked is moored close N of this bank.

Archdeacon Rock, with a least depth of 5.6m and deep water close-to, lies about 1.5 miles N of Trwyn Cemlyn. A buoy is moored about 0.1 mile NW of this rock.

**Wylfa Head** (53°25'N., 4°28'W.) is located 1.25 miles E of Trwyn Cemlyn. Cemlyn Bay and Porth-y-pistyll are two bays,

separated by a rocky ledge, which lie between Wylfa Head and Trwyn Cemlyn. Cemlyn Bay, on the W side of the ledge, affords good shelter in a depth of 7m, but should not be used in N winds. Porth-y-pistyll, on the E side of the ledge, is encumbered with below-water rocks and is not recommended. The buildings of a nuclear power station, which stands on the head, are conspicuous from seaward.

Cemaes Bay is entered between Wylfa Head and Llanbadrig Point, 0.8 mile E. A church stands near Llanbadrig Point and drying rocks lie close off it. There is a pier, used by small craft, situated at the head of the bay. The shores of the bay are high and rocky and the low water line consists of shelving ledges.

There is good anchorage, during offshore winds, in the middle of the bay, in depths of 9 to 11m. This berth is out of the tidal current, but a submarine cable passes through the center of the bay and lands at the SE end.

Llanlleiana Head is located 1.7 miles ENE of Wylfa Head and a tower stands on its extremity.

Middle Mouse, 7m high, is a steep-to islet lying 0.5 mile NW of Llanlleiana Head. A clear passage leads between this islet and the coast.

Graig Wen, 88m high, is a hill with a prominent white top which stands close to the coast on the W side of a small cove, about 0.5 mile ESE of Llanlleiana Head.

Bull Bay, lying 2.5 miles ESE of Llanlleiana Head, is entered between Trwyn Melyn, on the W side, and Trwyn Costog, about 1 mile ESE. A prominent disused windmill stands on Parys Mountain, 2 miles SSE of the bay. Bull Rock, with a depth of 4m, lies about 0.3 mile W of Trwyn Costog.

The bay provides good anchorage during offshore winds from between WNW and SE, in depths of 9 to 11m, sand. The berth lies out of the strength of the tidal current, which attains a velocity of only 1.2 knots within the bay but nearly 5 knots in the offing.

East Mouse is a rocky islet which lies close off Trwyn Costog, in the E approach to Bull Bay.

**Directions.—**Further off the coast, the offshore TSS route leads almost parallel to the coastline.

The inner or coastal route leads from a position lying W of South Stack (53°18'N., 4°42'W.) to a position lying N of Point Lynas (53°25'N., 4°17'W.) and then swings around The Skerries at a least distance of 1 mile. The route then passes NW of South Stack Light, which stands on a rocky islet with dangerous tide races in its vicinity, and NW of North Stack, an islet with dangerous tide races in its vicinity. It then leads NW of Langdon Lighted Buoy, which marks Langdon Ridge. This ridge consists of a rocky shoal, with a least depth of 9.1m, where tide rips occur.

The route then passes NW and N of The Skerries, N of Ethel Rock buoy, which lies 2.2 miles N of Carmel Head, and NE of Carmel Head. It passes N of Archdeacon Buoy, which is moored 1.7 miles W of Ethel Rock buoy, and N of Wylfa Head close SW of which stands a conspicuous power station. The route then continues N of Middle Mouse, a steep-to islet lying 5 miles ENE of Carmel Head and N of Trwyn Melyn, a rocky point located 2 miles ESE of Llanlleiana Head. It then passes N of Point Lynas where a pilot may be embarked by prior arrangement.

**Caution.—**A short, steep, and confused sea exists between Carmel Rocks and the coast when a fresh wind blows against the tidal current.

**9.3 Amlwch Harbour** (53°25'N., 4°20'W.), a tidal harbor, lies at the head of an inlet, 0.5 mile E of Bull Bay. It dries between 0.6 and 3m at LW. A rock, with a depth of 2.1m, lies about 90m offshore on the W side of the approach.

**Caution.—**A submarine pipeline, which is the remains of an SBM facility, extends for about 1.8 miles N from Amlwch Harbor. This pipeline is surrounded by an area within which fishing and anchoring are prohibited.

**Point Lynas** (53°25'N., 4°17'W.), which projects N from the coast 2.3 miles E of Amlwch Harbor, is very conspicuous from E and W. A rock, with a depth of 5m, lies close NE of the point.

A light is shown at an elevation of 39m from a prominent tower, 11m high, standing on the point. A radiobeacon is situated at the light. Lynas Bank, with a least depth of 11.3m, lies parallel with the coast, 0.5 mile offshore, between Amlwch Harbor and the point. This bank is generally marked by overfalls.

Porth Eilian is a small inlet with steep-to shores lying on the W side of Point Lynas. It is protected from the E by the same point of land. There is a mooring buoy in the center of the inlet and a slipway at the head. The inlet provides good anchorage for small craft during offshore winds, in a depth of 15m, mud and sand. An uncomfortable sea may occur when the tide is running strongly.

Mynydd Eilian, a hill surmounted by a beacon, stands 1 mile S of Point Lynas and is 174m high. A coastal radio station is situated 0.5 mile S of the hill.

**Tides—Currents.—**Between Point Lynas and Trwyn-du (53°19'N., 4°03'W.), the currents run SE and NW, with a maximum spring rate of 1.3 knots in each direction; they are weak within Dulas and Redwharf Bays and within Moelfre Roads, though fairly strong off Ynys Moelfre.

In Table Road (53°19'N., 4°05'W.), the currents run, as follows:

| Interval from HW Holyhead | Direction |
|---|---|
| -0535 | SE |
| +0035 | NW |
| **Note.—**The maximum spring rate in each direction is 3 knots. | |

**Pilotage.—**In bad weather or at the request of a vessel's master, Liverpool pilots will board off Point Lynas. Pilots board from a launch in a position about 2 miles N of the point.

**Directions.—**The coastal route to Liverpool Bay leads E from Point Lynas to Great Ormes Head, a distance of 15 miles, in deep water.

**Caution.—**Liquid cargo transfer operations take place frequently in an area centered about 4 miles ESE of Point Lynas. Vessels engaged in these operations may be at anchor, or otherwise unable to maneuver, and should be given a wide berth.

**9.4 Dulas Bay** (53°22'N., 4°15'W.), including Traeth Lligwy, is entered between Ynys Dulas (53°23'N., 4°15'W.)

and Ynys Moelfre, 2 miles SSE. It is only suitable as a temporary anchorage for small craft in offshore winds. There is little protection at LW from Ynys Dulas and the shallow flat. Garreg Allan, a detached drying patch, lies close E of Ynys Dulas.

Traeth Dulas, an inlet, lies at the head of the bay. It dries completely and is only suitable for small craft. The S entrance point of the inlet consists of a shingle beach and low sandhills.

A navigable channel, with a least depth of 3.7m, leads between the coast and Ynys Dulas. A rock, which dries, lies midway in the channel, 0.1 mile W of the N extremity of Ynys Dulas. Local knowledge is necessary.

Traeth Bychan lies in the bight, 1 mile S of Ynys Moelfre, and contains a small harbor with a slipway. This harbor was originally constructed for the use of vessels loading from the now disused quarries. The whole bight dries, but vessels can ground on a clean and sandy bottom at LW. Small craft can find anchorage within the bight with winds from between SW and NW, through S.

**Anchorage.—**Fresh Water Bay, 0.5 mile SE of Point Lynas, affords shelter in W winds. The anchorage has a depth of 17m. A bank lying 0.5 mile offshore has a least depth of 7.7m and fronts the bay.

Porthygwchiaid, a bay lying 0.5 mile S of Fresh Water Bay, also affords shelter in W winds. The anchorage has a depth of 8m, sand. The shore within this bay is composed of shingle with drying ledges extending from it.

Moelfre Road lies close S of Ynys Moelfre, an islet, and affords good sheltered anchorage in W winds. Moelfre Bay has a depth of 6m, mud and sand; the tidal currents are negligible.

A deep-water anchorage lies about 2 miles NE of Ynys Moelfre (53°22'N., 4°14'W.) in a depth of 20m. However, two patches of foul ground lie in the vicinity of the anchorage, 2.5 miles NNE and 2 miles ENE of Ynys Moelfre.

**Caution.—**Cargo transfer operations take place in an area centered 2 miles NE of Ynys Moelfre.

**9.5 Trwyn Dwlban** (53°19'N., 4°12'W.), located 2.7 miles SSE of Ynys Moelfre, is surmounted by a steep, abrupt, and regular mass of rock which resembles the remains of a castle when seen from a distance.

Red Wharf Bay, lying between Trwyn Dwlban and Carreg Onnen, 2.7 miles E, dries out almost to the line of the entrance points. At Carreg Onnen, the cliffs rise to heights of nearly 90m. A conspicuous radio mast, 106m high, stands 0.7 mile inland near Carreg Onnen and a radio tower stands on the high ground, about 1 mile SW of the mast.

Trwyn Dinmor is located 2.5 miles E of Carreg Onnen. The coast between trends irregularly and consists of limestone cliffs. Two disused piers extend NW from the coast close SE of Trwyn Dinmor.

Table Road, which fronts the cliffs between Carreg Onnen and Trwyn Dinmor, affords anchorage with offshore winds, in depths of 11 to 16m.

Four Fathom Bank fronts Red Wharf Bay and the N side of Table Road and has a least depth of 6.3m.

**Trwyn-du** (53°19'N., 4°03'W.), located 0.75 mile E of Trwyn Dinmor, is the E extremity of Anglesey. It is mostly fringed by a drying rocky edge. A light is shown from a conspicuous tower, 29m high, standing near the outer end of the rocky shelf, 0.1 mile NNE of the point.

Dinmor Bank is the NW part of the foul ground which extends up to 0.8 mile NW from Trwyn-du. This bank, which has a least depth of 2.5m, lies at the E side of Table Road and is marked by a buoy.

Ten Feet Bank lies at the E end of Four Fathom Bank, about 1 mile N of Trwyn-du. This bank has a least depth of 2.6m and is marked by a buoy moored on the SW side.

From Point Lynas, the velocity of the tidal current is much decreased by the land receding to the S, while the main part of the current runs between Point Lynas and the River Dee. However, a portion of the current circulates around the bay towards Puffin Island, at the NE entrance to the Menai Strait. The tidal currents to the E of Red Wharf Bay have a velocity of 3 knots at springs and 1.5 knots at neaps.

**Anchorage.—**Temporary anchorage can be found within Lighthouse Cove, a small bay, which lies close W of Trwyn-du Light. The berth lies, in a depth of 4m, sand, opposite a small beach located on the E side of Puffin Island.

**9.6 Puffin Island** (53°19'N., 4°02'W.) lies 0.5 mile NE of Trwyn-du and the conspicuous tower of a ruined chapel stands near its center. This island and Lavan Sands, 5 miles S, are nature reserves and designated bird sanctuaries.

Perch Rock is the SW extremity of a rocky ledge which dries and extends 0.3 mile SW from the S end of Puffin Island. A conspicuous beacon, 12m high, stands on this rock. A narrow spit, which dries, extends 0.3 mile SSE from Perch Rock. Irishman Spit, a drying bank, lies about 0.3 mile SE of Puffin Island.

**Directions.—**The approaches to the NE entrance of the Menai Strait lie on the W side of Conwy Bay near the Anglesey shore. There are two approach channels. The NW channel, being more direct and better marked, is generally used.

The strait, which is marked by aids, passes between Dinmor Bank and Ten Feet Bank and then leads between Perch Rock and Trwyn-du. A rocky bar connects to the drying spit which extends SSE from Perch Rock. The controlling depth of the channel is 4.3m which is also the least charted depth over the bar. The channel continues between the SE coast of Anglesey and the NW sides of Dutchman Bank and Lavan Sands.

The NE channel entrance is unmarked and lies between Puffin Island and Irishman Spit. This channel then passes through a narrow swashway lying close to the extremity of the spit which extends SSE from Perch Rock. This channel should not be attempted without local knowledge.

**Beaumaris** (53°16'N., 4°06'W.) lies on the W side of Conwy Bay, about 3.5 miles SSW of Trwyn-du. A small pier, with depths of 4m at the head, fronts the town. There is an anchorage within the channel, in depths of 7 to 13m, sand. Beaumaris is no longer open to commercial shipping, but is used by yachts and small craft. A prominent ruined castle stands at the NE side of the town and a conspicuous radio mast stands 1.5 miles NNE of it.

**Port Penrhyn** (53°14'N., 4°07'W.), the port for Bangor, lies 2 miles SSW of Beaumaris. It is a tidal harbor with depths of 3.3 to 4m at MHWS. A tidal basin, which dries, has two wharves with depths of 4 to 5.2m alongside at MHWS. Ro-ro vessels up to 2,300 gt can be accommodated. A conspicuous tower, 43m high, stands at the university, 0.5 mile SW of the harbor. A prominent castle stands on the high ground, about

0.8 mile SE of the harbor. An iron pile pier extends 0.3 mile NW from a point fronting the town of Bangor, close W of the harbor. Anchorage for vessels awaiting entry to the port can be taken off Beaumaris or off Bangor Pier, in depths of 5 to 13m. Several mooring buoys lie off Bangor.

**9.7 Conwy Bay** (53°18'N., 3°57'W.) is entered between Trwyn-du and Great Ormes Head, 6 miles ENE. The bay extends about 8 miles SW to Bangor, at the NE entrance to the Menai Strait. Much of the bay area is occupied by the drying sands of Dutchman Bank and Lavan Sands being broken only by Midlake Swatch and Penmaen Swatch. The Pool, lying further E of these water areas, has depths of up to 16m.

Four Fathom Bank, with depths of less than 6m, lies W of Great Ormes Head and fronts the entrance to the bay. A navigable channel lies on the W side of the bay and links the Menai Strait and its approaches with the open sea at Puffin Island.

The immediate coastline on both sides of the bay is low, backed by high ground. However, the high ground on the E side is considerably higher than that on the opposite side. Particularly noticeable are the quarry workings above Penmaenmawr Point (53°16'N., 3°57'W.) and a railway line which closely follows the E shoreline.

**Menai Bridge** (53°13'N., 4°10'W.) is a small town on the Anglesey shore; it is connected to the mainland by the Menai Suspension Bridge, which has a vertical clearance of 29m. The Britannia Bridge, situated 0.75 mile WSW of the Menai Suspension Bridge, has a vertical clearance of 26m.

The coast N of Deganwy Point (53°18'N., 3°50'W.), at the entrance to the River Conwy, is formed by a low-lying isthmus which connects Great Ormes Head with the mainland.

**9.8 Conwy** (53°17'N., 3°51'W.) lies in the NE part of the bay with its massive castle standing on the W bank of the river. Conwy Sands dry and occupy much of the estuary that lies between Great Ormes Head and Penmaen-bach Point, 3 miles S.

Pilotage for the NW entrance of the Menai Strait is arranged from Caernarfon (53°09'N., 4°16'W.) and the boarding positions are shown on the chart.

Conwy Sands, which dry, occupy most of the estuary. A shallow approach channel passes through the S part of the sands and its entrance is marked by a buoy which is moored about 1.7 miles WNW of Penmaen-bach Point. Llys Elisap Clynnog, a patch of drying rocks, lies 1.25 miles W of Penmaen-bach Point, on the S side of the approach to the entrance. The entrance to the Conwy River lies 1.7 miles E of Penmaen-bach Point.

The town of Deganwy, fronted by the ruins of an ancient castle, is situated on the E side of the river. The coast to the N of the town is formed by a low-lying isthmus which connects Great Ormes Head with the mainland. The town of Conwy is situated on the W bank of the river, enclosed by old walls and towers, and fronted by a seawall. A conspicuous large castle stands at the S end of the town. Three bridges situated close together span the river near the castle and have a minimum vertical clearance of 5.5m. Tides at Conwy rise 3.6m at MHWS and 2.9m at MHWN. The harbor can be contacted by VHF and is used mainly by yachts and pleasure craft. The town quay dries at LW. A lighted beacon stands on a drying bank at the S side of the river entrance and a prominent tower stands on high ground at Deganwy (53°18'N., 3°49'W.).

The wharf at Deganwy is 182m long. It dries out alongside at LW and has a depth of 5.8m alongside at HW.

Penmaen-Mawr lies 2 miles SW of Penmaen-bach Point, on the S coast of Conwy Bay. A pier, which dries at LW, extends from the shore and is used by small coastal vessels for loading stone from the nearby quarries.

**Tides—Currents.—**On the W side of Conwy Bay, the current is rotary, clockwise. When strong, the currents run SE towards Penmaen-bach Point (53°17'N., 3°53'W.) and NW to the N of Puffin Island.

In the NW entrance off Perch Rock, the currents begin, as follows:

| Interval from HW Holyhead | Direction |
|---|---|
| -0510 | S |
| -0025 | N |
| **Note.—**The maximum spring rate in each direction is 3.5 knots. | |

In the NE entrance off Puffin Island, the currents begin, as follows:

| Interval from HW Holyhead | Direction |
|---|---|
| - 0340 | SW |
| +0220 | NE |
| **Note.—**The maximum spring rate in each direction is 4 knots. | |

In the Outer Roads, the currents begin, as follows:

| Interval from HW Holyhead | Direction |
|---|---|
| - 0545 | SW |
| - 0100 | NE |

On the E side of Conwy Bay, about 2.5 miles SW of Great Ormes Head, the current setting E probably runs towards the latter, and the current setting W towards Lavan Sands.

In the entrance to the Conwy River, the currents begin, as follows:

| Interval from HW Holyhead | Direction |
|---|---|
| - 0410 | Incoming |
| +0020 | Outgoing |
| **Note.—**The maximum outgoing spring rate is 5 knots. | |

**Directions.—**From a position to the S of Fairway Buoy (safe water), moored 1.7 miles WNW of Penmaen-bach Point, the track generally leads E through a narrow and buoyed approach channel across Conwy Sands. The route passes N of Llys Elisap Clynnog, a patch of drying rocks, then S of a rocky patch, 2 miles W, which dries. It then passes S of Bwrlingau Rock, a collection of drying boulders, and N of a lighted beacon. On rounding this lighted beacon, the track leads SE into the harbor, passing SW of a beacon which marks the head of an outfall.

**Caution.—**The approach channel is constantly changing and the buoys are moved frequently, but it is sometimes necessary to pass on the wrong side of them.

The white sector of the lighted beacon indicates the approach fairway, but does not necessarily indicate the deepest water.

A prohibited anchorage area extends 50m on either side of a road tunnel which lies under the river, 0.4 mile N of the bridges. The deepest part over this tunnel is marked by buoys which form a navigable channel, 50m wide.

Tidal currents in the approach channel to the harbor are strong.

## Great Ormes Head to the River Dee

**9.9 Great Ormes Head** (53°21'N., 3°52'W.), a bold promontory, is 204m high and one of the finest landmarks on the coast. Its N face is formed by a steep limestone cliff from which the ridge or head extends 1.7 miles SE. A prominent hotel stands on the highest part and the stone tower of a disused lighthouse stands on the NW extremity of the promontory.

Ormes Bay (Llandudno) lies between Pen Trwyn (53°20'N., 3°50'W.), the NE extremity of Great Ormes Head, and Little Ormes Head, 2 miles E. Pen Trwyn, including the shore for about 0.5 mile to the S of it, is formed by a steep cliff. The head of the bay is formed by a marshy isthmus which rises at its E extremity to Little Ormes Head. The W side of the bay is fronted by rocky ledges which dry out up to about 100m, but farther E, the foreshore is formed of shingle fronted by sand. The bottom is mostly shingle with poor holding ground. A pier extends 0.2 mile NE from the shore at the W side of the bay. There is a depth of 2.7m alongside the head of the pier, but it was reported not in use. A jetty extends from the shore close S of the pier.

Little Ormes Head, with its high background, somewhat resembles Great Ormes Head, but the land at the head of the bay is low-lying.

**9.10 Rhos Point** (53°19'N., 3°44'W.), located 1.5 miles SE of Little Ormes Head, is low, flat, and fronted by loose stones which extend out to the low water line. The coast between is fronted by foul ground, with depths of less than 2m, which extends up to about 0.5 mile offshore. The prominent dark-colored tower of Llandrillo-yn-Rhos Church stands on rising ground, 0.5 mile NW of the point. A stranded wreck, marked by a buoy, lies about 0.3 mile NE of the point.

Colwyn Bay, which contains a large resort town, is entered between Rhos Point and Tan Penmaen Head, 2.5 miles SE. The foreshore is formed of shingle and is fronted by sand which and dries out up to 0.3 mile offshore. Submarine cables extends NE from a point on the W side of the bay, 0.5 mile S of Rhos Point. A drying rock lies 0.4 mile offshore midway between the entrance points of the bay. A detached breakwater, 200m long, lies close SE of Rhos Point and runs 200m and nearly parallel to the shore. A short breakwater extends E from the shore towards the S end of the detached breakwater and forms a small harbor which dries out. A stranded wreck, which lies 0.3 mile NE of Rhos Point, is marked by a buoy moored close NE. The tidal currents in Colwyn Bay are negligible.

Raynes Jetty, 218m long, and Llanddulas Jetty, 204m long, extend N from the coast about 1 mile E of Tan Penmaen Head. These jetties are used for the loading of crushed limestone and granite from the nearby quarries. Vessels of up to 3,200 tons, 92m in length, and 6m draft have been accommodated at HWS. Tides in the vicinity of the jetties rise about 7.8m at MHWS and 6m at MHWN. A shore control station may be contacted by VHF.

Gwrych Castle, a large building surrounded by trees, is a conspicuous object which stands on the E face of the hill, 2.7 miles ESE of Tan Penmaen Head. About 1 mile farther E, is the white square tower of the Abergele Church which stands 0.5 mile inland.

**9.11 Rhyl** (53°19'N., 3°29'W.), lying 7 miles ENE of Tan Penmaen Head, is a resort which occupies 1.8 miles of coastline to the E of the entrance of the River Clwyd. The town is prominent from seaward. The entrance to the river is simply a depression in the sand banks, scoured by the water from the river, and is subject to change both in depth and direction. A breakwater, marked by beacons, extends N from the E entrance point of the river. The entrance channel, which dries, lies close W of the breakwater. Foryd Harbor, a small harbor which dries, lies within the entrance of the river. Depths in the harbor rise to 3.6m at HWS and 2.4m at HWN. The harbor is no longer used by commercial shipping, but is mostly used by fishing boats and pleasure craft.

Rhyl Flats, with depths of less than 1m, extend up to 4 miles offshore abreast Rhyl and are marked on the NW side by a lighted buoy.

Constable Bank is a long narrow bank, with depths of less than 6m, which extends W from Rhyl Flats. It is composed of fine sand and a lighted buoy is moored at the W extremity.

Rhyl Flats Wind Farm, best seen on the chart, is established between Rhyl Flats and Constable Bank. It consists of 25 wind turbines.

**9.12 Point of Ayr** (53°21'N., 3°19'W.), low and sandy, lies 6.5 miles ENE of Rhyl. The coast between is formed by a low and shingle beach, about 0.5 mile wide, with a foreshore of fine sand. The principal objects seen along this stretch of coast are the heights above Gwaenysgor, 230m high, on which stand the ruins of St. Elmos Summer House and a radio mast. Lower down on the NE slope of the same ridge, stands the prominent mansion of Talacre. A prominent disused lighthouse, 19m high, stands close to Point of Ayr. A white tower, prominent from seaward, stands near the shore fronting the town of Prestatyn (53°20' N, 3°25'W).

**Directions.—**From a position lying N of Great Ormes Head, a route leads 20 miles ENE to the vicinity of Bar Lightfloat (53°32'N., 3°21'W.). It passes NNW of Constable Bank, which is marked by a lighted buoy; NNW of North Hoyle Lighted Buoy, which marks a shoal ground to the N of Chester Flats; and then leads to the pilot boarding position close SE of the lightfloat.

**Caution.—**North Hoyle Wind Farm is centered on position 53°25'N, 3°27'W; close NW of it lies an anemometer mast, 61m high, supported by metal piles. The farm consists of 30 wind turbines, each 61m high.

*Courtesy of Christopher Jones*

**North Hoyle Wind Farm**

## The River Dee

**9.13** The estuary of the River Dee, most of which dries, is entered between Point of Ayr and Hilbre Point, 4.5 miles ENE. The approach to the entrance of the River Dee is barred by Rhyl Flats, previously described in paragraph 9.11; Chester Flats; and West Hoyle and East Hoyle Banks. These banks and flats are all of a shifting nature and dry in places. They extend up to 6 miles seaward of Point of Ayr and Hilbre Point.

**Caution.—**Because of the shifting nature of the dangers in the approaches, mariners without local knowledge should not enter the estuary without contacting Mostyn Harbor Master to obtain information and advice.

**9.14** The Hilbre Islets lie on the NW part of a drying bank which extends up to 1.3 miles W and 2 miles S from Hilbre Point. The NW islet is 12m high and several small buildings stand on it. A light is shown from the NW end of this islet and a prominent beacon stands close S of the light.

Chester Flats, with general depths of less than 5.5m, extend from a position about 3.5 miles NW of Rhyl to within 3 miles of Point of Ayr. Patches, which dry up to 0.3m, lie on these flats. The S side of the flats forms the N side of Inner Passage, which is described below in paragraph 9.15. The W end of the flats is known as the Tail of Middle Patch and the E part as Middle Patch.

West Hoyle Bank may be said to be a continuation E and NE of Chester Flats. The E and NE sides of the bank form the W side of Hilbre Swash and the S side forms the N side of Welsh Channel. The channel over Chester Bar, between Chester Flats and West Hoyle Bank, has altered to such an extent that it is no longer used. The E portion of West Hoyle Bank, abreast of Hilbre Point, dries as much as 6.7m and its W part dries up to 3.9m. The N part slopes off gradually, but irregularly, into deep water. East Hoyle Bank dries for a distance of about 3.5 miles N of Hilbre Point.

The principal channels through the above-mentioned banks are Welsh Channel which is entered through Inner Passage from the W, and Hilbre Swash which is entered from the N.

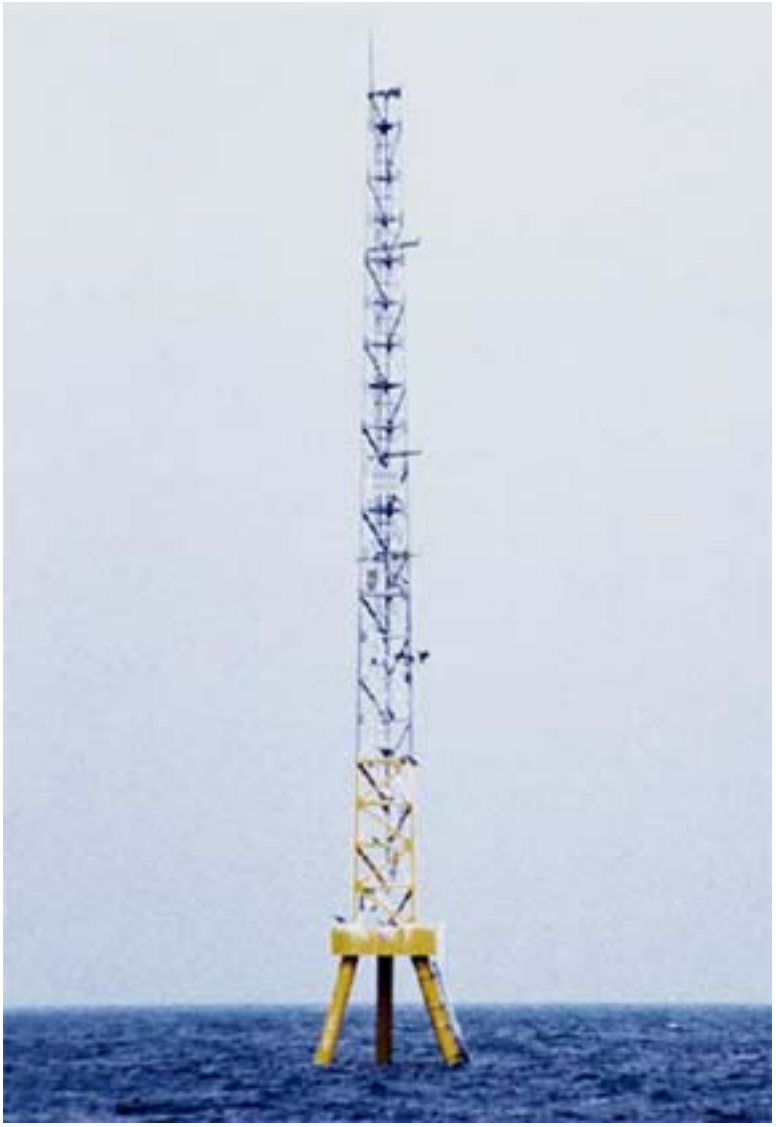
The inner ends of Welsh Channel and Hilbre Swash are connected by Welshmans Gut.

These channels are marked by lighted buoys and buoys, which are moved to meet frequent changes.

**Caution.—**Local knowledge is necessary because of the frequent changes in the channels. In the summer months, numerous pleasure craft are moored in the vicinity of Hilbre Point and there is much sailing activity in the estuary and approaches.

**9.15** **Inner Passage** (53°22'N., 3°30'W.), leading between Rhyl Flats and Chester Flats, is frequently used by coastal vessels. In the fairway of the channel, there is a least depth of 5.1m, but at the W end, there is a detached 3.8m patch. At the E end, S of Middle Patch, a bar, with a depth of 2.3m, separates Inner Passage from Welsh Channel.

Welsh Channel lies between the coastal bank fronting the



**North Hoyle Wind Farm—Anemometer Mast**

shore W of Point Ayr, and West Hoyle Bank. A bar, which joins Middle Patch to the shore NE of Prestatyn (53°20'N., 3°24'W.), lies at the W entrance to Welsh Channel and is crossed by a dredged channel. In 2000 there was a patch drying 2.1m, 0.1 mile NE of SH4 Lighted Buoy.

Hilbre Swash, which lies between West Hoyle and East Hoyle Banks, had a least depth of 4.6m in the fairway. A dangerous wreck, with a depth of 0.4m, lies within Hilbre Swash on the W side of the channel.

**Welshmans Gut** (53°22'N., 3°16'W.) lies between West Hoyle Bank, on the N side, and Salisbury Middle, to the S.

**9.16 Mostyn Docks** (53°19'N., 3°16'W.) is a small port which consists of a rubble training wall that extends about 0.4 miles NE from the shore, a ro-ro terminal and a river wharf. It is on the W side of the River Dee estuary, 2.7 miles SE of Point Ayr. The port is a ferry terminal for Ireland and handles various bulk cargoes.

**Tides—Currents.—**Tidal currents run at rates of 1.5 to 2.5 knots within Inner Passage and Welsh Channel. Below Mostyn Deep, the velocity of the tidal currents does not exceed 3 knots.

**Depths—Limitations.—**The ro-ro terminal is SE of and parallel to the training wall; the river wharf extends 0.2 miles farther in a SSE direction. The river wharf can accept vessels up to 5,500 dwt with a length of 120m, a beam of 18m, and up to 6m in draft at all states of the tide.

The harbor master should be consulted for the latest information for channel depth in Mostyn and the berths at the docks. The buoys are moved occasionally according to the changes in channel depth.

**Pilotage.—**Pilotage for Mostyn Docks and ports in the River Dee and its estuary is compulsory for all vessels carrying explosives or a bulk cargo of dangerous substances, all vessels engaged in towing where the combined length of the towing

vessel and tow is more than 50m in length, fishing vessels of 47.5m or more in length, and all other vessels of 20m or more in length.

Vessels should send their ETA at the Mostyn Outer Pilot boarding area, via telex or facsimile, at least 24 hours in advance and provide the following:

1. Vessel name and call sign.
2. Vessel agent.
3. Vessel characteristics; length, beam, draft, type, gross tonnage, net tonnage, dwt, maximum speed, and propulsion specifics.
4. ETA at the Mostyn Outer Pilot boarding area.
5. Conformation of no notable defects.
6. Conformation that an up-to-date version of Admiralty Chart 1953 is on board.

When within VHF range, vessels should call Mostyn Pilot or River Dee Pilot on VHF channel 14 or 16. Pilots board at the inner position near Dee Lighted Buoy. However, pilots board the following vessels at the outer pilot boarding position (53°22.5'N., 3°33.3'W.):

1. Vessels over 95m in length where the master has no previous experience of the approaches to Mostyn.
2. Vessels that do not have an up-to-date chart of the River Dee on board.
3. Vessels requesting to be boarded at the outer boarding position.

**Contact Information.—**Mostyn Pilots can be contacted, as follows:

1. Telephone: 1-44-1745-560335
2. Facsimile: 1-44-1745-560324
3. E-mail: harbourmaster@portofmostyn.com

**Anchorage.—**Deep-draft vessels bound for Mostyn should anchor at Wild Road near North Rhyl Light (53°23'N., 3°35W.) and then proceed at 3 hours before HW to Dee Lighted Buoy.

Entry to Mostyn is from 2 hours before HW or by arrangement. Temporary anchorage can be obtained at Wild Road in depths of 17m with little or no protection from weather and tide. Vessels should be prepared to move from the anchorage on very short notice.

Anchorage can be obtained at Mostyn Deep (53°21'N., 3°17W.), in depths of 5 to 10m; however, similar situations apply as in the Wild Road anchorage.

**Directions.—**From Dee Lighted Buoy to the Mostyn Docks entrance, the track leads 3 miles SE through Wild Road and Mostyn Deep. The leading line on 177.25° in the white sector of the Inner Directional Light (53°19.3'N., 3°16.1'W.) leads S through a dredged channel to Mostyn Docks.

**Connah's Quay** (53°13'N., 3°04'W.) lies on the S side of the mouth of the River Dee, about 9 miles SE of Mostyn Quay. The two tidal docks are now disused. Overhead cables, with a clearance of 39m, span the river NW of the quay. Anchorage can be taken, in a depth of 17m, 0.5 mile NE of Point of Ayr or, in depths of 7 to 14m, about 1.5 miles SE of the same point.

## Liverpool (53°25'N., 3°02'W.)

World Port Index No. 34690

**9.17** This section describes the approaches to the River Mersey, including the entrance channel; the Port of Liverpool, including Birkenhead and the oil terminal at Tranmere; the Port of Garston; the Manchester Ship Canal; and the Port of Manchester. It also provides details on the navigable reaches of the Upper Mersey.

The port handles general cargo, bulk, oil, container, and ro-ro vessels.

The port limits include the River Mersey and the approaches from a line between Hilbre Point and Formby Point, extending 15 miles seaward and upriver to Warrington Bridge (53°23'N., 2°35'W.), excluding any waters belonging to the Port of Manchester.

**Port of Liverpool Home Page**

http://www.merseydocks.co.uk

A free port area lies on the E side of the river and consists of the Royal Seaforth, Gladstone, Alexandra, Langton, and Canada Docks; an area within Birkenhead Docks has also been given free port status.

The port of Liverpool stands on the banks of the River Mersey, which discharges into Liverpool Bay. The towns bordering the river are known collectively as Merseyside. The port comprises the dock systems at Liverpool, on the E side; at Birkenhead, on the W side; and Tranmere Oil Terminal, which lies S of Birkenhead. In addition, there are extensive repair facilities, including dry docks. The port provides support for oil and gas exploration activities.

The port is entered through Queens Channel and Crosby Channel which lead through Liverpool Bay. The approach to Queens Channel is marked by Bar Light Float, which is moored 3 miles WNW of the entrance.

The channel is encumbered by banks on either side, which extend up to 8 miles offshore, but these dangers and the fairway are marked by floating seamarks and lighted buoys so that navigating the approach is not difficult in moderately clear weather.

Queens Channel and Crosby Channel form a continuous entrance fairway through the offshore banks.

**Tides—Currents.—**The spring tide range is 8.4m and the neap tide range is 4.5m. Strong NE winds reduce the tidal heights and SW winds increase the tidal heights.

In Queens Channel and Crosby Channel, the tidal current generally runs in the direction of the fairway, but in the dredged cut and entrance to Queens Channel, a SE set has been experienced during the incoming current. In addition, a W set has been experienced during the outgoing current. At the bend in Crosby Channel, when the training banks are covered, an E set has been experienced during the incoming current and a N set during the outgoing current. The sets at the bend in Crosby Channel may be very strong at springs.

From the channels up to the river entrance, the velocity of the current gradually increases from 2 to 4 knots.

**Depths—Limitations.—**The depths in Queens Channel and Crosby Channel are maintained at or near 6.9m. A fairway channel, 0.5 mile wide, has been dredged through the bar at the outer end of Queens Channel. Generally, vessels with drafts of up to 12.9m can enter the port at any HW and vessels of up to 14.1m draft can enter on 75 per cent of the high waters during the year. Occasionally, these drafts have been slightly exceeded

**Liverpool—Salisbury Dock—Victoria Tower (1848)**

by arrangement and permission of the Port Authorities.

Royal Seaforth Dock, Liverpool Docks, Birkenhead Docks, and Tranmere Oil Terminal are maintained to provide deep-draft berthing facilities.

The largest vessel handled was one of 322,912 dwt, 346m in length, 57.4m beam, and 12.5m draft, which berthed at the Tranmere Oil Terminal.

The water in the docks on the Liverpool side is impounded at a level approximately 9.7m above chart datum. The water in Birkenhead Docks is impounded at a level approximately 10m above chart datum. The level of water is apt to vary more or less from time to time and vessels must therefore take precautions while berthed alongside. However, within both docks, the levels are maintained so far as circumstances permit by pumping from the river.

Liverpool Docks and the City of Liverpool lie on the E bank of the river. Liverpool Docks are an extensive system of wet docks and basins which occupy 6 miles of river frontage. The basins are connected by passages so vessels may be transferred from one to another without having to enter the river. The dock system is entered through two locks. Gladstone Lock has a sill 5.6m below chart datum and Langton Lock has a sill 5.3m below chart datum. The water level in the wet docks is maintained, when possible, at a level of 9.7m above chart datum. Vessels of up to 75,000 dwt, 260m length, and 12.8m draft can be taken to berth.

The S part of the wet dock system, on the E side of the river, is closed to commercial traffic. Birkenhead Docks, which form a part of the Port of Liverpool, occupy about 1 mile of river frontage on the W side. They consist of a series of wet docks, basins, and dry docks. Entrance from the river is via Alfred Lock, with a sill 2m below chart datum. For vessels which are

**Liverpool—Albert Dock**

**Liverpool Maritime Museum**

**Liverpool Skyline**

**Liverpool—The Three Graces**

longer than the lock entrance, the whole of the inner Alfred Dock basin is used as a lock. The water level in the wet docks is maintained, when possible, at a level of 10m above chart datum by pumping from the river. Vessels of up to 8.7m draft can be accommodated.

Tranmere Oil Terminal consists of a U-shaped pier which projects ENE from the W shore 1.5 miles S of the entrance lock at Birkenhead Docks. At the head of each arm, there is a floating pontoon, 112m long, with several dolphins. T. A jetty, which is used by vessels up to 70,000 dwt for tank cleaning, extends from the W bank of the river, close S of the tanker terminal. Bromborough Dock, which formerly led to Port Sunlight, lies 1.5 miles S of the terminal.

Royal Seaforth Dock provides ten deep-water berths and is entered from Gladstone Dock through a passage, 39.6m wide. The passage has a depth of 5.6m below chart datum, and the dock has a depth of 3.7m below chart datum. There is 3,170m of quayage including a ro-ro ferry service terminal.

Works are in progress (2013) to construct a new deep-water container terminal known as Liverpool2. This terminal will be

*Courtesy of John Luxton*

**Liverpool**

located close NW of the Gladstone Lock, will have 854m of berthing, be able to accommodate two vessels of 380m length, and have depths alongside of 16.5m. In addition, the approach channel to this terminal will be dredged to a minimum of 8m below chart datum.

Gladstone Dock, located adjacent to the S side of the Royal Seaforth Dock, is one of the principal wet docks and includes three branch wet basins. It is entered from the river through Gladstone Lock. For further information refer to table titled **Liverpool-Locks**

Alexandra Dock is connected to Langton Dock by a passage, 39.4m wide.

Langton Dock, entered from Langton Lock, gives access to the remaining docks within the N division. Brocklebank Dock, which includes a branch basin, lies adjacent to Langton Dock. This dock contains a freight ferry terminal.

Canada Dock is entered from Brocklebank Dock through a passage, 39.6m wide, and contains three branch wet basins.

Huskisson Dock is entered from Canada Dock through a passage, 27.3m wide. It contains two branch wet basins.

Sandon Half-Tide Dock, entered from Huskisson Dock, gives access to the smaller docks in the system. Wellington Dock and Bramley Moore Dock are entered via cuttings, 21.3m and 18.3m wide. Nelson Dock, Wellington Dock, Salisbury Dock, Collingwood Dock, Stanley Dock, and Trafalgar Dock are no longer open to commercial traffic.

Liverpool Landing Stage, a floating dock 620m long, operates a ro-ro vehicle and passenger ferry service to the Isle of Man from the N section of the stage.

Alfred Docks, at Birkenhead, is entered directly from Alfred Lock. For further information pertaining to the Alford Lock refer to the table titled **Liverpool-Locks.** East Float is entered from Alfred Dock by a passage, 30.5m wide.

Vittoria Dock, which lies within East Float, contains berths at Vittoria Wharf and South Vittoria Doc.

West Float is entered from East Float by Duke Street Passage which has a width of 30m.

Bidston Dock is entered from West Float through Bidston Passage which has a width of 30.4m.

Mersey Wharf, a private wharf opened to commercial shipping in 1990, lies 1.5 miles SE of Tranmere oil terminal and fronts the Bromborough Dock. Generally, vessels take the ground when alongside at LW. For further berthing information refer to the table titled **Liverpool—Berth Information**.

**Aspect.—**The coast between the N entrance point of the River Dee and Rock Lighthouse, 6.5 miles NE, is composed of low sand hills. Rock Lighthouse, which stands at the W entrance point of the River Mersey, is a prominent disused light tower.

Within the port, the Three Graces are the tallest buildings and stand out conspicuously on the waterfront.

Grange Monument, a column surmounted by a sphere, stands 1.5 miles SE of Hilbre Point and is conspicuous. A prominent war memorial stands close NW of this monument and two prominent radio masts stand on a hill close SE of it.

A range of hills lies behind the coast and Thurstaston Hill, 86m high, rises about 3 miles SE of Hibre Point and is prominent. Another prominent hill is Bidston Hill, which stands about 3 miles SSW of Rock Lighthouse, with its disused lighthouse, observatory, and mill.

Between the two hills is the prominent square church tower of Woodchurch. Near the coast, prominent landmarks include the dome of a church standing 0.5 mile SSW of Rock Lighthouse and a water tower standing close SW of the dome.

On the N side of the approach, Formby Point and the shore for 5 miles S of it consist of low sand hills. A disused lifeboat house and a flagstaff, with a triangle top mark, stand on the point. Rock Channel, parts of which dry, lies about 1.5 miles offshore, NW of Rock Light. This channel, which leads to the river, is unmarked and used only by small craft with local knowledge.

**Liverpool Locks**

| Lock | Maximum Vessel | | | Remarks |
|---|---|---|---|---|
| | LOA | Draft | Beam | |
| Gladstone Entrance Lock | 292m | 11.6m | 32.6m | Maximum draft on spring tide of 12.8m |
| Langton Entrance Lock | 215m | 11.0m | 32.6m | — |
| Birkenhead Alford Lock | 192m | 8.5m | 26.5m | — |

| Liverpool—Berth Information | | | | | | |
|---|---|---|---|---|---|---|
| Berth | Length | Depth | Maximum Vessel | | | Remarks |
| | | | LOA | Draft | Beam | |
| **Royal Seaforth Dock** | | | | | | |
| Grain Dock | 133m | — | — | — | — | Grain. |
| S 1 | 261m | 4.5m | 290m | 11.6m | 36m | — |
| S 2 | 234m | 4.5m | 290m | 12.8m | 36m | — |
| Coastal Quay | 133m | — | 165m | 8.1m | — | Coastal trans-shipments. |
| S3-S5 | 810m | — | 292m | 11.6m | 36m | — |
| S6 | 285m | — | — | — | — | Containers. |
| S7-S9 | 499m | — | 290m | 11.6m | 36m | Forest and general cargo. |
| S 10 | 213m | — | 292m | 12.5m | 35m | — |
| Minor berth | 225m | — | — | — | — | Bulk cargo. |
| **Gladstone Dock** | | | | | | |
| West | 330m | — | — | — | — | Scrap cargo. |
| No. 1 N | 371m | — | 290m | 11.6m | 36m | Steel and autos. |
| No. 1 S | 454m | — | — | — | — | Coal and break bulk. |
| No. 3 | 274m | — | — | — | — | Ro-ro and passenger (P&O Ferries). |
| **Liverpool 2** | | | | | | |
| Container | 854m | 16.5 | — | — | — | Under construction. |
| **Alexandria Dock** | | | | | | |
| West | 487m | — | 189m | 8.8m | 26m | Bulk cargo. |
| No. 2 S | 415m | 7.6m | — | — | — | Bulk cargo. |
| No. 3 N | 433m | 9.2m | — | — | — | General cargo . |
| **Langton Dock** | | | | | | |
| North | 152m | 8.8m | — | — | — | Bulk cargo. |
| Branch N | 308m | 8.7m | — | — | — | Ferries and ro-ro. |
| West | 345m | 9.7m | — | — | — | General cargo and cruise terminal. |
| **Brocklebank Dock** | | | | | | |
| West | 232m | 9.9m | — | — | — | — |
| East | 272m | — | — | — | — | Vehicles, steel, and ro-ro. |
| **Canada Dock** | | | | | | |
| West | 490m | — | — | — | — | Bulk cargo. |
| No. 1 N | 331m | — | — | — | — | Bulk cargo. |
| No. 1 S | 430m | — | — | — | — | General cargo. |
| No. 2 N&S | 569m | — | — | — | — | General and bulk cargo. |
| No. 2 N&S | 608m | — | — | — | — | General, steel, and ro-ro. |
| No. 3 E | 91m | — | — | — | — | Ro-ro. |
| **Huskisson Dock** | | | | | | |
| No. 3 N&S | 788m | — | — | — | — | General cargo and sugar. |

| Liverpool—Berth Information | | | | | | |
|---|---|---|---|---|---|---|
| Berth | Length | Depth | Maximum Vessel | | | Remarks |
| | | | LOA | Draft | Beam | |
| Bramely Moore N-E-S | 667m | — | — | — | — | Bulk cargo. |
| Pier Head cruise Jetty | 350m | — | 300m | 11.0m | — | Passenger. |
| **Birkenhead Docks** | | | | | | |
| Carthcart St. | 175m | — | 300m | 11.0m | — | Passenger. |
| Vittoria Wharf | 465m | — | — | — | — | Forest products and general cargo. |
| Vittoria Quay | 110m | — | — | — | — | — |
| Duke Street Wharf No. 1 and No. 2 | 289m | — | — | — | — | Forest products and steel. |
| Duke Street Wharf | 197m | — | — | — | — | Bulk cargo. |
| Cavendish Wharf | 125m | — | — | — | — | Bulk cargo. |
| Cavindish Quay | 298m | — | — | — | — | Bulk cargo. |
| Ocean Mill Quay | 112m | — | — | — | — | — |
| Beaufort Road Mill Quay | 126m | — | — | — | — | Bulk cargo. |
| Graving Dock No. 3 | 228m | — | — | — | — | Ship repairs. |
| Nelson Dock | 470m | — | — | — | — | — |
| Ilchester Quay | 220m | — | — | — | — | Lay-by berth. |
| **Birkenhead Twelve Quays Ferry Terminal** | | | | | | |
| No. 1 and No. 2 | — | — | — | — | — | Passenger and ro-ro. |
| **Bromborough** | | | | | | |
| No. 1 and No. 2 | 155m | 7.5m | 110m | 7.0m | — | Vessels up to 6,000 dwt can be accommodated. |
| **Mersey Wharf** | | | | | | |
| Private | 280m | — | — | — | — | Private wharf. Bulk cargo. It is reported that for limited periods on certain HW spring tides, vessels of up to 6,000 dwt can berth alongside. |
| **Gladstone** | | | | | | |
| No. 2 N | 376m | — | 183m | 11.6m | 33m | Bulk cargo and oil. |
| No. 2 S | 385m | — | — | — | — | Bulk liquids and steel. |
| **Canada** | | | | | | |
| No.1 S | 429m | | | | | Bulk oils and animal feed. |
| **Tankers** | | | | | | |
| **Tate and Lyle Terminal** | | | | | | |
| Oil East Lewis quay | 172m | 8.4m | 152m | 8.2m | 26.5m | Chemicals. Vessels up to 28,000 dwt can be accommodated. |
| Oil West Lewis quay | 152m | 8.4m | 132m | 8.2m | 26.5m | Chemicals. |
| **Langton Dock** | | | | | | |
| South Berth (Cargill) | 272m | — | — | — | — | Edible oils. |

| Liverpool—Berth Information | | | | | | |
|---|---|---|---|---|---|---|
| Berth | Length | Depth | Maximum Vessel | | | Remarks |
| | | | LOA | Draft | Beam | |
| Liverpool Bulk Liquids (LBL) | — | — | — | 11.5m | — | Petroleum products. Vessels up to 25,000 dwt can be accommodated. |
| **Tranmere Terminal** | | | | | | |
| North | 354m | 12.5m | 345m | — | — | Vessels up to 193,050 dwt can be accommodated. |
| South | 354m | 11.7m | 248m | 11.0m | — | Vessels up to 91,445 dwt can be accommodated. |
| **Note:** Vessels bound for a berth within the Royal Seaforth Dock or Gladstone dock should proceed towards the Gladstone Dock river entrance which is NNW/SSE. Vessels are presented bow first. Large vessels usually berth at or near HW. | | | | | | |

*Courtesy of Jürgen Tronikce*

**Rock Light**

Queens Channel, Crosby Channel, and the River Mersey are marked by floats and lighted buoys. The approach to the entrance of Queens Channel is marked by Bar Lightfloat which is moored about 2.7 miles WNW of the entrance, 12 miles NW of Rock Lighthouse. A racon is situated at the lightfloat.

**Pilotage.—**Pilotage is compulsory, as follows:

1. Vessels with lengths of 82m and above.
2. Vessels under tow where the combined length of tug and tow exceeds 82m.
3. Vessels of less than 82m in length carrying dangerous cargo or harmful substances.
4. Vessels affected by a defect in or damage to the vessel itself or its equipment.
5. Vessels the port authority deems require pilotage due to crew inadequacy or incompetence.
6. Vessels carrying more than 12 fare-paying passengers.
7. Vessels navigating within the port limits solely to adjust its compass.
8. Vessels of more than 50m in length where the master or first mate has not previously navigated the vessel or a similar class vessel within the port.

A request for a pilot should be made with the ETA notice (see).

The Liverpool Pilots can be contacted on VHF channels 11, 12, and 16. The Point Lynas Pilots can be contacted on VHF channels 9 and 16.

Pilots normally embark or disembark in the vicinity of Bar Lightfloat (53°32'N., 3°21'W.). In the case of bad weather or at the request of a vessel's master, pilots will board off Point Lynas (53°25'N., 4°17'W.). A communications officer boards with the pilot on vessels of 100,000 dwt or over.

In extreme cases of poor weather, a pilot may leave an outbound vessel anywhere in the river, if the Port Control Center permits.

**Contact Information.—**Liverpool Pilots can be contacted, as follows:

1. Telephone: 44-151-9496131
   44-151-9496133
   44-151-9496132
2. Facsimile: 44-151-9496090
3. E-mail: vts.pilotage@merseydocks.co.uk

**Regulations.—**Vessels of more than 50 gross tons navigating within the Port of Liverpool must be equipped with VHF communications capable of working VHF channels 6, 12, and 16 and should establish contact with the Port Control Center

(call sign: Mersey VTS) when approaching Bar Lightfloat; inbound vessels should maintain a continuous listening watch. Vessels carrying dangerous cargo are also required to report to the Port Control Center when passing Bar Light Float.

Vessels should send an ETA for the designated pilot boarding position at least 24 hours in advance, stating the vessel's name, draft, gross tons, destination, loa, date and time of ETA, pilot boarding position, last port of call, message origin, and persons on board. The ETA should be confirmed when within VHF range. Vessels carrying dangerous cargo should provide an ETA at least 48 hours in advance, along with the nature of the cargo.

The Port Control Center, which is situated in the Port of Liverpool Building (53°28'01.8"N., 3°01'07.8"W.), broadcasts vessel movements, weather reports, local navigation warnings, and visibility reports.

All vessels carrying dangerous cargoes and all vessels towing another vessel must report when passing the following points:

1. Q1 Lighted Buoy (inbound) or Q2 Lightfloat (outbound).
2. Crosby Lighted Buoy.
3. Brazil Lighted Buoy or C22 Lighted Buoy.
4. Woodside Stage or Dukes Buoy.

In poor visibility when the above is not practicable, vessels will, on request, be tracked by radar.

Vessels wishing to adjust compasses within the port must give 24 hours prior notice to the Port Control Center and confirm immediately before commencing adjustment.

When vessels of 150m or over in length intend to swing in the river, they must report their intentions to the Port Control Center at least 10 minutes before maneuvering.

Vessels of over 50 gross tons may not anchor inward of Q1 Lighted Buoy without permission from Mersey Radio. In the case of an emergency anchoring, a report must be made as soon as practicable.

**Mersey Channel Collision Rules.—**The Mersey Docks and Harbor Company has adopted certain for vessels navigating the River Mersey, sea channels, and approaches; a partial summary of the rules are, as follows:

1. In these rules, except where the context otherwise requires, "Collision" means the Merchant Shipping (Distress Signals and Prevention of Collisions) 1996 made under section 2l of the Merchant Shipping Act 1979 and, in relation to seaplanes, the Collision (Seaplanes) Order 1989 made under section 418(1) of the Merchant Shipping Act of 1894 as extended by section 97(1) of the Civil Aviation Act 1982.

2. Every vessel navigating in any part of the River Mersey or in the sea channels or approaches between Rock Light and the furthest point seaward to which such sea channels or approaches respectively are for the time being buoyed on both sides shall comply with these rules, and the Collision, except in so far as compliance with these rules requires otherwise.

3. The lights prescribed by these rules shall be exhibited from sunset to sunrise, from sunrise to sunset in restricted visibility, and in all other circumstances when it is deemed necessary and during such other times no other lights shall be exhibited. These lights as cannot be mistaken for the lights specified in these rules, do not impair their visibility or distinctive character, or interfere with keeping a proper lookout.

The marks and shapes prescribed by these rules shall be exhibited from sunrise to sunset and shall comply with the provisions of the Collision.

4. A power driven vessel when being towed shall, if under power, notwithstanding anything contained in Rule 24(e) of the Collision, exhibit the lights prescribed by Rule 23 of the Collision. Provided that a power driven floating crane shall not be required under this paragraph to exhibit the light prescribed by Rule 23(a)(ii) of the Collision.

5. A power driven floating crane when under way shall exhibit the lights prescribed by Rule 23(a)(i)(iii) and (iv) of the Collision, but shall not be required to carry the light prescribed by Rule 23(a)(ii) thereof.

6. A vessel of 20m or over in length, when at anchor, shall in addition to the requirements of Rule 30 of the Collision, carry aft, where it can best be seen, one ball at a height of 4.5m lower than the forward ball.

7. A vessel, when lying at or attached to another vessel lying at any jetty or stage N of a line drawn from the S end of the Liverpool Landing Stage to the S end of the Woodside Ferry Stage, shall exhibit the lights prescribed by Rule 23 of the Collision or, as the case may be, Rule 25 thereof:

Provided that a power driven floating crane shall not be required under this paragraph to exhibit the light required by Rule 23(a)(ii) of the Collision.

A vessel, when lying at any jetty or stage S of the said line, or moored head and stern to buoys permanently fixed, shall exhibit, where they can best be seen, one white all round light forward and, at or near the stern, a second white all round light. The forward light shall be 4.5m above the after light, provided that a vessel under 50m length may carry one such light only, fixed where it can best be seen.

8. A vessel exceeding 200m in length when under way or at anchor, shall, in addition to the lights prescribed by Rule 23 or Rule 30 of the Collision, exhibit where they can best be seen three red all round lights spaced vertically 2m apart.

9. A vessel wishing to warn ships of an unmarked underwater obstruction shall display the lights or shapes provided for in Rule 27(b) and (d) of the Collision; additionally, such vessel may use its searchlight to warn oncoming ships as provided for in Rule 36 of the Collision.

10. For the purposes of Rule 9 of the Collision (navigation in narrow channels), the fairways of the River Mersey and the sea channels or approaches between Rock Light and the furthest point seaward to which such sea channels or approaches respectively are for the time being buoyed on both sides shall be considered to be narrow channels.

11. A vessel shall not navigate to come into or leave the Main Channel (i.e. Queens and Crosby) seaward of a line drawn on a true bearing of 071° from Rock Light (i.e. a line drawn from Rock Light to the W pier head of the Gladstone River Entrance) at such a time or in such a manner as to hamper traffic passing up and down the Main Channel.

12. A power driven vessel under way, when about to turn round (i.e. alter its course more than 135°), shall indicate the same by four short and rapid blasts on the whistle followed, after a short interval if turning with its head to starboard, by

one short blast, or, if turning with its head to port, by two short blasts. The giving of the signal shall not relieve a vessel of its obligations under the Collision or these Rules.

Vessel less than 50m long shall not be required to give the signal unless it is towing one or more vessels and the distance from its stern to the stern of the last vessel towed is 50m or more.

**Vessel Traffic Service.—**A Vessel Traffic Service (VTS) is operated from the Port Control Center, although the surveillance radar is maintained at the Port Radar Station (53°27.9'N., 3°02.3'W.). The radar coverage extends over the bay and up to 20 miles from the station.

**Contact Information.—**Mersey VTS can be contacted, as follows:

1. Telephone: 44-151-9496134
   44-151-9496135
2. Facsimile: 44-151-9496090
3. E-mail: vts.portoperations@merseydocks.co.uk

**Anchorage.—**In the event of berths not being readily available, designated anchorage areas lie in the Bay. It is essential that vessels anchor clear of the buoyed channel and Bar Lightfloat. All vessels intending to anchor within the port limits must first contact Mersey VTS. Deep draft vessels are assigned to the N anchorage area in the vicinity of 53°34'N, 3°22'W while all other vessels are assigned to the S anchorage area in the vicinity of 53°28'N, 3°24'W.

For vessels awaiting the tide, anchorage may be taken in mid-channel for about 1.5 miles above the river entrance.

**Caution.—**To avoid obstructing shipping in the approaches to the River Mersey, vessels are prohibited from anchoring within an area, which may best be seen on the chart, extending W from Q2 Light Buoy and Ql Light Buoy to a position 3 miles W of Bar Light Float.

Numerous wrecks and obstructions exist in the approaches to the port and in the river and may best be seen on the chart. Dangerous wrecks are generally buoyed and mariners are warned to give such wrecks and buoys a wide berth, particularly since dispersal operations with explosives may be conducted at any time.

During strong NW winds, a considerable swell exists on the bar and deep-draft vessels must allow for this when entering or leaving the port.

Training banks, which cover, have been constructed on each side of the entrance channel. Vessels are advised not to navigate between the floating aids, which mark the sides of the fairway, and these training banks.

The depths in the entrance channel and in the river are liable to change and the floating aids are frequently changed as necessary.

Large tankers of up to 210,000 dwt may be encountered within the port during daylight hours. Other vessels should avoid meeting such vessels in the narrow parts of the fairway. An amber quick flashing light is exhibited, by day and at night, from the Port Radar Station to warn marine traffic that a large inbound vessel or a deep-draft vessel has entered the approach channel.

Dredges are constantly operating within the approach channels and the river.

A regular ferry service operates within the river in the vicinity of the Liverpool Landing Stage.

At the entrance to Garston Channel, a submerged pipeline extends SW from the shore and is marked at its head by a lighted buoy. Anchoring and fishing are prohibited within the vicinity of this pipeline.

Submarine pipelines, which may best be seen on the chart, lie in the vicinity of the tanker cleaning jetty at Rock Ferry (53°22'N., 3°00'W.), in an area adjacent to the N limit of the South Explosives Anchorage, and in an area lying at the middle of the South Explosives Anchorage.

The depths within the navigable entrance fairways vary so frequently that it is impracticable to describe them. No reliance can be placed on the buoys marking these channels as they are frequently dragged out of position by the strong tides.

Burbo Wind Farm and Burbo 2 Wind Farm are centered in position 53°29'N, 3°11'W and are marked by lighted buoys.

Gwynt-y-Mor Wind Farm, comprised of 160 wind mills, is centered in position 53°28'N, 3°35'W and is marked by lighted buoys. Caution should be used when navigating in this area.

## Upper Mersey

**9.18** Garston Docks (53°21'N., 2°54'W.) lie on the E side of the river, 3.5 miles above Tranmere Oil Terminal. They consist of three wet docks and are approached through Garston Channel which lies between the E shore of the river and the tongue of a drying sand bank. Stalbridge Dock is entered through a lock and is connected to Old and North Docks by passages. The lock, which is 84.1m long and 19.8m wide, has a sill with a depth of 0.7m below chart datum. The channel is marked by lighted buoys and the approach to the lock is indicated by a range. A drying rocky ledge lies close S of the approach to the lock. There are facilities for general, bulk, container and ro-ro vessels. Vessels of up to 10,000 dwt, 152m in length, 19m beam, and 8.3m draft can be accommodated.

The estuary of the River Mersey above Garston almost dries, except for the winding course of the river and several deep-water bights or blind channels which are subject to constant changes.

The channels of the Upper Mersey are marked, but local knowledge is necessary.

Liverpool John Lennon Airport is situated on the NE bank of the river, close E of Garston.

Runcorn Gap, about 6 miles E of Garston, is where the river narrows to a width of 0.2 mile and is spanned by a high-level road and railway bridge with a vertical clearance of 24.4m. The town of Widnes stands on the N shore and has a wet dock which is entered through a lock situated close W of the bridge. The lock is 48.8m long, 12.2m wide, and has a depth of 6.4m over the sill at MHWS. Small craft of up to 4.6m draft can reach Widnes at MHWS.

Warrington, an industrial town, is situated about 5 miles above Widnes. A quay is accessible to small craft with drafts up to 3.5m at MHWS. The river in the vicinity of the town is spanned by several bridges. Above Warrington, there are several weirs in the river. Locks make the river navigable for small craft and it joins the Manchester Ship Canal at a point about 12 miles below Manchester.

Queen Elizabeth II Dock lies on the S side of the river adjacent to the entrance of the Manchester Ship Canal, 4 miles SSE of Tranmere Oil Terminal. The dock is specially designed for

the handling of bulk petroleum and liquid chemicals and is entered through a lock, 246m long and 30.5m wide. There are four berths, 221 to 274m long, and the dock is normally maintained at a depth of 10m.

## Manchester Ship Canal

**9.19** The Manchester Ship Canal is 36 statute miles in length. Figures exhibited on the bank indicate the distance from the seaward end of the canal. The entrance is via Eastham Locks which are situated on the S side of the River Mersey, adjacent to Queen Elizabeth II Dock. Between the entrance and Manchester, there are four sets of canal locks giving a total lift of 17m. Tides at Eastham Locks rise about 9.7m at springs and 7.7m at neaps.

**Depths—Limitations.—**Eastham Locks, the only entrance in use, consists of three locks. The E or smallest lock is not used for navigation. The W lock is 183m long and 24.4 wide. The center lock is 106.7m long and 15.2m wide. These locks generally operate for 4 hours either side of HW and are closed during leveling tides.

Each set of canal locks consists of two locks; a larger one, 183m long and 19.8m wide, and a smaller one, 106.7m long and 13.7m wide. These locks are situated at Latchford, Irlam, Barton, and Mode Wheel, which lie, respectively, about 21, 28.5, 30.5, and 34 statute miles from the seaward entrance.

Vessels using the canal may have a maximum draft, as follows:

1. Eastham Locks to Ince Oil Wharf, about 5.2 statute miles above the entrance—8.78m.
2. Ince Oil Wharf to Runcorn Lay-by—8.07m.
3. Runcorn Lay-by to Lower Mode Wheel Locks—7.31m.
4. Lower Mode Wheel Locks to the Manchester Swinging Basin—5.48m.

The width of the canal at the water level varies from 40 to 64m, depending upon the slope of the bank and depth of water. The minimum fairway width in the canal occurs in the passage under the Runcorn Railway Bridge where the distance between fenders at the water level is 25.9m.

Vessels with dimensions not exceeding a length of 170.7m or a beam of 21.9m can, with a draft up to 8.8m in fresh water, proceed as far as Ince Oil Wharf.

Vessels with dimensions not exceeding a length of 161.5m or a beam of 19.4m can proceed as far as Manchester, subject to the following fresh water draft restrictions:

a. 8.1m as far as Latchford Locks
b. 7.3m as far as Mode Wheel Locks
c. 5.5m as far as the Railway Swing Bridge at Manchester

The canal is crossed by a number of fixed, swing and vertical lift bridges. The minimum passage width through these swing bridges is 36.6m. The minimum vertical clearance of any fixed bridge is not less than 22m above normal water level. In order to avoid detention during periods of high water levels, masts and funnels should not have a greater height than 21.3m above the waterline. Gauge wires are set across the canal before the fixed bridges. Any vessel failing to clear these wires should not attempt to pass under the bridges.

If a vessel's funnels or masts are too high to pass under the bridges, the topmasts or funnel tops can be removed by the crane which is situated on the W side of the canal, 0.2 mile above Eastham Locks. The minimum vertical clearance of any overhead power cable is 25.8m above the normal water level.

When the tide rises to a height of 9.08m, Eastham Locks are opened to the river and the canal may become tidal as far as Latchford Locks. When the leveling tide starts to ebb at Eastham Locks, the gates are closed and any excess water is returned to the river through sluices. Vessels in the canal should navigate with caution during these operations.

Numerous private wharves and lay-by berths, with lengths of 83 to 375m, are situated along the canal. The wharves have facilities for oil, chemical, bulk, ro-ro, and container vessels. The principal docks within the canal are described below.

Ellesmere Port, lying on the S side of the canal about 3 statute miles above Eastham, is the terminus of the Shropshire Union Canal. There is 716m of wharfage along the canal, with a depth of 9.1m alongside, and a wet dock for barges. Bowater's Wharf (Manisty Wharf), at the W end of Ellesmere Port, is 335m long and equipped to handle pulp and forest products.

Stanlow Oil Docks are situated on the N side of the canal, about 4.5 statute miles above Eastham. These docks have berths for tankers. They are isolated and are for the loading and discharging of liquids with a low flash point. Vessels of maximum draft for the canal can be accommodated alongside and there is no limit to the height of masts or funnels of vessels using these docks. There is a turning basin at the entrance to the docks in which vessels of 170.7m overall length can be turned. Stanlow Lay-by Berth, situated on the S side of the canal, and Ince Oil Wharf, about 1 mile farther up, are each 183m long and have depths of 9.1m.

Weston Point Docks lie on the E side of the canal, about 11 statute miles above Eastham. They are entered through a passage, 18.3m wide, which leads into Delamere Dock. Other docks and basins are connected to Delamere Dock and provide 1,350m of quayage. Vessels of up to 2,500 tons and 4.6m draft can be accommodated.

The Weaver Navigation Canal is entered at Weston Point through a lock, 69.8m long and 13m wide. It serves Northwich and Winsford and is used by small commercial vessels and pleasure craft. Anderton Depot at Northwich, about 11 miles above Weston Point, has 183m of quayage. Vessels of up to about 1,000 dwt can be accommodated, but are limited to a length of 60m, a beam of 10.1m, a draft of 3m, and a vertical height of 18.3m. Vessels proceeding to Winsford are limited to a length of 40m, a beam of 10.7m, a draft of 3m, and a vertical height of 9.1m.

Runcorn Docks lie on the E side of the canal, about 12 statute miles above Eastham. They consist of three principal basins which are entered through a passage leading from the canal. Vessels of up to 115m in length, 16m beam, and 7m draft can be accommodated. Runcorn Lay-by is situated on the E side of the canal between Weston Point and Runcorn Docks. It is 168m long, with depths of up to 8m alongside. There are facilities here for the handling of bulk liquids with a flash point above 23°C.

**Pilotage.—**Canal pilots board vessels at Eastham Locks. Helmsmen for the canal passage are also available. Vessels requiring a pilot should give not less than 4 hours 30 minutes advance notice of their ETA at the Bar Lighted Buoy. For further

information, see pilotage for Liverpool in paragraph 9.17.

Several VHF shore stations, which are situated along the canal, control the movements of vessels. A continuous radio watch must be maintained on VHF.

**Vessel Traffic Service.—**A Vessel Traffic Service (VTS) is established for the Manchester Ship Canal. The service is located at the Eastham Port Operations Control Center. Communication is, as follows:

1. VHF channel 7—the River Mersey and Eastham approaches.
2. VHF channel 14—in the canal.
3. VHF channel 20—communicating with the swing bridges.

Vessels approaching from the River Mersey should contact Eastham Port Operations Control Center. Vessels should contact the Duty Operations Controller before moving within the canal. Vessel movements are regulated by the Eastham Port Operations Control Center throughout the entire canal.

**Signals.—**At Eastham Locks, docking signal lights are shown by day and at night from a horizontal platform, mounted on a metal mast, standing at the outer end of the center lock island. Five lights, disposed horizontally on the platform, consist of two red outer lights, two white inner lights, and one green center light. The red and white lights at the E end of the platform control entry to the center lock and those at the W end control entry to the W lock. The signals are, as follows:

1. A white occulting light signifies that the lock indicated is available.
2. A red occulting light signifies that the lock indicated is not available and vessels must keep well clear.
3. A green occulting light signifies that the lock gates are open and the water in the river and the canal are level.
4. An emergency signal consisting of an amber flashing light and two white balls, disposed horizontally, is shown from a mast on the W side of the lock to indicate that the lock is inoperative.

At each of the sets of canal locks, signal lights are shown by day and at night from concrete columns on the lock walls at both the downstream and upstream sides of each lock, as follows:

1. A red flashing light indicates that the lock is not available.
2. A white flashing light indicates that the lock is available.
3. A green fixed light indicates that the lock gates are open and the water levels in the river and canal are level.

Traffic signals are shown by day and at night from both the downstream and upstream sides of all swing bridges, as follows:

1. A fixed red light over the center of the fairway indicates that the bridge is closed.
2. Two fixed red lights at the side of the fairway indicate that the bridge is open for opposing traffic and the vessel at which the signals are directed must not approach the bridge.
3. A flashing green light and a fixed red light at the side of the fairway indicate that the bridge is open and the vessel at which the signals are directed may proceed.
4. A red flashing light at either the center or side of the fairway indicates an emergency signal. The bridge is not fully open and all vessels must keep clear.

In the event of an emergency situation in the Stanlow area, the following signals may be made:

1. A flashing white light visible 230°-125° shown from the roof of the Administration Building on Stanlow Island.
2. A sound signal emitted from sirens established on Stanlow Lay-by Berth and Stanlow Chemical Berth, consisting of a continuous, alternating high and low pitch warning.

Vessels should avoid entering the area between Ince High Cutting and the Stanlow Chemical Berth in the event of and for the duration of the above visual and audible signals.

Three flashing red lights, displayed vertically, from positions 0.5 mile upstream and 0.5 mile downstream of Ince B Berth will be shown in the event of an ammonia spill. A horn will be sounded from the berth and accompany the flashing lights. Vessels should avoid transiting this area when these signals are in operation.

Flashing green lights situated at the Centenary Lift Bridge indicate that vessels may proceed.

**Contact Information.—**Eastham Port Control can be contacted, as follows:

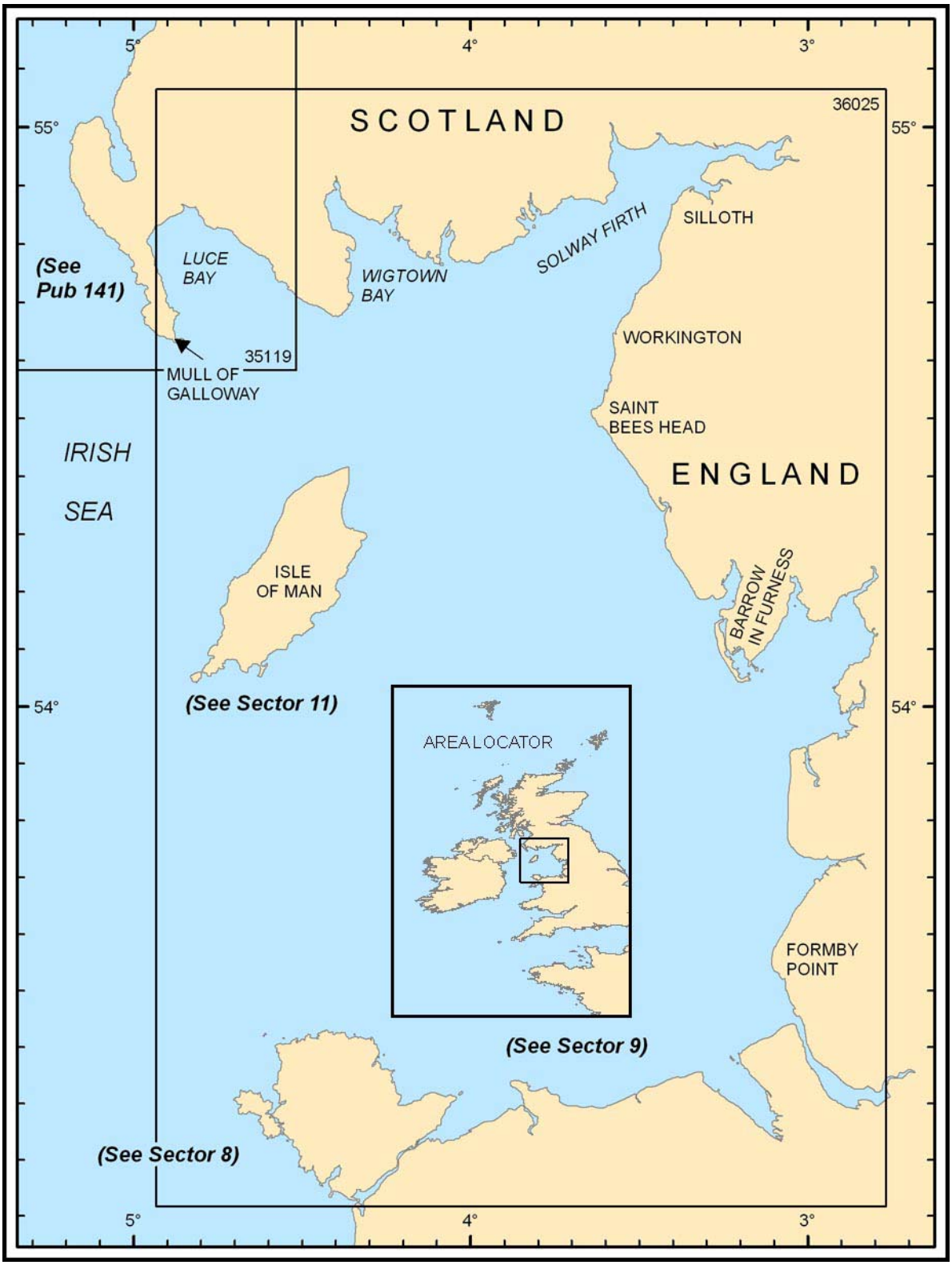
1. Telephone: 44-151-3274638
2. Facsimile: 44-151-3277482
3. E-mail: portops.control@shipcanal.co.uk

**Caution.—**Passing vessels should proceed at dead slow speed to prevent causing damage to vessels at moorings or alongside or to the wharves or banks.

Care is also necessary when passing open sluices.

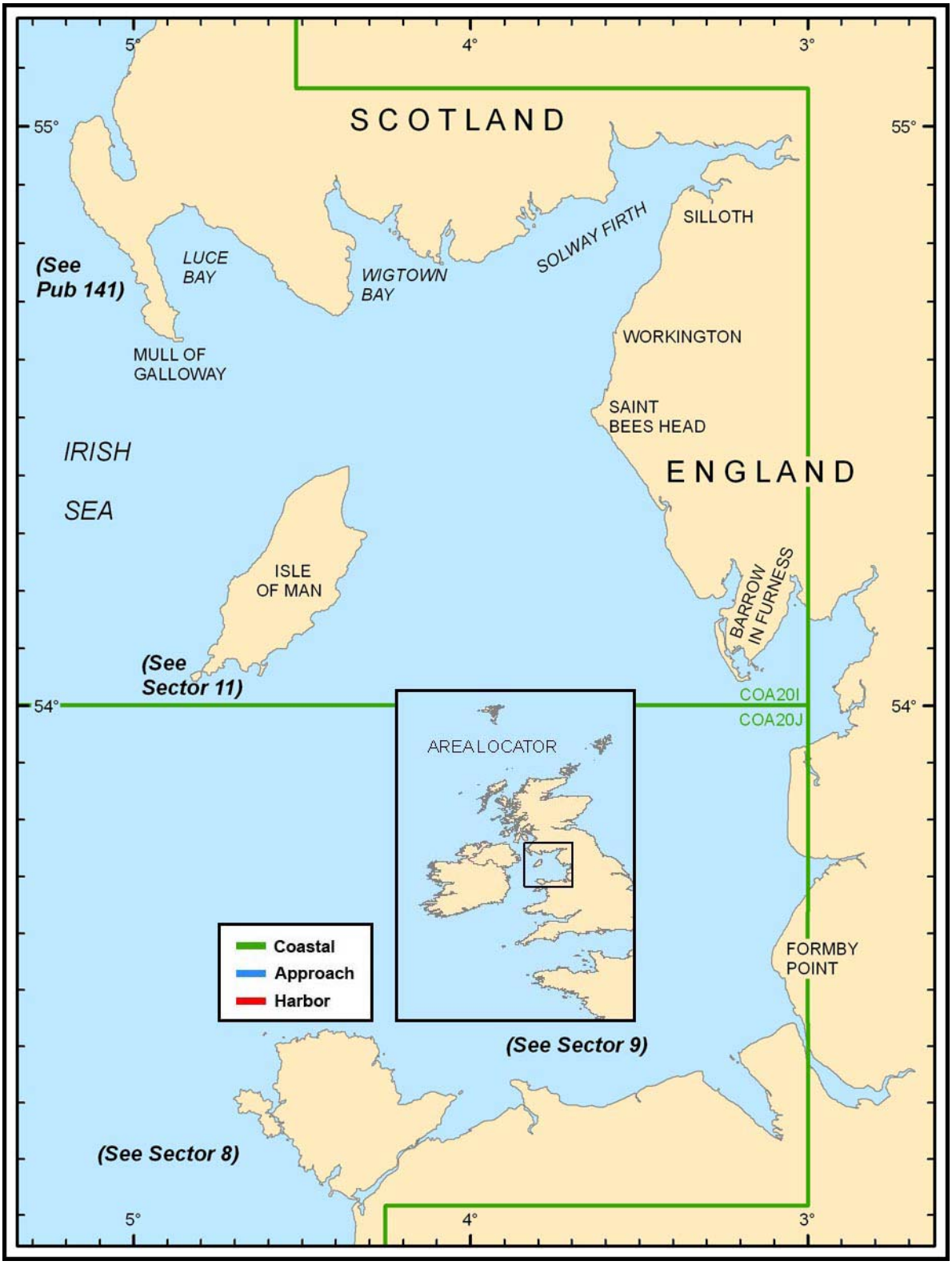
**9.20 Manchester** (53°28'N., 2°17'W.) (World Port Index No. 34700) is a very large industrial center. Vessels bound for the port are limited by the restrictions of the canal

Many of the former docks are closed to commercial traffic and one dock is used as a marina.




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

SECTOR **10** — CHART INFORMATION

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SECTOR 10 — DNC LIBRARY INFORMATION

# SECTOR 10

## IRISH SEA—EAST SIDE—FORMBY POINT TO THE MULL OF GALLOWAY

**Plan.—**This sector describes the E shore of the Irish Sea, from Formby Point in a N and NW direction to Solway Firth and then W to the Mull of Galloway (54°38'N., 4°51'W.).

The description in this sector also includes the offshore installations of the South Morecambe Gas Field, the North Morecambe Gas Field, the Calder Gas Field, the Douglas Oil Field, the Hamilton Gas Field, the Hamilton North Gas Field, and the ports of Barrow-in-Furness and Heysham (54°02'N., 2°55'W.).

### General Remarks

**10.1** Submarines exercise frequently, both surfaced and submerged, in the waters described within this sector.

Numerous wrecks lie in the waters described within this sector and may be seen on the chart.

Oil and gas exploration structures and associated servicing vessels may be encountered within the waters described in this sector.

Offshore trawlers may be encountered in large concentrations up to 35 miles W or SW of Lune Deep Lighted Buoy (53°56'N., 3°11'W.) during April and May; smaller numbers of trawlers may be encountered from August to October. Inshore trawlers may be encountered at any time.

### Formby Point to Morecambe Bay

**10.2** The estuary of the River Ribble is entered between Formby Point and Stanner Point, 11 miles NNE, and is mostly encumbered by drying sandbanks. Southport, a resort, lies 5 miles NE of Formby Point and the coast between is composed of low sandhills fronted by sands which dry out up to 1 mile offshore. Shoal ground, with depths of less than 5.5m, extends up to 5.5 miles W of Formby Point and terminates in a spit, with a least depth of 0.8m, which is marked by a lighted buoy.

A pier on iron piles extends 0.3 mile NW from the coast at Southport; three prominent gas tanks stand 1.7 miles inland, ESE of the pier. The former port of Preston, which was closed to commercial shipping in 1981, lies 11 miles above the entrance of the River Ribble. The coast to the N of the river entrance is low and sandy, but rises at Blackpool, an extensive resort lying 5 miles N of Stanner Point. There are several conspicuous structures at Blackpool, the most noteworthy of which is a 183m high tower that resembles the Eiffel Tower at Paris and may be seen for many miles.

**Rossall Point** (53°55'N., 3°03'W.) lies 5.5 miles N of Blackpool. The coast between is mostly low and sandy, but consists of red clay cliffs near Blackpool. A conspicuous chimney stands 2.5 miles SSE of the point.

Rossall Oyster Grounds, with depths of less than 5.5m, extends up to 3.5 miles W and 5.5 miles SW from Rossall Point. Several obstructions, with depths of less than 1m, lie on these grounds.

Shell Flat is the W extension of Rossall Oyster Grounds. It has depths of less than 11m and extends up to 11 miles W from the coast.

**10.3 South Morecambe Gas Field** (53°51'N., 3°35'W.) is situated about 6.5 miles W of Morecambe Lighted Buoy. The Central Process Platform (CPP1) stands at the center of the field and connecting pipelines carry gas to it from the surrounding drilling platforms. Accommodation Platform No. 1 (AP1) is situated close W of the CPP1 and Development Platform (DP1) is situated close ENE. A flame tripod structure stands close N of the CPP1. Lighted Platform DP3 and Lighted Platform DP4 are situated 2 miles SSE and 2 miles NNE, respectively, of Platform CPP1. Lighted Platform DP6 and Lighted Platform DP8 are situated 1.7 miles NW and 3 miles NNW, respectively, of Platform CPP1.

**North Morecambe Gas Field** (53°57'N., 3°40'W.) lies NNW of South Morecambe Gas Field and consists of a single lighted offshore production platform (110/2A-DPPA) containing a flare boom. A gas trunkline, with an adjoining submarine pipeline and power cable, extends ENE from the offshore platform to the shore; the landing place lies 2.5 miles NW of Walney Light.

A gas pipeline, which links all the platforms, extends NE from Platform CPP1 to a point on the shore 2 miles NW of Walney Light (54°03'N., 3°11'W.); the landing place of the pipeline is marked by a beacon. Submarine power cables link all the development platforms with Platform CPP1.

**Calder Gas Field** (53°48'N., 3°40'W.), situated 2 miles SW from CPP1, consists of a single lighted platform.

**Douglas Oil Field** (53°32'N., 3°35'W.), situated 17 miles SSE from Calder Gas Field, consists of a single lighted platform.

**Hamilton Gas Field** (53°34'N., 3°27'W.), situated 4 miles ENE from Douglas Oil Field, consists of a single lighted platform.

**Hamilton North Gas Field** (53°39'N., 3°29'W.) consists of a single lighted platform with an associated SPM Buoy situated 3 miles NE.

**Lennox Oil and Gas Field** (53°38'N., 3°11'W.) consists of a single lighted platform.

**Millom Gas Field** (54°02'N., 3°52'W.) consists of a single lighted platform.

Vessels, underwater craft, and divers may be working within the adjacent Development Area. Mobile rigs may also be encountered. Well 11013B-4, with a least depth 12.8m, lies outside this area; it is situated 5 miles NE of the CPP1 and is marked by a lighted buoy. Well 11012A-7 and Well 11012A-8 are situated 5.3 and 6.5 miles NNW, respectively, of Platform CPP1; each is marked by a lighted buoy.

**Directions.—**From the vicinity of Bar Lightfloat (53°32'N., 3°21'W.), a coastal route leads about 23 miles N to a position W of Rossall Point and seaward of Shell Flat (53°51'N., 3°20'W.). This route is clear apart from a number of wrecks which lie in the approaches to the lightfloat.

From the vicinity of Bar Lightfloat, the route leads to More-

cambe Bay and passes W of Jordan's Spit (53°34'N., 3°15'W.), an extension of shoal ground which lies W of Formby Spit and has depths of less than 3m. An area of spoil ground, marked by a lighted buoy, lies off the W edge of Jordan's Spit. An obstruction, the remains of Formby Towers, lies at the NE tip of the spit and is marked by a lighted buoy. The route then passes clear of a wreck (53°37.5'N., 3°23.5'W.) and E of South Morecambe Gas Field (53°51'N., 3°35'W.). It leads W of Shell Flat which extends 11 miles W from the coast. This flat has depths of less than 10m and is the tongue like extension of Rossall Oyster Grounds. The route then passes W of Morecambe Lighted Buoy (53°52'N., 3°24'W.) which is moored off the NW edge of Shell Flat. A wellhead, marked by a lighted buoy, lies 2 miles WNW.

Vessels of suitable draft bound for Lune Deep can take an inside route over Shell Flat in depths of not less than 6m. After passing W of Jordan's Spit Lighted Buoy, the route leads about 20 miles NNE.

The line of bearing, 009°, of the tower of Saint Michaels Church (54°06'N., 3°10'W.) open W of Walney Light passes over Shell Flat and W of Rossall Patches.

**Caution.—**Wind farms are present in the area. The Walney Wind Farm is located at position 54°02'N, 3°30'W; the Ormonde Wind Farm is located at position 54°05'N, 3°26'W.

## Morecambe Bay

**10.4** Morecambe Bay is an extensive inlet entered between Rossall Point and Isle of Walney, about 9 miles NW. It is nearly filled with drying flats, but is penetrated in its S part by a trough, known as Lune Deep, which furnishes access to several ports on its SE shore, namely Fleetwood, Lancaster, and Heysham. At the N side of the entrance to the bay, a narrow channel leads to Piel Harbor, at the head of which are the docks of Barrow-In-Furness. **Barrow Wind Farm** (53°59'N., 3°18'W.) is located about 5 miles SW of the S end of Walney.

The low-lying Isle of Walney, which lies on the N side of the entrance to the bay, is about 7 miles long. Foul ground extends up to 1 mile off the W coast of the isle; a light is shown from a prominent tower standing at the SE end. A radiobeacon is situated at the light. The isle protects the port and inner approaches of Barrow from seaward.

**Tides—Currents.—**The tidal currents in the bay follow the deep-water channels at LW, but when the banks are covered they flow directly in and out of the bay. The maximum velocity of the current is 4 knots at springs.

**Aspect.—**Lune Deep, a deep channel, has depths in excess of 60m and penetrates the SE part of Morecambe Bay. The shoals that border Lune Deep are steep-to and dangerous. On the S side are Northwest Boulders, which lie on Rossall Oyster Grounds and have patches with depths of less than 1.8m; King Scar which dries 4.9m and is part of the extensive shoal known as North Wharf; and Bernard Wharf, an extensive shoal that dries up to 3.9m in places.

On the N side are the extensive Morecambe Flats, on the SE edge of which lie Danger Patch, a rock with a depth of 1.5m, and Fisher Bank Spit, with depths of less than 0.9m.

Lune Deep Lighted Buoy, equipped with a racon, is moored about 5 miles W of Rossall Point and marks the approach to the channel.

A narrow approach channel leads into the NW side of the bay. It passes between the shoals extending from the S side of Isle of Walney and Mort Flats which dry in places and occupy the NW part of the bay. A lighted buoy, moored about 3.7 miles SW of Walney Light, marks the approach to the entrance channel. The fairway of this channel is indicated by ranges and marked by lighted buoys.

## Fleetwood (53°55'N., 3°01'W.)

World Port Index No. 34660

**10.5** Fleetwood harbor, at the mouth of the River Wyre, is entered through a narrow channel that cuts through the drying flats on the SE side of Lune Deep. The harbor consists of the section of the river abreast the town and two wet docks lying on the S side of the town. The port was once an extensive fishing port.

**Port of Fleetwood Home Page**

http://www.abports.co.uk/custinfo/ports/fleet.htm

**Tides—Currents.—**Tides rise about 9.2m at springs and 7.3m at neaps.

In the entrance, the currents follow the channel when the banks on either side are exposed, but flow across the channel when the banks are covered. It is, therefore, necessary for vessels to guard against the cross-current.

**Depths—Limitations.—**Depths within the harbor and approach channel are subject to frequent change. Continuous dredging is carried out. A controlling depth of 1.2m exists (2012) in the channel over the bar.

The Isle of Man berth, 91m long, is situated adjacent to the town. It is dredged to a depth of 4.5m and can accommodate vessels up to 107m in length, with drafts up to 4.5m.

A ro-ro berth is situated close S of the ferry berth. It is dredged to a depth of 4.8m and can accommodate vessels up to 160m in length, with drafts up to 4.2m. The Fish dock is 800m in length and had a draft of 5.5m.

The channel, which leads to the wet docks, is dredged to a drying height of 2m. The docks are entered through a lock, 76m long and 15.2m wide. They consist of Wyre Dock, 305m long and 122m wide, and a fish dock which is connected by a passage, 15.2m wide. The wet docks are normally maintained at a depth of 6.4m, but are reduced to a depth of 5.5m during some neap periods. Vessels of up to 105m in length and 14.2m beam can enter the wet docks.

**Aspect.—**A fairway lighted buoy is moored at the entrance to the approach channel, about 2.5 miles NNE of Rossall Point. The channel is indicated by a range and marked by buoys, beacons, and lighted buoys. A prominent disused light structure stands on piles at the W side of the entrance to the approach channel. The chimney and cooling towers of a power station, which is situated close SE of the wet docks, are conspicuous, but are reported to be due for demolition.

**Pilotage.—**Pilotage is compulsory for vessels of 50 gt and over with certain exceptions.

Pilots board in position 53°57.7'N, 3°02.0'W. Pilots can be contacted on VHF channel 12 or 16.

**Regulations.—**Vessels should send their ETA and draft 24 hours in advance, with amendments sent up to 12 hours before the original ETA. A securite broadcast on VHF channel 16 should be made prior to entry and departure of the port.

**Contact Information.—**Fleetwood Dock Radio can be contacted, as follows:

1. Telephone: 44-1253-872323
2. Facsimile: 44-1253-777549
3. E-mail: fleetwood@abports.co.uk

**Anchorage.—**Vessels waiting to enter the port may anchor about 1 mile NNW of the fairway lighted buoy, in a depth of 18m.

**Caution.—**Local knowledge is required. The most dangerous winds at Wyre Bar are those from between the NW and NE.

A ferry crosses the channel at the harbor entrance.

A speed limit of 5 knots should be maintained within the port.

Submarine cables lead between Heysham and 2.5 miles E of Barrow. A beacon marks cables landings at Heysham.

**10.6 Lancaster** (54°01'N., 2°48'W.) is a small port lying on the River Lune. It consists of Glasson Dock, 2 miles within the mouth of the river, and a river quay, 7 miles above the mouth. An approach channel connects Lune Deep with the river and leads between extensive areas of foul ground. It is entered about 1.5 miles NE of the Fleetwood approach channel. National Wildfowl Refuge, the Wyre-Lune Sanctuary lies on the sands fronting the River Wyre and the River Lune.

**Tides—Currents.—**Tides at Glasson Dock rise about 6.6m at springs and 4.4m at neaps. At Lancaster, the tides rise about 4.3m at springs and 2.5m at neaps.

**Depths—Limitations.—**Glasson Dock, a wet dock, lies on the S side of the river and is entered through a gate, 15m wide. The dock is 156m long and 61m wide. It is maintained at a depth of 5.5m at MHWS and 3.5m at MHWN. The dock can accommodate vessels of up to 85m in length, 14m beam, and 4.6 draft at HWS.

A basin is connected to the dock by a lock which is 30.5m long and 7.6m wide. The basin has a depth of 4.3m and is used as a marina. A canal, which is used by pleasure craft only, leads into this basin.

There are two riverside wharves, North Wall and East Wall, which can accommodate vessels of up to 3,000 dwt, 90m in length, and 14m beam. Two quays, situated at Lancaster, provide a berth, 146m long. Vessels of up to 3.8m draft can be accommodated alongside at MHWS, but take the ground at LW. The maximum size of vessels handled at the port at HW is 25,000 dwt, 160m in length, 26m beam, and 9m draft.

**Aspect.—**Conspicuous silos stand close S of the dock; a castle, a cathedral, a chimney, and a gas tank are prominent in the town. The entrance to the approach channel is marked by a lighted buoy and indicated by a range. The fairway is marked by lighted buoys.

**Pilotage.—**Local knowledge is essential and a pilot should be employed. An ETA should be sent 12 hours in advance. Pilots will board in the vicinity of River Lune Lighted Buoy and may be contacted on VHF channels 9 and 16.

**Caution.—**The positions of the buoys are subject to change.

Overhead power cables, with a vertical clearance of 28m, span the river about 1.5 miles above Glasson Dock.

**10.7 Heysham** (54°02'N., 2°55'W.) (World Port Index No. 34640) consists of an artificial harbor basin and is situated 4 miles NNE of the entrance to Lancaster approach channel. The port has facilities for ro-ro and container vessels. A ferry service runs to the Isle of Man and a terminal for vessels servicing the gas fields is situated in the harbor.

**Port of Heysham Home Page**

http://www.portofheysham.com

**Tides—Currents.—**Tides rise about 9.4m at springs and 7.4m at neaps.

The tidal current in Heysham Lake sets NE from 5 hours before until 1 hour after HW at Liverpool and has a maximum velocity of 3 to 4 knots at springs. During the remaining hours, it sets SW at about the same velocity.

**Depths—Limitations.—**Heysham Lake, with a width of about 0.3 mile between the limiting shoals, extends NE from the inner end of Lune Deep and provides an approach channel to the harbor. The fairway has a least depth of 4.1m. An entrance channel, with a least charted depth of 3.2m, leads to the harbor entrance which is 91m wide and protected on the S side by a breakwater. A dredged depth of 4.1m is generally maintained in the harbor basin which is accessible at all stages of the tide. Vessels of up to 10,000 tons, 150m in length, and 5.1m draft can be accommodated.

**Aspect.—**An oil refinery stands 1 mile SE of the harbor basin. A prominent nuclear power station stands close SE of the harbor entrance. The approach channel is marked by lighted buoys and the entrance to the harbor is indicated by a range.

**Pilotage.—**Pilotage is compulsory for vessels of 50m and over with certain exceptions. An ETA should be sent 3 hours in advance. This message should include the vessel's name, draft, gross tonnage, loa, destination, ETA, last port-of-call, and ISPS level. The pilot boards near Lune Deep Lighted Buoy and can be contacted by VHF.

The pilots can be contacted (call sign: Heysham Pilot) on VHF channels 14, 16, and 74.

**Contact Information.—**Heysham Port Control can be contacted, as follows:

1. Telephone: 44-1524-868307
2. Facsimile: 44-1524-853301
3. E-mail: duty.manager@heyshamport.com

**Caution.—**The depths in the harbor are maintained by dredging but are liable to change.

Hauling-off wires lie on the seabed in the E part of the harbor.

An obstruction, marked by a lighted beacon and a lighted buoy, lies in the channel, about 0.5 mile N of the harbor entrance.

Submarine cables lead between Heysham and 2.5 miles E of Barrow. A beacon marks the cable landings.

## Barrow-In-Furness (54°06'N., 3°14'W.)

World Port Index No. 34630

**10.8** Barrow-in-Furness (Barrow) lies on the NW side of Morecambe Bay and is protected from seaward by the Isle of Walney. The port specializes in exporting limestone, spent nuclear fuels, and gas condensates. In addition, a large section of the port has facilities for ship building.

**Winds—Weather.—**Winds from the SW and W are the most dangerous and cause considerable seas in the entrance channel. When very strong, they may increase the depth in the channel; strong winds from the E have the opposite effect.

**Port of Barrow-In-Furness Home Page**

http://www.abports.co.uk/custinfo/ports/barrow.htm

**Tides—Currents.—**Tides rise about 9.1m at springs and 7.1m at neaps and are one of the greatest tidal ranges in the United Kingdom.

At Lightning Knoll Lighted Buoy, which is moored at the entrance to the channel, the currents are rotary and have little velocity. The greatest strength is at 2 hours after HW at Liverpool, when the current runs at 1.5 to 2.5 knots and sets between WNW and W, and at half flood, when the current runs at 1 to 2 knots and sets between ESE and E. Strong SW and W gales increase the strength of the currents in Walney Channel; strong winds from the E have the opposite effect.

**Depths—Limitations.—**Ramsden Dock Basin lies on the E side of the entrance channel and is entered through a gate, 36.5m wide, which has depths on the sill of 9.4m at MHWS and 7.4m at MHWN.

Ramsden Dock is entered from the basin through a lock, 213m long and 30.5m wide. The dock is 895m long and 196m wide and structures for the offshore gas and oil industries are constructed in its S part.

Buccleuch Dock, which is 0.5 mile long and 150m wide, is entered from Ramsden Dock through a passage, 30.5m wide. A fitting-out berth lies on the S side of this dock.

Devonshire Dock is entered from Buccleuch Dock through a passage which is 24.1m wide and has a depth of 8.5m over the sill. A shipyard stands on reclaimed land which was formerly the W part of the dock. A bridge spans the connecting passage.

Vessels of up to 200m length, 29m beam, and 7.5m draft can be accommodated within these wet docks.

There are two tidal berths on the E side of the channel close N of the entrance to the wet docks. Belfast Berth is 183m long and has a charted depth alongside of 2m. Deepwater Berth is 259m long and has a charted depth alongside of 10m.

**Aspect.—**Jubilee Bridge crosses the channel about 1 mile above the entrance to Ramsden Dock Basin. The clusters of large cranes standing in the vicinity of the shipyard are prominent.

**Pilotage.—**Pilotage is compulsory for vessels of 50m and over in length, all vessels carrying dangerous substances, and all vessels carrying more than 12 passengers. Pilots may be contacted on VHF channel 12 or 16 and board close SW of Lightning Knoll Lighted Buoy. The ETA at the pilot boarding position should be sent at least 24 hours in advance.

A vessel awaiting a pilot should keep S of the boarding area in depths of at least 10m

**Regulations.—**A Local Port Service is in effect. Reporting is compulsory for all vessels of 20m and over, all vessels carrying 12 or more passengers, all vessels carrying dangerous cargo, and inbound windfarm crew transfer vessels as well as other similar small work boats.

Both inbound and outbound vessels should call Barrow Port Radio on VHF channel 12 when passing abeam Haws Point. This report should include the vessel's name, intended passage, and any other requested information. Upon request, Barrow Port Radio will provide information on planned traffic movements, known defects to aids to navigation, berth allocation, tidal and weather information, and other specific information.

**Contact Information.—**Barrow Port Radio can be contacted, as follows:

1. Telephone: 44-1229-822911
2. Facsimile: 44-1229-835822
3. E-mail: barrowmc@abports.co.uk

**Anchorage.—**Anchorage is available SW of Isle of Walney Light, seaward of Barrow Wind Farm and clear of the submarine cables.

**Directions.—**The SW approach to Barrow-in-Furness is made from a position WNW of Morecambe Lighted Buoy (53°52'N., 3°24'W.) and leads 10 miles NE to the pilot boarding area W of Lightning Knoll Lighted Buoy (54°00'N., 3°14'W.). Deep-draft vessels should use the buoyed channel.

**Caution.—**Dredging is generally in progress within the channel between Piel Harbor and the docks.

Navigational lights may be difficult to distinguish because of the glare from the iron works situated in the vicinity of Barrow-in-Furness, which may sometimes be seen at a distance of up to 15 miles.

## Morecambe Bay to Solway Firth

**10.9** Between the S extremity of the Isle of Walney and Solway Firth, 32 miles NNW, the coast is free of dangers up to over 2 miles offshore. There are breaks in this section of coast at the mouth of the River Duddon and at Ravenglass Harbor, where small coasters can enter at HW.

Cockspec Scar and two other patches, the shoalest of which dries, lie nearly 2 miles off the middle of the Isle of Walney.

The River Duddon discharges through the drying flats N of the Isle of Walney. The channel has a depth of 1.8m at the entrance, but dries farther in. The drying shoals at the mouth of the river project about 2 miles beyond the general line of the coast and vessels should keep in depths of not less than 15m.

**Black Combe** (54°15'N., 3°20'W.), a dark hill with an unbroken rounded outline, rises 4.5 miles N of the River Duddon, 2 miles from the shore.

**Selker Rocks** (54°17'N., 3°27'W.), some of which dry, extend up to 1.7 miles off the coast, 7.5 miles NNW of the River Duddon. Scala Fold, Style Rock, Black Leg Rock, and several other dangers extend up to 1.5 miles off the shore for up to 3 miles S of Selker Rocks.

Vessels in this vicinity should keep in depths of not less than 18m. Selker Lighted Buoy is moored about 1.7 miles SW of Selker Rocks.

*Courtesy of Jurgen Tronicke*

**St. Bees Head Light**

**10.10 Ravenglass** (54°21'N., 3°24'W.) is a small harbor formed by the drying estuary of three rivers. It dries and is used by yachts and pleasure craft. The harbor should not be entered without local knowledge and is reported to be difficult to identify from seaward. Newtown Knot, a long and sloping hill, lies SE of Ravenglass and is a good landmark.

Drigg Rock lies about 1 mile offshore close N of the entrance to Ravenglass and has a depth of less than 1.8m. Several ledges lie on the drying sands that border the shore to the N of this rock. With these exceptions, the coast as far N as St. Bees Head is free of dangers. A railroad skirts this section of the coast and mountains may be seen in the background.

Calder Hall Power Station, with several conspicuous cooling towers, stands near the coast, 5 miles NNW of Ravenglass. Outfall pipelines extend seaward from the power station and are marked by buoys.

**St. Bees Head** (54°31'N., 3°38'W.), a conspicuous headland, is located 12.5 miles NW of Ravenglass. A perpendicular cliff of red sandstone, 94m high, is located on its seaward face and a flat summit stands close inland. A light is shown from a prominent tower standing on this headland.

Several wrecks lie in the vicinity of the headland and may best be seen on the chart.

**Directions.—**From a position WNW of Morecambe Lighted Buoy (53°52'N., 3°24'W.), a route leads about 40 miles NNW to a position W of St. Bees Head. It passes ENE of a submerged wellhead (53°53'N., 3°27'W.) then clear of a wreck, with a least depth of 9.1m, which lies 2.5 miles N of the wellhead. The route then leads WSW of Cockspec (54°06'N., 3°18'W.), a rocky ground with detached seaweed covered drying patches, ENE of an ODAS buoy (54°08'N., 3°37'W.) WSW of Haverigg Point (54°11'N., 3°19'W.), WSW of Black Leg Rock (54°14'N., 3°24'W.), and WSW of Selker Lighted Buoy. It then continues WSW of the entrance to Ravenglass Harbor, WSW of Drigg Rock (54°20'N., 3°28'W.), WSW of two outfall buoys, and WSW of South Head, the S extremity of the promontory forming St. Bees Head.

## Solway Firth

**10.11** Solway Firth, an extensive inlet, is mostly encumbered by shifting sand banks which are subject to frequent changes. It is entered between St. Bees Head and Abbey Head, 19 miles NW. The best navigable channel is English Channel, which lies near the SE shore and has the only fairway that is marked by buoys. This channel provides access to several small ports along the English shore, including Whitehaven, Workington, Maryport, and Silloth.

Robin Rigg wind farm, 7 miles NW of Workington is located in the middle of the Firth.

The chart should not be considered a safe guide for the navigation of the firth as the changes in the depths are very rapid. Local knowledge is essential for vessels navigating the firth, except, perhaps, English Channel as far as Maryport Roads. No vessel should attempt to enter the firth in reduced visibility without first having ascertained an accurate position.

Workington Bank, with a least depth of 5.2m, lies in the entrance, 8 miles N of St. Bees Head and is marked by lighted

**Entrance to Whitehaven**

buoys. Three Fathoms Bank, with a least depth of 2.8m, lies about 1.5 miles NW of Workington Bank. Two Feet Bank, with a least depth of 1m, lies 1 mile N of Three Fathoms Bank. A large mass of drying sandbanks extends N from Two Feet Bank to within a short distance of the N shore of the firth.

English Channel, the main fairway, is entered about 5.5 miles N of St. Bees Head and leads between the shoals extending from the coast and Workington Bank. This fairway has a least depth of 10.9m for 9 miles then it shoals quickly to a depth of 5.5m and finally decreases to depths of less than 2.5m.

Numerous disused iron foundries, with prominent chimneys, are situated along the coast between St. Bees Head and Workington, 8 miles N. Bengairn, 386m in elevation, and Criffel, 565m in elevation, are two conspicuous mountains standing 6 miles NNE and 15 miles NE, respectively, of Abbey Head.

**Tides—Currents.—**The tidal current approaching Solway Firth passes inward through the channel between the N point of the Isle of Man and Burrow Head. At springs, the incoming current, at a position 5 miles N of the Isle of Man, sets E at a rate of 2.7 knots at springs. Half way between the Isle of Man and Burrow Head, the current sets ENE at a rate of 2.5 knots. At a position 5 miles S of Burrow Head, it sets NE at a rate of 3.5 knots. The corresponding outgoing directions and rates are W at 3 knots; WSW at 3.2 knots; and SW at 3.5 knots.

The principal tidal flow in and out of Solway Firth is through Middle Channel. The currents have their greatest velocity towards the NW or Scottish shore.

**Pilotage.—**Pilotage is compulsory, with certain exceptions, for Whitehaven, Workington, Silloth, and Annan. Vessels bound for these ports should notify their agents 24 hours in advance of their ETA so that the pilot boat may be on station when required. Amendments should be sent up to 4 hours before the time of the original ETA. Pilots generally board vessels bound for Whitehaven off that port. Pilots board vessels bound for Workington, Silloth, and Annan off Workington. Pilots can be contacted by VHF from 2 hours 30 minutes before to 1 hour 30 minutes after HW.

**Caution.—**Winds from the SW cause the highest sea in the firth. Heavy seas exist with winds from between SW and NW, but decrease within Workington Bank.

A magnetic anomaly exists within English Channel due to slag having been washed into the water.

**10.12 Whitehaven** (54°33'N., 3°36'W.) a port within an artificial harbor, is protected by breakwaters and divided by spurs into several sections which dry at LW. In addition, there is a wet basin.

**Depths—Limitations.—**Queens Dock has a depth of 4.2m, maintained by gates at its entrance. This gateway is 13.7m wide and has a depth on the sill of 6.7m at HWS. In the tidal section of the harbor, there are depths of 4.2 to 6.4m at HWS. The channel, which leads through the harbor to Queens Dock, is maintained by dredging to a depth of 7.6m. Vessels of up to 82m in length and 12.2m beam have entered the harbor. It was reported that due to silting, only small vessels up to 1,500 tons could enter. Cargo can be unloaded into barges from large vessels anchored offshore.

**Tides—Currents.—**Tides rise about 7m at MHWS and 3.9m at MHWN.

**Pilotage.—**Pilotage is compulsory for vessels of 50m in length and over.

The pilots can be contacted on VHF channel 12 or 16 and board 0.5 mile S of South Workington Lighted Buoy.

**Regulations.—**Vessels should send an ETA at least 12 hours in advance.

**Contact Information.—**Whitehaven Port can be contacted, as follows:

1. Telephone: 44-1946-692435
2. Facsimile: 44-1946-691135
3. E-mail: office@whitehaven-harbour.co.uk

**Anchorage.—**Temporary anchorage can be taken, in depths of 9 to 11m, sand, about 0.5 mile off the harbor entrance.

**Caution.—**During W gales, a heavy sea may be encountered across the harbor entrance.

## Workington (54°39'N., 3°34'W.)

World Port Index No. 34610

**10.13** Workington is formed within breakwaters at the mouth of the small River Derwent on the E side of the entrance to English Channel. It consists of a tidal harbor and a wet dock, known as Prince of Wales Dock. The harbor is used principally for the import of chemicals and has a molten sulfur terminal.

**Tides—Currents.—**Tides rise about 7.2m at MHWS and 3.7m at MHWN.

**Port of Workington Home Page**

http://www.portofworkington.co.uk

**Depths—Limitations.—** The maintained depth of the approach channel, turning basin, and Prince of Wales Dock is 1.2m.The entrance channel is maintained by dredging, but silts rapidly. There is usually only a dredged depth of 0.3m on the bar at the entrance. Prince of Wales Dock is entered through a gate, 21.3m wide, which has depths over the sill of 9.3m at springs and 7.6m at neaps. Depths of 7.2 to 10m are maintained in the dock depending upon the tides. Vessels of up to 12,000 dwt, 137m in length, 20m beam, and 8.5m draft can be taken to berth during a spring tide in Prince of Wales Dock.

The entrance to the tidal harbor is crossed by a railroad bridge which also crosses the river entrance. The passage into the harbor is 15m wide and the vertical clearance below the bridge is 0.7m. The tidal harbor is only used by small craft and fishing vessels.For further berthing information refer to table titled. **Port of Workington—Berth Information.**

**Pilotage.—**Pilotage is compulsory for all vessels of 50m and over in length.

The pilot boards off Workington harbor entrance.

**Regulations.—**Vessels should send an ETA at least 24 hours in advance.

**Contact Information.—**Workington Harbour Radio can be contacted, as follows:

1. VHF: VHF channels 14 and 16
2. Telephone: 44-1900-602301
3. Facsimile: 44-1900-604696
4. E-mail: gateway@portofworkington.co.uk

**10.14 Harrington** (54°37'N., 3°34'W.), lying 2 miles S of Workington, is a small harbor which dries at LW. The port is no longer open to commercial vessels and is used by only yachts and fishing craft.

**Maryport** (54°43'N., 3°30'W.), lying 4.7 miles NNE of Workington, is a small harbor located at the mouth of the River Ellen. The port is mostly silted up and no longer used by commercial vessels. It is used by only yachts and fishing craft.

**Anchorage.—**Maryport Roads lie abreast of the harbor at Maryport and near the head of English Channel. This roadstead provides anchorage that is sheltered from all but W winds. The inner part has depths of 6 to 7m, shell and shingle. Anchorage can be taken in the outer part, in a depth of 12m, sand, about 2.7 miles of NW of South Pier.

**10.15 Silloth** (54°52'N., 3°24'W.) (World Port Index No. 34590) lies on the S side of Solway Firth, 10 miles NE of Maryport. The harbor consists of a tidal basin and a wet dock.

**Tides—Currents.—**Tides rise about 8.4m at MHWS and 4.8m at MHWN.

**Port of Silloth Home Page**

http://www.abports.co.uk/custinfo/ports/silloth.htm

**Depths—Limitations.—**The firth above Maryport is shallow and obstructed by shifting banks. The channel is marked by buoys, but local knowledge is essential. The tidal dock is entered through a passage, 30m wide. The wet dock is entered from the tidal dock through a gateway, 17.4m wide, which has depths over the sill of 7.6m at springs and 5.2m at neaps. Vessels of up to 3,000 dwt, 90m in length, 15m beam, and 6m draft at HWS can be taken to berth.

**Pilotage.—**Pilotage is compulsory for all vessels of 50m and over in length.

The pilot boards off the Workington harbor entrance.

**Port of Workington—Berth Information**

| Berth | Length | Depth | Maximum Vessel | | | Remarks |
|---|---|---|---|---|---|---|
| | | | LOA | Draft | Beam | |
| **Dry Cargo Berths** | | | | | | |
| 1-3 | 295m | — | — | — | — | General cargo. |
| 5-6 | 165m | — | — | — | — | General cargo. |
| 6a | — | 6.0-8.0m | — | — | — | Ro-ro and heavy loads. |
| 7 | 76m | — | — | — | — | General cargo. |
| **Cumbrian Storage Terminal** | | | | | | |
| No. 4 | 130m | 8.3m | 120m | 7.2m | 20m | Tanker berth. Can accommodate vessels up to 10,000 dwt |

**Regulations.—**Vessels should send an ETA at least 12 hours in advance.

**Contact Information.—**Silloth Port Office can be contacted, as follows:

1. Telephone: 44-1697-331358
2. Facsimile: 44-1697-332709
3. E-mail: silloth@abports.co.uk

**Anchorage.—**Vessels may take temporary anchorage, in depths of 7 to 11m, within the NE part of the channel leading to Silloth.

**10.16 Annan** (54°58'N., 3°16'W.) is a very small port lying on the N shore of Solway Firth at the mouth of the River Annan. The upper part of the firth is encumbered by shifting and drying sand banks interspersed with shallow channels. Buoyage is moved as required to meet the changes. Navigation should not be attempted without a pilot or local knowledge.

A well-marked shallow channel leads from Silloth to Annan and is suitable for vessels with local knowledge. Two quays are situated in the harbor and are generally used by fishing vessels.

## Solway Firth to the Mull of Galloway

**10.17 Abbey Head** (54°46'N., 3°58'W.), located on the NW side of the entrance to Solway Firth, is a bold and rocky headland. A dangerous wreck lies about 1.2 miles SSW of the head. Gipsy Point is located 3 miles W of the head and the coast between is bold, rocky, and steep-to.

**Kirkcudbright Bay** (54°46'N., 4°04'W.) is entered between Gipsy Point and Little Ross Island, 1.5 miles W. It has depths of 5 to 9m in the entrance and the approach is free from dangers with the exception of a detached 3.9m patch which lies about 0.2 mile W of Gipsy Point. Little Ross Island is separated from the mainland by a narrow passage. A light is shown at an elevation of 50m from a prominent structure, 20m high, standing on the E side of this island.

The River Dee flows into the head of the bay and connects with a narrow channel with a least charted depth of 0.3m over the bar. This channel passes through the drying sandbanks in the N part of the bay. A wharf, which dries at LW, is situated on the river side about 4.5 miles N of the bay entrance. It has a depth alongside of 5.2m at MHWS. Vessels of up to 1,500 dwt, 67m in length, and 5m draft can be handled at HWS. Pilotage is not compulsory, but advisable. Pilots are available and an ETA must be sent 24 hours in advance. The port may be contacted on VHF channels 12 or 16. The pilot boards off the Lifeboat Station.

Buoys marking the channel are moved without notice to conform with changes in the drying banks.

Vessels can anchor in the outer part of the bay, in depths of 5.5m, good holding ground. This anchorage is sheltered from all winds except those from the S and SE.

**10.18 Wigtown Bay** (54°45'N., 4°15'W.) is entered between a point on the mainland, lying close W of Little Ross Island, and Burrow Head, 11.5 miles SW. The NW and NE portions of the bay are occupied by extensive drying sands. The entrance has depths of 18 to 34m which decrease regularly towards the head. Several anchorages lying near the shores of the bay provide shelter from offshore winds. The bay is open to the S and S winds, which are very prevalent and often give little warning, send in a heavy sea. Vessels without local knowledge should not attempt to navigate the inner and shallow sections of this bay. The River Cree discharges into the head of Wigtown Bay through a buoyed channel which leads across the drying sands along the N shore. Creetown and Carty Quay, 2.5 miles farther up the river, can be reached at HWS by vessels with drafts up to 3.6m. Local knowledge is essential.

*Courtesy of Jürgen Tronicke*

**Mull of Galloway Light**

Garlieston is a small tidal harbor lying on the W side of the bay, 6.5 miles N of Burrow Head. There are two berths which dry at LW and can accommodate vessels of up to 1,000 dwt.

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

**Isle of Whithorn** (54°42'N., 4°22'W.), a small peninsula, lies 1.7 miles NE of Burrow Head. A conspicuous white tower stands near the SE end of this isle. A small harbor, which is used by pleasure craft and fishing boats, lies within a bay on the S side of the peninsula.

Small vessels may anchor, in depths of 5 to 7m, sand, within the bay, but S winds drive in a heavy sea.

**Burrow Head** (54°41'N., 4°24'W.) is formed by a conspicuous cliff with deep water lying close offshore. A water tower and a radio mast stand 0.5 mile and 1.5 miles NW, respectively,

*Courtesy of John Spooner*

**Mull of Galloway Light**

of the head and are conspicuous from seaward.

**10.19 Luce Bay** (54°45'N., 4°45'W.) extends NNW for 13 miles and is entered between Burrow Head and the Mull of Galloway. There are depths in the entrance of 18 to 27m which decrease gradually towards the head where drying sands extend up to 0.5 mile seaward. There are no good harbors within the bay, but there are a number of places where small vessels can find shelter from offshore winds.

The Scares are a group of rocks lying in the middle of the entrance to the bay. They consist of Big Scare, a steep-to rock 21m high, and Little Scares, a group of above and below-water rocks, lying about 0.7 mile NNE. A dangerous wreck lies about 2.5 miles E of Big Scare.

East Tarbet Bay, lying on the N side of the promontory forming the Mull of Galloway, offers the most secure and sheltered anchorage within Luce Bay. A storehouse and a landing place, used to supply the light tower, lie at the head of this small bay. The best anchorage may be found, in depths of 6 to 7m, about 0.2 mile ENE of the storehouse.

In a position about 5 miles S of the Mull of Galloway, the tidal current at springs has a maximum velocity of 3.2 knots. The current runs E from 5 hours before until HW at Dover. It runs W from 1 hour after until 6 hours after HW at Dover. A tidal race, with overfalls, extends up to 2 miles off the Mull of Galloway. The current here runs at rates of up to 6 knots at springs and 4 knots at neaps. Overfalls in this vicinity are dangerous to small vessels.

**Caution.—**Gunnery and bombing practice exercises take place within Luce Bay. Numerous buoys and targets are moored in the bay and may best be seen on the chart. Unexploded ordnance may be present on the bottom of the bay.

**10.20** The **Mull of Galloway** (54°38'N., 4°51'W.), 82m high, is a bold and precipitous headland that is steep-to. Due to the tidal race, it is recommended that vessels keep at least 3 miles offshore. A light is shown at an elevation of 99m from a conspicuous tower, 26m high, standing near the SE extremity of the headland.

Caution is necessary when navigating in this vicinity because the light is frequently obscured by haze or low-lying clouds.

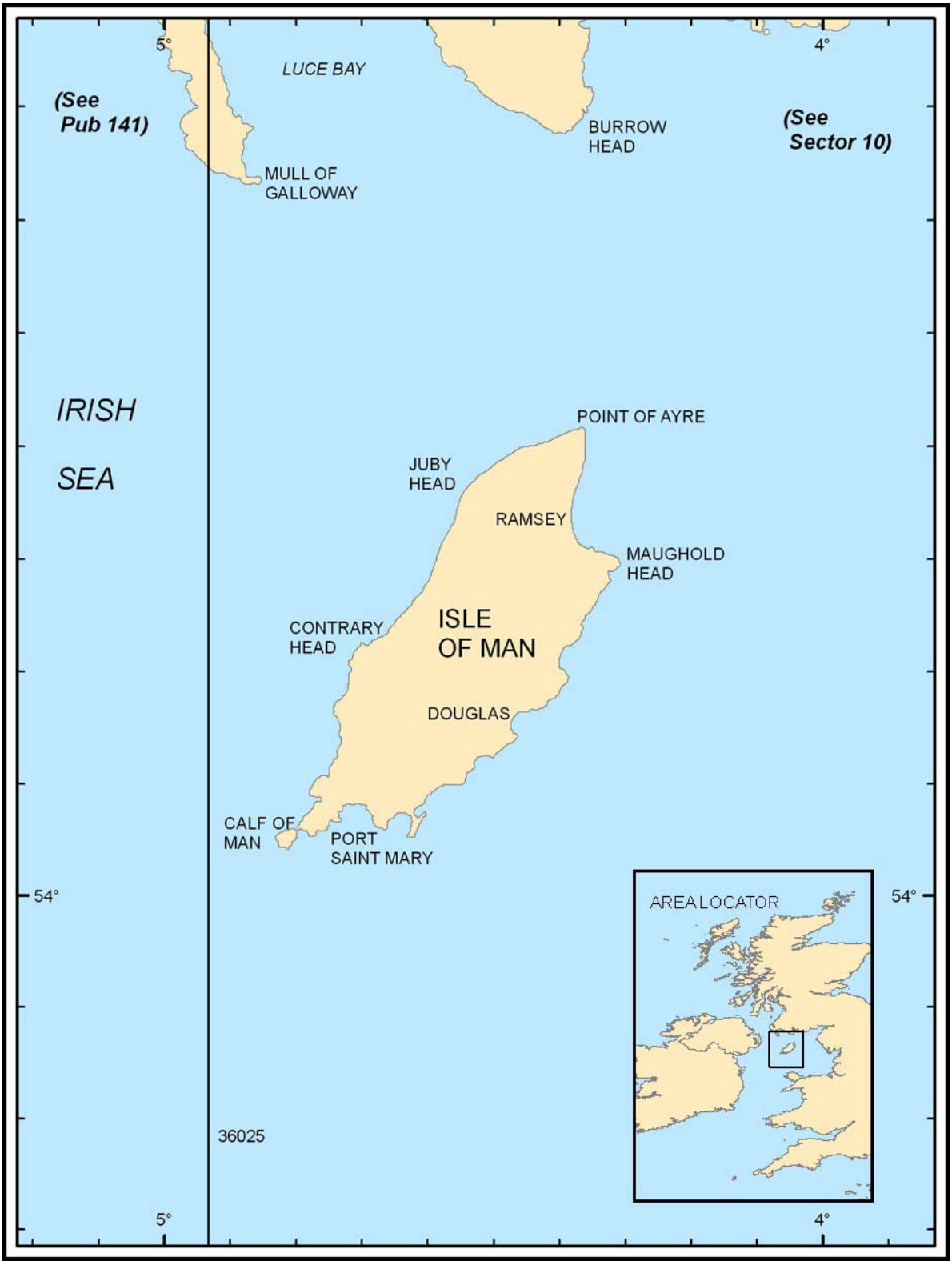
**Directions.—**From a position lying about 8 miles SE of the E extremity of King William Banks (54°27'N., 4°08'W.), an outer route leads 44 miles to a position SW of the Mull of Galloway. It passes WSW of St. Bees Head (54°31'N., 3°38'W.), NNE of King William Banks, and NNE of Point of Ayre

(54°25'N., 4°22'W.) on which stands a prominent light tower. The route then passes SSW of Burrow Head, on which stands a conspicuous tower and radio mast. It then continues SSW of the Mull of Galloway (54°38'N., 4°51'W.).

From a position 8 miles SE of the E extremity of King William Banks, an inner and clear weather route lies between the banks lying closer inshore to the Isle of Man. This route leads about 42 miles WNW to a position SW of the Mull of Galloway. It passes SSW of the lighted buoy marking the E extremity of King William Banks; NNE of Bahama Bank, which extends 7 miles SE from Whitestone Bank and is marked at its SE end by a lighted buoy; SSW of Ballacash Bank; and NNE of Whitestone Bank, which is marked by a lighted buoy and over which the sea breaks.

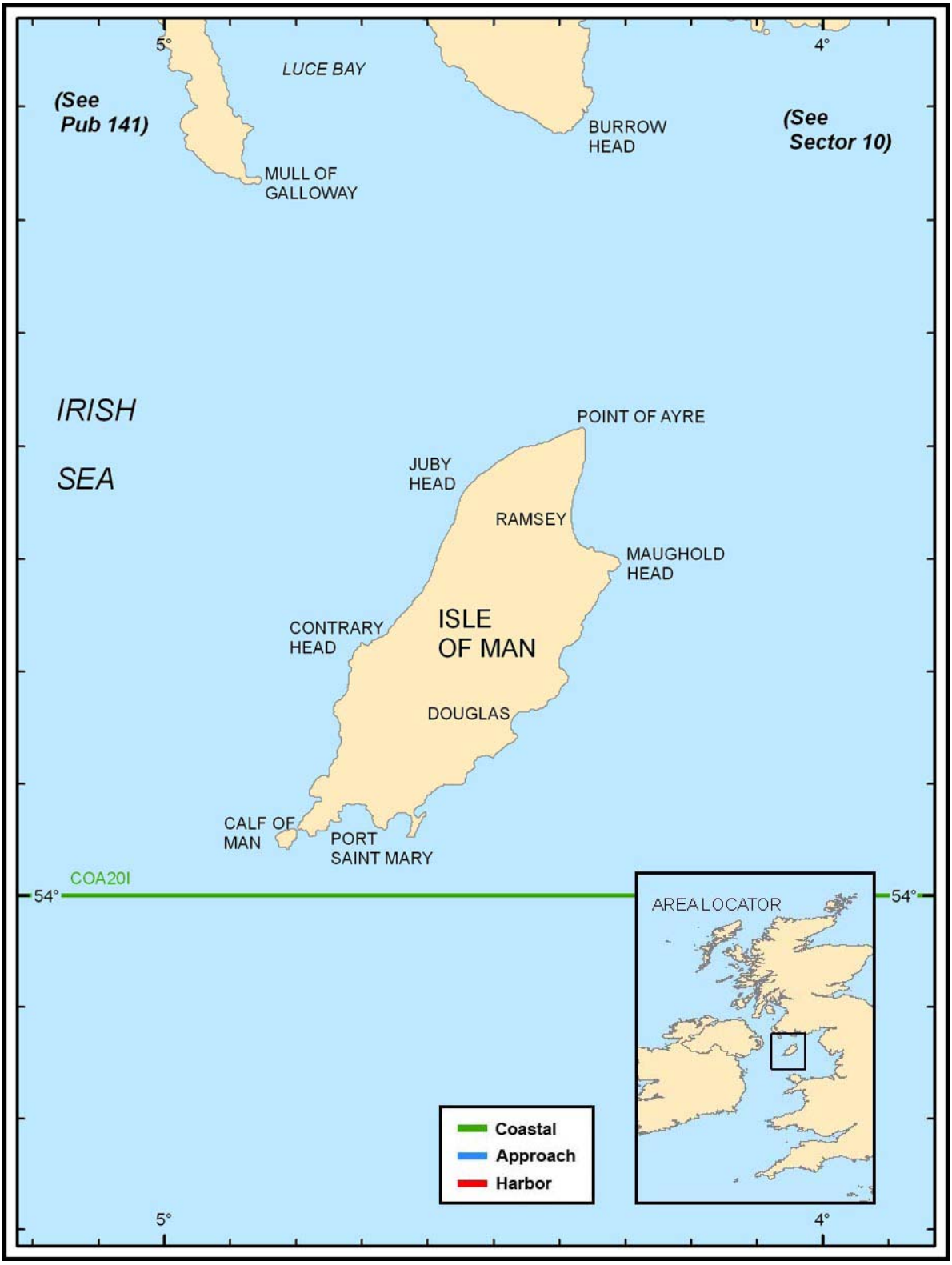
From a position lying S of South Workington Lighted Buoy (54°37'N., 3°38'W.), an offshore route leads about 45 miles W to a position SW of the Mull of Galloway. This route passes S of Abbey Head (54°46'N., 3°58'W.); S of Little Ross (54°46'N., 4°05'W.) with a prominent light structure; N of the Point of Ayre (54°25'N., 4°22'W.), the N extremity of the Isle of Man; S of Burrow Head (54°41'N., 4°24'W.); and S of Big Scare (54°40'N., 4°42'W.).

**Caution.—**An unmarked dangerous wreck lies 1 mile N of Point of Ayre; Strunakill Bank, with depths of less than 10m and over which the sea breaks, lies 1 mile NW of the Point of Ayre.




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

SECTOR **11** — CHART INFORMATION

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SECTOR 11 — DNC LIBRARY INFORMATION

# SECTOR 11

## THE ISLE OF MAN

**Plan.—**This sector describes the S side of the Isle of Man from W to E, the SE side from S to N, the NE side from S to N, the NW side from N to S, and the W side from N to S in that order.

## General Remarks

**11.1** The Isle of Man (54°15'N., 4°30'W.) lies in the N part of the Irish Sea about 26 miles W of the English mainland. The island is a Dependency of the British Crown and is administered in accordance with its own laws by the court of Tynwald. The principal port and the seat of government is Douglas, which is located on the SE side of the island.

Seen from a distance, the general look of the island presents a mild aspect, for though the mountains, which extend nearly through its entire length, are of considerable elevation, they do not tower up with sufficient abruptness to assume picturesque forms. The highest point of the mountain range is Snaefell (54°16'N., 4°28'W.), which is 617m high; many of the other summits range in height from 457 to 548m. The mountains and hills, which occupy a considerable portion of the surface of the island, are chiefly composed of clay slate varied by masses of granite.

At the S end of the island, between Bay Ny Carrickey and Derby Haven, mountain limestone rests on the slate, but is separated from it by a bed of conglomerate. The middle of the island is crossed by a valley which extends from Douglas to Peel. A similar flat is to be found at the S end between Derby Haven and Bradda Head. The N end of the island is flat and consists chiefly of alluvial soil. The island is well watered with numerous rivers and rivulets issuing from the sides and bases of the hills. There are but few trees, with the greater quantity growing in the N part of the island.

## South Side of the Isle of Man

**11.2** The **Calf of Man** (54°03'N., 4°49'W.), an island, is 125m high and lies close off the SW extremity of the Isle of Man. A bold cliff, 37m high, lies at the S end of this island and is connected to the main island by a drying isthmus. Small craft obtain shelter from N winds within a small cove lying W of the isthmus at the SE end of the island. The cove has depths of 5 to 18m, but local knowledge is necessary.

*Courtesy of Liz Courtie*

**Calf of Man Sound**

Three disused lighthouses stand on the W extremity of the Calf of Man.

Calf of Man Sound leads between the Calf of Man and the SW extremity of the Isle of Man. Thousla Rock, which dries, lies on the W side of the sound and is marked by a lighted beacon. The tidal currents run through the sound with considerable strength and it should not be used without local knowledge.

**Chicken Rock** (54°02'N., 4°50'W.), 1.5m high, lies about 0.5 mile SW of the Calf of Man. A light is shown from a prominent tower standing on this rock. Wart Bank, with a least depth of 8.3m, lies about 2 miles E of the rock.

*Courtesy of John Luxton*

**Chicken Rock Light**

**Spanish Head** (54°03'N., 4°46'W.) lies at the S end of a peninsula which forms the SW extremity of the Isle of Man. This peninsula rises to a height of 167m about 1 mile inland.

Bay Ny Carrickey lies 2.5 miles NE of Spanish Head and is entered between Kallow Point and Scarlett Point, 2.5 miles E. A drying rock lies in the center of this bay and is marked by a lighted beacon. A rock, with a depth of 1.3m, lies close NE of the drying rock.

**11.3 Port St. Mary** (54°04'N., 4°44'W.) is a small tidal harbor lying in the W corner of Bay Ny Carrickey. It dries and is mostly used by yachts, fishing vessels, and small craft with occasional use by passenger vessels and coasters.

**Port St. Mary Home Page**

http://www.gov.im/harbours

Vessels of up to 48m in length can enter the inner harbor with drafts up to 3.7m at springs and 2.6m at neaps. Alfred Pier can accommodate vessels of up to 60m in length with drafts of 3m. The harbor can be contacted by VHF channels 12 or 16 and local pilots are available. During offshore winds, small

*Courtesy of Liz Courtie*

**Port St. Mary**

vessels may anchor, in depths of 5 to 7m, close N to NE of the harbor entrance.

Castletown Bay is entered between Scarlett Point and Langness Point, 1.3 miles ESE. Langness Point is the SW extremity of the Langness Peninsula; several rocks, which dry, extend up to 0.1 mile SW of it. A light is shown from a tower standing on the SE end of this peninsula, about 0.3 mile ESE of Langness Point.

*Courtesy of John Luxton*

**Langness Light**

A conspicuous tower, 13m high, stands at a height of 32m, about 0.3 mile NNE of the light. A dangerous wreck lies close S of the light. Lheeah-rio Rocks are the outermost of the detached masses of rocks which lie on the NW side of the bay. These rocks dry up to 1.8m and are marked by a lighted buoy.

**11.4 Castletown Harbor** (54°04'N., 4°39'W.) lies on the NW side of the bay and is protected by a breakwater. It consists of inner and outer basins which dry at LW. The inner basin can accommodate small vessels of up to 55m in length and 8.2m beam with drafts up to 3.5m at MHWS and 2.6m at MHWN. The outer basin can accommodate small vessels of up to 55m

*Courtesy of the Department of Tourist and Leisure/Lily Publications (IOM) Ltd.*
**Port St Mary inner harbour**

in length with drafts of up to 3.8m at MHWS and 2.7m at MHWN. The harbor can be contacted on VHF channel 12 or 16. Local fishermen are available to serve as pilots. Pilotage is not compulsory but can be arranged through the Harbor Master. Strong SW winds sometimes cause large swells in the harbor. A castle, flanked by towers, stands near the harbor and is conspicuous. At the head of the bay, a prominent battlemented tower stands near the buildings of a college.

**Port of Castletown Home Page**

http://www.gov.im/harbours

The SE portion of the bay affords anchorage, in depths of 12 to 18m. However, this area is not recommended as the bottom is foul, the depths are uneven, and the tidal currents, although weak, are confused.

**Contact Information.—**The port can be contacted, as follows:

1. Telephone: 44-1624-823549
2. Facsimile: 44-1624-824339

## Southeast Side of the Isle of Man

**11.5 St. Michael's Island** (54°04'N., 4°36'W.) lies close off the NE end of the Langness Peninsula, to which it is joined by a causeway. It is sometimes called Fort Island because of the ruined fort standing near the NE end. An ancient church, in ruins, stands on the SW part of the island. Several ledges, which dry, fringe the shores of the island.

The tidal currents off the E side of the Langness Peninsula attain rates of up to 2.3 knots, but farther seaward rates of up to 5 knots have been reported.

Derby Haven is entered between St. Michael's Island and the mainland coast, 0.5 mile NW. A small harbor, protected by a detached breakwater, lies at the head of this haven and is used by yachts. An airport is situated on the N side of the haven and an aeronautical radiobeacon is situated near the coast, 0.7 mile N of St. Michael's Island.

Small vessels can anchor, in depths of 6 to 8.5m, about 300m NW of the ruined fort on St. Michael's Island.

Santon Head is located 2.5 miles NE of St. Michael's Island. Cliffs rise from a height of 6m, at about 1 mile N of Derby Haven, to a height of 60m, at the head. A submarine cable extends

seaward from a point on the coast, 1 mile WSW of the head.

Douglas Head, which has a bold appearance, is located 3.7 miles NE of Santon Head. The coast between consists of cliffs which attain a height of about 120m. A light is shown from a prominent tower, 20m high, standing near the extremity of the head. A conspicuous building, with a tower, stands on the high ground, close SW of the light. Conspicuous radio masts stand on hills which rise 1 mile and 3 miles W of the head.

## Douglas (54°09'N., 4°28'W.)

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**11.6** The port of Douglas lies in the SW corner of Douglas Bay, at the mouth of the Douglas River. It consists of a town and a small harbor, formed by breakwaters. Douglas is the principal port for the Isle of Man and has facilities for passenger, ferry, ro-ro, general cargo, and tanker vessels.

The harbor is divided into an outer part and an inner part, which dries at LW.

**Port of Douglas Home Page**

http://www.gov.im/harbours

**Winds—Weather.—**Strong E winds send heavy seas into the outer harbor and render some of the berths untenable.

**Tides—Currents.—**Tides rise about 6.1m at MHWS and 3m at MHWN.

**Depths—Limitations.—**The outer harbor is entered between the head of Victoria Pier, on the NW side, and a rubble mound breakwater, which extends 160m NE from the head of Battery Pier, on the SE side.

A dolphin stands about 50m off the head of the rubble mound breakwater.

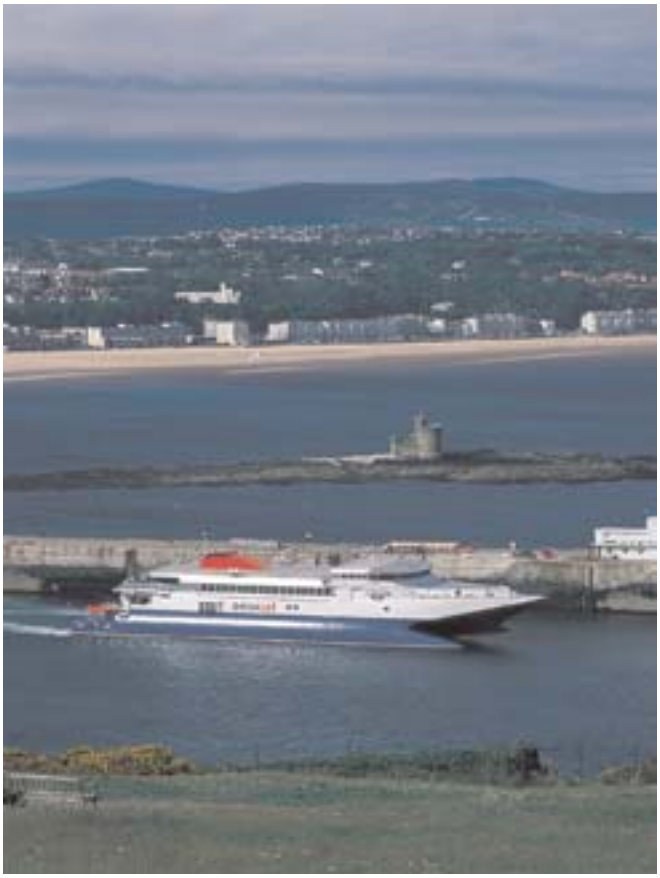
There is a depth of about 7m in the entrance. Depths in the outer harbor are maintained at 5.4m by dredging. The following table shows depths alongside that are maintained at the berths:

| Berth | Depth |
|---|---|
| 1 | 5.0m |
| 2 | 6.0m |
| 3 | 6.0m |
| 6 | 4.5m |
| 7 | 5.0m (dries) |
| 8 | 5.0m (dries) |

Slight variations may be encountered due to the bottom being disturbed by bowthrusters.

The harbor can accommodate ro-ro and ferry vessels up to 130m in length and 6m draft; general cargo vessels up to 100m in length and 4m draft; and tankers up to 85m in length and 5.5m draft at MLWS.

**Aspect.—**Conister Rock, a detached ledge which dries, lies in the S part of Douglas Bay and is marked at its W end by a beacon. Rocky heads, with depths of less than 5m, extend up to 0.3 mile E from Conister Rock and are marked by lighted buoys. The town extends 2.5 miles along the shore to the N of



*Courtesy of the Department of Tourist and Leisure/Lily Publications (IOM) Ltd.*

**Douglas Harbor**

*Courtesy of John Luxton*

**Douglas Harbor**

the harbor and is prominent.

The slopes, everywhere, are studded with villas; the Douglas Bay Hotel, a large red brick building, crowns the heights of Onchan Head, 1.5 miles NNE of Douglas Head. A conspicuous church spire stands in the S part of the town, W of the harbor entrance. A conspicuous church tower stands 0.5 mile NW of the spire. A prominent refuge tower stands on the highest part of Conister Rock and a prominent spire stands on a building situated at the root of Victoria Pier. A prominent and remarkable spherical gas storage tank stands near the root of Battery Pier.

Entry is assisted by a lighted range.

**Pilotage.—**Pilotage is compulsory if the Master is not familiar with the port or the Port Manager directs pilot services. An ETA and request for pilot should be sent at least 6 hours prior to arrival. The pilot can be contacted on VHF channel 12 (preferred) or 16 and boards up to 1 mile ENE of No. 1 Lighted Buoy.

The Douglas Harbor Control Area comprises those waters within 3 miles of the port. The Harbor Control procedures apply to all vessels, including small craft. Other than those vessels on scheduled services, vessels should send an ETA 24 hours in advance, followed by amendments if required.

Vessels must report to the Harbor Control at least 1 hour prior to arrival and when 1 mile from the harbor entrance. This report should include the vessel's name, last port, ETA, maximum draft, cargo, and any defects present. In addition, vessels entering the Harbor Control Area should first obtain clearance by VHF and then maintain a listening watch.

Vessels entering the Harbor Control Area, but not entering the port, must also report to the Harbor Control Station. This reports should include the vessel's name, call sign, course, speed, type of vessel, and nature of cargo.

Radar surveillance of the area is maintained from Douglas Head.

**Signals.—**Traffic signals are shown from a panel situated on the roof of a building near the head of Victoria Pier. This panel exhibits a flashing orange light at each top corner. The signals, which can be seen from seaward and inside the harbor, are, as follows:

1. A red St. Andrew's Cross indicates that vessels, unless specified, may not proceed.
2. A white arrow indicates that vessels may proceed in the direction indicated.

**Contact Information.—**Douglas Harbour Control can be contacted, as follows:

1. Telephone: 44-1624-686627/28
2. Facsimile: 44-1624-626403
3. E-mail: control@gov.im

**Anchorage.—**Several designated anchorage berths lie, in depths of 11 to 18m, within 1 mile NNE of Douglas Head, but the bay is open to the E.

**Caution.—**Care should be exercised not to anchor in the vicinity of the submarine cable extending E and NE from Port Skillion.

## Northeast Side of the Isle of Man

**11.7 Laxey Bay** (54°13'N., 4°23'W.) is entered 4 miles NE of Douglas Bay. A small harbor lies at the mouth of the Laxey River which flows into the N end of this bay. A small pier within the harbor can accommodate vessels of up to 44m in length and 3.4m draft at HWS. A conspicuous television tower, 50m high, stands close W of the harbor. The bay affords anchorage during offshore winds, in depths of 9 to 13m, fine sand and clay.

**Maughold Head** (54°18'N., 4°19'W.), the E extremity of the Isle of Man, lies 6 miles NE of Laxey Bay. The cliffs at the head rise to heights of 114m. A light is shown at an elevation of 65m from a prominent tower, 23m high, standing on the head.

Snaefell, 617m high, stands 5.7 miles SW of the head and is the summit of the isle.

*Courtesy of John Luxton*

**Maughold Head**

Ramsey Bay is entered between Maughold Head and Shellag Point, 4.7 miles NW. Several detached rocks lie close to the shore in the S part of this bay. The bay affords anchorage sheltered from winds between SSW and NW, in depths of 7 to 11m, sand, good holding ground, but it is exposed to E winds. In addition, winds from between NE and SE send in a heavy sea.

*Courtesy of Liz Courtie*

**Ramsey Harbor**

**Ramsey Harbor** (54°19'N., 4°23'W.) lies within the bay at the mouth of the Sulby River, 3 miles NW of Maughold Head. It is formed by two piers and has an entrance, 45m wide. The harbor is tidal and the foreshore dries out up to about 50m seaward of the pierheads. There are depths of 6m in the entrance channel and 5 to 5.6m alongside the piers at MHWS. There are depths of 4 to 5m at MHWS alongside the quays at the S side of the harbor. Vessels of up to 61m in length can enter with drafts of up to 4m at MHWS and 3m at MHWN. The harbor can be contacted on VHF channel 12 or 16 and local pilots are available, but pilotage is not compulsory.

**11.8** The **Point of Ayre** (54°25'N., 4°22'W.), located 5.7 miles N of Ramsey, is the N extremity of the Isle of Man. Two lights are shown from towers standing on this point. Point of Ayre Light is shown from a conspicuous tower, 30m high, standing 0.2 mile SW of the point. A racon is situated at this tower. In addition, a low light tower (disused), 10m high, stands 0.2 mile NE of the light.

A dangerous wreck lies about 1 mile N of the point.

*Courtesy of Liz Courtie*

**Point of Ayre Light**

Whitestone Bank lies within 2 miles SE of the Point of Ayre; the sea breaks heavily over it in strong winds. The shoalest part of the bank, with a least depth of 2m, lies about 1.2 miles ESE of the point and is marked on the SW side by a lighted buoy. Detached patches lie close NW and S of this bank.

Bahama Bank extends for about 5 miles SE from Whitestone Bank. It consists of sand and shells and has a least depth of 1.7m. This bank is nearly steep-to on both sides and is marked by a lighted buoy which is moored about 9 miles SE of the Point of Ayre.

Ballacash Bank extends for about 3 miles ESE from a position 3.7 miles NE of the Point of Ayre. It is steep-to on both sides and has a least depth of 2.1m.

King William Banks lie centered about 2 miles E of Ballacash Bank. They extend for about 6 miles ESE and have a least depth of 2.8m. A lighted buoy, moored 13 miles E of the Point of Ayre, marks the E extremity of these banks.

## Northwest Side of the Isle of Man

**11.9** Strunakill Bank lies 1 mile NW of the Point of Ayre. It has a least depth of 5.3m and the sea breaks on it.

Jurby Head is located 7.5 miles SW of the Point of Ayre. The conspicuous ruins of a chapel stand on the high ground close within this head. Jurby Rock, with a depth of 2.7m, lies about 0.5 mile W of the head.

**Caution.—**The waters off Jurby Head, formerly an aerial bombing range, contain unexploded ordnance.

Craig Rock, with a depth of 4m, lies about 1.5 miles offshore, 6.8 miles SW of Jurby Head. St. Patricks Isle lies 9 miles SW of Jurby Head and is connected by a causeway to the W side of Peel Harbor. A castle stands on this isle; its walls are flanked by prominent towers.

**11.10 Peel Harbor** (54°14'N., 4°42'W.) lies at the entrance to the River Neb, on the S and E sides of St. Patricks Isle. It is tidal and protected by a breakwater which extends ENE from St. Patricks Isle.

**Port of Peel Home Page**

http://www.gov.im/harbours

The inner part of the harbor can accommodate vessels up to 49m in length, with drafts of up to 3.9m at MHWS and 3m at MHWN; all vessels lie aground at LW. Vessels up to 112m in length and 5.8m draft can be accommodated alongside the outer breakwater at MHWS. The harbor is mostly used by small cross-channel ferry vessels and fishing vessels.

Pilotage is not compulsory, but pilots are available and can be contacted on VHF channel 12 or 16. An ETA should be sent 24 hours in advance.

*Courtesy of John Luxton*

**Peel Castle**

## West Side of the Isle of Man

**11.11 Contrary Head** (54°13'N., 4°43'W.) lies 1.3 miles SW of St. Patricks Isle. The coast between consists of hills, from 60 to 150m high, which slope down to rocky bases. A conspicuous square tower stands on the summit of a hill which rises close NE of the head.

*Courtesy of John Luxton*

**Port Erin**

Bradda Head lies 7.2 miles SSW of Contrary Head. The coast between consists of cliffs, 60 to 160m high, except at Elby Point, which is low and rocky, located 3 miles SSW of Contrary Head. Within 2.5 miles of the coast, the land rises to South Barrule which is 480m high. A prominent television mast stands 2.5 miles ENE of Elby Point. A conspicuous tower, with a round turret, stands on Bradda Head.

Fleshwick Bay, a small cove, lies 1.5 miles NNE of Bradda Head and affords shelter to fishing vessels during S and E winds. Bradda Hill, standing on the S side of this cove, is 233m high and prominent.

**11.12 Port Erin** (54°05'N., 4°46'W.), a small harbor, lies at the head of a small bay, 1 mile SE of Bradda Head. A rock, which covers at HW, and a shoal patch, with a depth of 1.5m, lie close to the coast, on the N side of this bay. The ruins of a breakwater extend from the S entrance point and are marked by a buoy.

The harbor lies in the SE corner of the bay and has a pier which dries at its outer end. There are depths alongside the pier of 4.2m at springs and 3.3m at neaps. The harbor is used by fishing boats and pleasure craft. The bay affords good anchorage, in sheltered depths of 5 to 8m, sand and clay.

## Irish

| IRISH | English |
|---|---|
| **A** | |
| a,an,ant | the |
| abha | river |
| abhainn, abhann | river |
| achadh | field |
| airidh | hill pasture |
| ard | high, height |
| ardan | little height |
| ath | ford |
| **B** | |
| bagh | bay |
| baile, (pl.) bailte | townland, settlement |
| bailin, baillin | diminutive of baile |
| ban | white |
| barr | top |
| beag | small |
| beal | mouth, entrance |
| bealach | way, path |
| beann | peak, mountain |
| bearna, bearnas | gap, defile |
| bhaile | townland |
| bheal inse | island mouth |
| bhealigh | path, way |
| bior | pin, peak |
| bogha | sunken rock |
| bolg | bulge, belly |
| bothair | road |
| bothairin | little road |
| buidhe | yellow |
| bun | foot, lowest reach |
| **C** | |
| caiseal | fort |
| camus | bay, creek |
| caol | narrow inlet, strait |
| carn | heap, mound |
| carraig | rock |
| cathair | fort |
| ceann | head |
| ceann, cinn | head of the sea |
| ceathru | "quarter", district |
| cill, (pl.) cealla | church, cell |
| cillin | little cell or church |
| cladach | flat beach |
| cloch | stone, stone building |
| clochan | stepping stones, stone house |
| clochan | stone, stone structure |
| clochar | stone building |
| cloire | whirlpool |
| cluain, (pl.) cluainte | meadow |
| cnoc | hill |
| cnocan, cnuicn | little hill |
| coill, (pl.) coillte | wood |
| cora | welr |
| creag, craig | rock |
| croc, cnoc | hill |
| crois | cross |
| cruach | rick, rick-like mountain |
| cruachan | rick-like hill |
| cuan | harbor |
| cuas | cavern, indent |
| cul | back, corner |
| currach | a level, low-lying plain |
| **D** | |
| da | two |
| daingean | stronghold |
| dearg | red |
| deas | south |
| doimhin | deep |
| doire, daire | oak tree, oak wood |
| doirin | little oak tree |
| domhnach | church |
| droichead | bridge |
| druim | ridge |
| dubh | black |
| dumhach | sand hill |
| dun | fort |
| **E** | |
| eaglais | church |
| eanach | marshy ground |
| eas | waterfall |
| eharraig | rock |
| **F** | |
| fada | long |
| faill | cliff |
| fhada | long |
| fiodh (pl.) feadha | wood |
| fionn | fair, white |
| fraoch | heather, heath |
| **G** | |
| (g.) caiseal | fort |
| gaineamh | sand |
| gaoth | inlet of sea |
| gaoth, (gen.) gaoith | wind |
| garbh | rough |
| glass | green |
| gleann | valley |
| gleannan, gleatan | glen, small valley |
| gob | bill, beak, promontory |
| gorm | blue |
| **I** | |
| iar | west |
| imleach | land bordering lake or marsh |

| IRISH | English |
|---|---|
| inbhear | estuary |
| inis | island |
| inis, inse | island |
| iochtair | lower |
| **L** | |
| leacan | stony hill slope |
| leath, leith | half |
| leathan | wide |
| lianan | shallow, shoal |
| liath | grey |
| linn | pool |
| loch (lough) | lake or bay |
| **M** | |
| machaire | plain |
| magh | open plain |
| mainistir | monastery |
| mhuilinn | mill |
| mionan, min, | smooth green spot |
| moal, maolean | brow (of hill) |
| moin, (g.) mona | bog |
| mor | big, great |
| muileann | mill |
| muine | thicket |
| mullach | summit, crown |
| **N** | |
| nua | new |
| **O** | |
| oilean | island |
| oir | east |
| **P** | |
| poll | hole |
| port | bank |
| **R** | |
| raith | ringfort |
| riasc | marsh |
| rinn | point (of land) |
| ron | seal |
| ros | point |
| ruadh | red |
| **S** | |
| scealp | cliff or large rock |
| sceir, sceiri | rock or rocks in sea |
| scor | reef or shelf or rock |
| sliagh | mountain |
| **T** | |
| teach, tigh, tighe (gen. sing.) | house, monastery, church |
| teampall | church |
| tiobra, tiobraid | well |
| tir | country, territory |
| tobar | well |
| traigh | strand |
| tuaisceart | north |
| tulach | a small hill |
| **U** | |
| uaigh | cave, grave |
| ur | new, fresh |

## Welsh

| WELSH | English |
|---|---|
| **A** | |
| aber | river-mouth |
| afon | river |
| **B** | |
| bach, bychan, feminine fach, fechan | little |
| braich | arm |
| **C** | |
| careg, carreg, (pl.) cerrig | rock(s), stones(s) |
| carn, garn | cairn |
| carnck | rock, stone |
| cefn | ridge |
| clwt, (pl.) clytiau | patch(es) of rock |
| craig | crag |
| **D** | |
| dau, fcmine dwy | two |
| dinas | hill-fort |
| du, feminine ddu | black |
| dyffryn | wide valley |
| gwyn, wyn, feminine gwen, wen | white |
| isaf | lowest |
| **L** | |
| llan | churchyard, church |
| llech | flagstone, flat rock |
| llyn, (pl.) llynnau or lynnoedd | lake(s) |
| **M** | |
| maen | rock |
| mawr, feminine fawr | great |
| moel, foel | bare hill |
| morita | marsh |
| mynydd, (pl.) mynyddau or mynyddoedd | mountain(s) |
| **P** | |
| pen | head |
| penrhyn | promontory, cape |
| pont, bont | bridge |
| porth, borth | port |
| pwll | pool |
| **R** | |
| rhyn | headland |
| **S** | |
| sarn | causeway |
| **T** | |
| traeth | beach |
| trwyn | nose, point |
| **U** | |
| uchaf | highest |
| **Y** | |
| ynys, (pl.) ynysoedd | island(s) |

# 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.

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| BLACK ROCK | 54 | 04 N | 10 | 19 W | 5.2 |
| BLACK ROCK | 54 | 18 N | 8 | 37 W | 5.7 |
| BLACK ROCKS | 53 | 38 N | 9 | 55 W | 4.22 |
| BLACKSOD BAY | 54 | 05 N | 10 | 00 W | 5.2 |
| BLACKSOD POINT | 54 | 06 N | 10 | 04 W | 5.2 |
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| BOSCASTLE | 50 | 41 N | 4 | 42 W | 7.9 |
| BOYLAGH BAY | 54 | 55 N | 8 | 30 W | 5.15 |
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| BRAICHY-Y-PWLL | 52 | 48 N | 4 | 46 W | 9.1 |
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| BRANNOK ISLANDS | 53 | 09 N | 9 | 51 W | 4.3 |
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| CAERNARVON BAY | 53 | 05 N | 4 | 35 W | 8.16 |
| CAHORE POINT | 52 | 34 N | 6 | 12 W | 2.9 |
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| CARLINGFORD LOUGH | 54 | 03 N | 6 | 08 W | 2.23 |
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| CARRIGAHOLT BAY | 52 | 36 N | 9 | 42 W | 3.36 |
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| CASHEN RIVER | 52 | 29 N | 9 | 41 W | 3.35 |
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| CASTLE BREAKER | 51 | 43 N | 9 | 30 W | 3.17 |
| CASTLE HAVEN | 51 | 31 N | 9 | 11 W | 1.14 |
| CASTLE ISLAND | 51 | 31 N | 9 | 30 W | 1.8 |
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| CEFN SIDAN SANDS | 51 | 43 N | 4 | 26 W | 7.30 |
| CEMAES HEAD | 52 | 07 N | 4 | 44 W | 8.7 |
| CHEEK POINT | 52 | 16 N | 6 | 59 W | 1.30 |
| CHICKEN ROCK | 54 | 02 N | 4 | 50 W | 11.2 |
| CLARE ISLAND | 53 | 48 N | 10 | 00 W | 4.6 |
| CLEGGAN BAY | 53 | 34 N | 10 | 08 W | 4.19 |
| CLEGGAN POINT | 53 | 34 N | 10 | 08 W | 4.4 |
| CLEW BAY | 53 | 50 N | 9 | 45 W | 4.23 |
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| CLIFDEN CASTLE | 53 | 29 N | 10 | 04 W | 4.18 |
| CLOGHAN POINT | 54 | 44 N | 5 | 44 W | 6.17 |
| CLOGHCORMICK BUOY | 53 | 51 N | 9 | 43 W | 4.25 |
| CLOGHER HEAD | 52 | 09 N | 10 | 28 W | 3.29 |
| CLOGHER HEAD | 53 | 48 N | 6 | 13 W | 2.21 |
| CLOUGHCORMICK SHOAL | 53 | 51 N | 9 | 43 W | 4.24 |
| CLOVELLY | 51 | 00 N | 4 | 24 W | 7.13 |
| COBH | 51 | 51 N | 8 | 18 W | 1.24 |
| COCKSPEC | 54 | 06 N | 3 | 18 W | 10.10 |
| COD'S HEAD | 51 | 40 N | 10 | 06 W | 3.20 |
| CODLING BANK | 53 | 07 N | 5 | 51 W | 2.4 |
| CODLING LANBY | 53 | 03 N | 5 | 41 W | 2.4 |
| COLERAINE | 55 | 08 N | 6 | 40 W | 6.8 |
| COMBE MARTIN BAY | 51 | 13 N | 4 | 03 W | 7.15 |
| CONEY ISLAND | 51 | 30 N | 9 | 34 W | 1.8 |
| CONNAH'S QUAY | 53 | 13 N | 3 | 04 W | 9.16 |
| CONTRARY HEAD | 54 | 13 N | 4 | 43 W | 11.11 |
| CONWY | 53 | 17 N | 3 | 51 W | 9.8 |
| CONWY BAY | 53 | 18 N | 3 | 57 W | 9.7 |
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| COPPERAS ROCK | 51 | 14 N | 4 | 01 W | 7.15 |
| CORK HARBOUR | 51 | 51 N | 8 | 16 W | 1.24 |
| CORK HEAD | 51 | 45 N | 8 | 18 W | 1.24 |
| CORK SEA BUOY | 51 | 43 N | 8 | 16 W | 1.23 |
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| CREADAN HEAD | 52 | 11 N | 6 | 57 W | 1.31 |
| CROA-LEA | 51 | 26 N | 9 | 37 W | 1.7 |
| CROOKHAVEN | 51 | 28 N | 9 | 42 W | 1.3 |
| CROSSFARNOGE POINT | 52 | 10 N | 6 | 35 W | 1.33 |
| CROW HEAD | 51 | 35 N | 10 | 10 W | 3.20 |
| CROWDY POINT | 51 | 43 N | 9 | 33 W | 3.16 |
| CRUCKDOUGH | 53 | 17 N | 9 | 29 W | 4.12 |
| CULVER SAND | 51 | 17 N | 3 | 15 W | 7.19 |
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| **D** | | | | | |
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| DANIEL ISLET | 51 | 46 N | 10 | 01 W | 3.22 |
| DAUNT ROCK | 51 | 44 N | 8 | 18 W | 1.23 |
| DEENISH ISLAND | 51 | 44 N | 10 | 13 W | 3.21 |
| DEGANWY | 53 | 18 N | 3 | 49 W | 9.8 |
| DEGANWY POINT | 53 | 18 N | 3 | 50 W | 9.7 |
| DENNY ISLAND | 51 | 32 N | 2 | 47 W | 7.48 |
| DERNISH ISLAND | 54 | 25 N | 8 | 30 W | 5.11 |
| DERNISH OIL TERMINAL | 52 | 41 N | 8 | 55 W | 3.43 |
| DEVLIN HILL | 53 | 42 N | 9 | 53 W | 4.23 |
| DILLISK ROCKS | 53 | 48 N | 9 | 42 W | 4.24 |
| DINGLE HARBOUR | 52 | 08 N | 10 | 17 W | 3.27 |
| DINISH ISLAND | 51 | 39 N | 9 | 54 W | 3.13 |
| DINISH ISLAND | 53 | 15 N | 9 | 45 W | 4.15 |
| DONAGHADEE | 54 | 39 N | 5 | 32 W | 6.22 |
| DONEGAL BAY | 54 | 31 N | 8 | 30 W | 5.11 |
| DONEGAL HARBOUR | 54 | 37 N | 8 | 14 W | 5.14 |
| DOOLIN POINT | 53 | 01 N | 9 | 24 W | 4.10 |
| DOON POINT | 51 | 53 N | 10 | 24 W | 3.25 |
| DOUCALLIA ROCKS | 51 | 40 N | 9 | 44 W | 3.11 |
| DOUGLAS | 54 | 09 N | 4 | 28 W | 11.6 |
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| DROGHEDA HARBOUR | 53 | 43 N | 6 | 21 W | 2.20 |
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| DUNANY POINT | 53 | 52 N | 6 | 15 W | 2.21 |
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| DUNDRUM | 54 | 15 N | 5 | 50 W | 2.28 |
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| EAGLE ISLAND | 54 | 17 N | 10 | 05 W | 5.4 |
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| ERAGH | 53 | 17 N | 9 | 44 W | 4.15 |
| ERRIS HEAD | 54 | 18 N | 10 | 00 W | 5.3 |
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| FANAD HEAD | 55 | 17 N | 7 | 38 W | 5.19 |
| FASTNET ROCK | 51 | 23 N | 9 | 36 W | 1.2 |
| FENIT HARBOUR | 52 | 16 N | 9 | 52 W | 3.33 |
| FENIT ISLAND | 52 | 18 N | 9 | 53 W | 3.32 |
| FISHGUARD | 52 | 01 N | 4 | 59 W | 8.6 |
| FLAT HOLM | 51 | 23 N | 3 | 07 W | 7.44 |
| FLEA ISLET | 51 | 30 N | 9 | 11 W | 1.15 |
| FLEETWOOD | 53 | 55 N | 3 | 01 W | 10.5 |
| FOHISH ROCKS | 52 | 02 N | 10 | 36 W | 3.4 |
| FORELAND POINT | 51 | 15 N | 3 | 47 W | 7.16 |
| FORELAND POINT | 54 | 39 N | 5 | 32 W | 6.21 |
| FORMBY POINT | 53 | 33 N | 3 | 03 W | 9.0 |
| FORT BELAN | 53 | 07 N | 4 | 20 W | 8.16 |
| FORT POINT | 51 | 56 N | 10 | 19 W | 3.25 |
| FORTH MOUNTAIN | 52 | 19 N | 6 | 34 W | 1.33 |
| FOYNES HARBOUR | 52 | 37 N | 9 | 06 W | 3.41 |
| FRENCH PORT | 54 | 14 N | 10 | 06 W | 5.3 |
| FRESHWATER WEST BAY | 51 | 39 N | 5 | 05 W | 7.26 |
| FRIAR ISLAND | 53 | 33 N | 10 | 14 W | 4.19 |
| FUNDALE ROCK | 52 | 11 N | 6 | 20 W | 2.6 |
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| GALWAY | 53 | 16 N | 3 | 03 W | 4.13 |
| GARRAUNBAUN POINT | 52 | 35 N | 9 | 14 W | 3.40 |
| GARRON POINT | 55 | 03 N | 5 | 58 W | 6.12 |
| GARSTON DOCK | 53 | 21 N | 2 | 54 W | 9.18 |
| GASCANANE SOUND | 51 | 27 N | 9 | 27 W | 1.11 |
| GLANDORE HARBOUR | 51 | 34 N | 9 | 07 W | 1.17 |

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| GLIN VILLAGE | 52 | 34 N | 9 | 17 W | 3.40 |
| GLOUCESTER SHARPNESS CANAL | 51 | 43 N | 2 | 29 W | 7.53 |
| GODREVY ISLAND | 50 | 14 N | 5 | 24 W | 7.5 |
| GOLAM HEAD | 53 | 14 N | 9 | 46 W | 4.11 |
| GORE POINT | 51 | 13 N | 3 | 38 W | 7.17 |
| GRASSHOLM | 51 | 44 N | 5 | 29 W | 7.23 |
| GREAT BLASKET ISLAND | 52 | 06 N | 10 | 32 W | 3.5 |
| GREAT NEWTOWN HEAD | 52 | 08 N | 7 | 10 W | 1.29 |
| GREAT ORMES HEAD | 53 | 21 N | 3 | 52 W | 9.9 |
| GREAT SKELLIG | 51 | 46 N | 10 | 32 W | 3.2 |
| GREEN GROUNDS | 51 | 35 N | 3 | 56 W | 7.33 |
| GREENCASTLE POINT | 54 | 02 N | 6 | 06 W | 2.24 |
| GREENORE HARBOUR | 54 | 02 N | 6 | 08 W | 2.25 |
| GREENORE POINT | 52 | 14 N | 6 | 19 W | 2.7 |
| GREGORY SOUND | 53 | 05 N | 9 | 37 W | 4.4 |
| GULLAND ROCK | 50 | 34 N | 5 | 00 W | 7.7 |
| GUNS ISLAND | 54 | 18 N | 5 | 33 W | 2.30 |
| GURNARD HEAD | 50 | 12 N | 5 | 36 W | 7.4 |
| **H** | | | | | |
| HAG'S HEAD | 52 | 57 N | 9 | 28 W | 4.10 |
| HARE ISLET | 53 | 15 N | 9 | 01 W | 4.12 |
| HARRINGTON | 54 | 37 N | 3 | 34 W | 10.14 |
| HARTLAND POINT | 51 | 01 N | 4 | 31 W | 7.10 |
| HATS | 51 | 43 N | 5 | 37 W | 7.23 |
| HAULBOWLINE ROCKS | 54 | 01 N | 6 | 05 W | 2.23 |
| HAVERIGG POINT | 54 | 11 N | 3 | 19 W | 10.10 |
| HELLYHUNTER ROCK | 54 | 01 N | 6 | 02 W | 2.23 |
| HELVICK HEAD | 52 | 03 N | 7 | 32 W | 1.28 |
| HELWICK SANDS | 51 | 32 N | 4 | 18 W | 7.31 |
| HEMPTON'S TURBOT BANK | 55 | 26 N | 6 | 57 W | 6.2 |
| HERRING ROCK | 52 | 38 N | 9 | 02 W | 3.42 |
| HEYSHAM | 54 | 02 N | 2 | 55 W | 10.7 |
| HIGH ISLAND | 53 | 33 N | 10 | 15 W | 4.19 |
| HIGH ISLANDS | 51 | 31 N | 9 | 08 W | 1.15 |
| HIGHER SHARPNOSE POINT | 50 | 54 N | 4 | 34 W | 7.10 |
| HOG'S HEAD | 51 | 47 N | 10 | 13 W | 3.24 |
| HOLY ISLAND | 53 | 18 N | 4 | 39 W | 8.18 |
| HOLYHEAD | 53 | 19 N | 4 | 38 W | 8.21 |
| HOLYHEAD BAY | 53 | 19 N | 4 | 38 W | 8.20 |
| HOOK HEAD | 52 | 07 N | 6 | 56 W | 1.33 |
| HORN HEAD | 55 | 14 N | 7 | 59 W | 5.17 |
| HORNET ROCK | 51 | 39 N | 9 | 51 W | 3.12 |
| HORSE ISLAND | 51 | 30 N | 9 | 11 W | 1.14 |
| HORSE ISLET | 51 | 42 N | 9 | 28 W | 3.17 |
| HORSESHOE ROCKS | 51 | 15 N | 4 | 13 W | 7.14 |
| HOWTH | 53 | 23 N | 6 | 04 W | 2.5 |
| HOWTH HARBOUR | 53 | 23 N | 6 | 04 W | 2.18 |
| HOWTH PENINSULA | 53 | 23 N | 6 | 04 W | 2.4 |
| HUNGRY HILL | 51 | 42 N | 9 | 47 W | 3.8 |
| **I** | | | | | |
| ILFRACOMBE | 51 | 13 N | 4 | 07 W | 7.15 |
| ILLAUNBOY | 52 | 07 N | 10 | 31 W | 3.5 |
| ILLAUNEERAGH | 53 | 17 N | 9 | 44 W | 4.15 |
| INGARD POINT | 52 | 11 N | 6 | 49 W | 1.33 |
| INISHBEE | 53 | 51 N | 9 | 40 W | 4.24 |
| INISHBOFIN | 53 | 37 N | 10 | 13 W | 4.5 |
| INISHDALLA | 53 | 41 N | 10 | 04 W | 4.22 |
| INISHEER ISLAND | 53 | 03 N | 9 | 32 W | 4.4 |
| INISHKEA ISLANDS | 54 | 08 N | 10 | 12 W | 5.3 |
| INISHMAAN ISLAND | 53 | 05 N | 9 | 35 W | 4.3 |
| INISHMURRAY | 54 | 26 N | 8 | 40 W | 5.11 |
| INISHOWEN HEAD | 55 | 14 N | 6 | 55 W | 6.4 |
| INISHSHARK | 53 | 37 N | 10 | 17 W | 4.4 |
| INISHTRAHULL | 55 | 26 N | 7 | 14 W | 6.2 |
| INISHTURK | 53 | 42 N | 10 | 06 W | 4.6 |
| INNER PASSAGE | 53 | 22 N | 3 | 30 W | 9.15 |
| INVER BAY | 54 | 37 N | 8 | 19 W | 5.14 |
| IRELAND'S EYE | 53 | 24 N | 6 | 04 W | 2.18 |
| ISLE OF MUCK | 54 | 51 N | 5 | 43 W | 6.15 |
| ISLE OF WHITHORN | 54 | 42 N | 4 | 22 W | 10.18 |
| **J** | | | | | |
| JORDAN'S SPIT | 53 | 34 N | 3 | 15 W | 10.3 |
| **K** | | | | | |
| KEDGE ISLAND | 51 | 28 N | 9 | 20 W | 1.14 |
| KENMARE RIVER | 51 | 45 N | 10 | 00 W | 3.21 |
| KERRY HEAD | 52 | 25 N | 9 | 57 W | 3.32 |
| KILCONLY POINT | 52 | 33 N | 9 | 40 W | 3.38 |
| KILCREDAUN POINT | 52 | 35 N | 9 | 41 W | 3.36 |
| KILKEEL HARBOUR | 54 | 04 N | 5 | 59 W | 2.28 |
| KILKERIN POINT | 52 | 36 N | 9 | 20 W | 3.38 |
| KILKIERAN COVE | 53 | 19 N | 9 | 44 W | 4.15 |
| KILLALA BAY | 54 | 16 N | 9 | 08 W | 5.6 |
| KILLARY HARBOUR | 53 | 37 N | 9 | 50 W | 4.22 |
| KILLEANY BAY | 53 | 07 N | 9 | 39 W | 4.3 |
| KILLYBEGS HARBOUR | 54 | 37 N | 8 | 26 W | 5.13 |
| KILMAKILLOGE HARBOUR | 51 | 46 N | 9 | 50 W | 3.22 |
| KILRUSH | 52 | 38 N | 9 | 30 W | 3.37 |
| KING WILLIAM BANKS | 54 | 27 N | 4 | 08 W | 10.20 |
| KINSALE | 51 | 42 N | 8 | 31 W | 1.21 |
| KINSALE HEAD GAS FIELD | 51 | 22 N | 8 | 00 W | 1.26 |
| KIRKCUDBRIGHT BAY | 54 | 46 N | 4 | 04 W | 10.17 |
| KISH BANK LIGHT | 53 | 19 N | 5 | 56 W | 2.4 |
| KNOCK POINT | 53 | 27 N | 10 | 08 W | 4.17 |
| KNOCKAPHUCA | 51 | 31 N | 9 | 42 W | 1.4 |
| KNOCKMORDEN RANGE | 53 | 23 N | 9 | 43 W | 4.15 |
| **L** | | | | | |
| LABASHEEDA BAY | 52 | 37 N | 9 | 15 W | 3.40 |
| LABBASHEEDA BAY | 52 | 37 N | 9 | 15 W | 3.40 |
| LACKEEN ROCKS | 51 | 50 N | 9 | 44 W | 3.24 |
| LACONIA BANK | 55 | 26 N | 7 | 14 W | 6.2 |
| LAMB'S HEAD | 51 | 44 N | 10 | 08 W | 3.21 |
| LAMBAY ISLAND | 53 | 29 N | 6 | 01 W | 2.5 |
| LANCASTER | 54 | 01 N | 2 | 48 W | 10.6 |
| LANDS END | 50 | 04 N | 5 | 43 W | 7.2 |
| LARNE LOUGH | 54 | 51 N | 5 | 48 W | 6.14 |
| LAVERNOCK POINT | 51 | 24 N | 3 | 10 W | 7.43 |
| LAWRENCE COVE | 51 | 38 N | 9 | 48 W | 3.11 |
| LAXEY BAY | 54 | 13 N | 4 | 23 W | 11.7 |
| LETTERMORE HILL | 53 | 18 N | 9 | 40 W | 4.15 |
| LIMEBURNER ROCK | 55 | 18 N | 7 | 48 W | 5.19 |
| LIMERICK | 52 | 40 N | 8 | 38 W | 3.45 |
| LINNEY HEAD | 51 | 37 N | 5 | 03 W | 7.26 |
| LITTLE ISLAND | 52 | 15 N | 7 | 03 W | 1.30 |
| LITTLE ROSS | 54 | 46 N | 4 | 05 W | 10.20 |
| LIVERPOOL | 53 | 25 N | 3 | 02 W | 9.17 |
| LLANDDWYN ISLAND | 53 | 08 N | 4 | 25 W | 8.18 |
| LOGHEEN ROCK | 52 | 40 N | 8 | 48 W | 3.44 |
| LONDONDERRY | 55 | 00 N | 7 | 19 W | 6.6 |
| LONEHORT POINT | 51 | 39 N | 9 | 47 W | 3.9 |
| LONGSHIPS | 50 | 04 N | 5 | 44 W | 7.3 |
| LOOP HEAD | 52 | 34 N | 9 | 56 W | 3.0 |
| LOUGH FOYLE | 55 | 10 N | 7 | 00 W | 6.5 |
| LOUGH SWILLY | 55 | 14 N | 7 | 34 W | 5.20 |
| LOUSY ROCKS | 51 | 29 N | 9 | 23 W | 1.13 |
| LUCE BAY | 54 | 45 N | 4 | 45 W | 10.19 |
| LUGNAQUILLIA | 52 | 58 N | 6 | 28 W | 2.1 |
| LUNDY | 51 | 10 N | 4 | 40 W | 7.11 |
| LYDNEY HARBOUR | 51 | 43 N | 2 | 30 W | 7.52 |
| LYNMOUTH | 51 | 14 N | 3 | 50 W | 7.16 |
| **M** | | | | | |
| MAGHAREE ISLANDS | 52 | 20 N | 10 | 03 W | 3.31 |
| MAL BAY | 52 | 50 N | 9 | 31 W | 4.8 |
| MALIN HEAD | 55 | 23 N | 7 | 24 W | 6.4 |
| MALIN MORE HEAD | 54 | 42 N | 8 | 47 W | 5.15 |
| MALINBEG HEAD | 54 | 40 N | 8 | 48 W | 5.12 |
| MANCHESTER | 53 | 28 N | 2 | 17 W | 9.20 |
| MARYPORT | 54 | 43 N | 3 | 30 W | 10.14 |
| MAUGHOLD HEAD | 54 | 18 N | 4 | 19 W | 11.7 |
| MCSWYNES BAY | 54 | 16 N | 8 | 50 W | 5.12 |
| MELMORE HEAD | 55 | 15 N | 7 | 47 W | 5.18 |
| MENAI STRAIT | 53 | 08 N | 4 | 19 W | 8.17 |
| MEW ISLAND | 54 | 42 N | 5 | 31 W | 6.18 |

| | Position ° | ' | ° | ' | Sec. Para |
|---|---|---|---|---|---|
| MIDDLE GROUND | 52 | 41 N | 8 | 53 W | 3.43 |
| MILFORD HAVEN | 51 | 43 N | 5 | 02 W | 7.25 |
| MILL COVE | 51 | 39 N | 9 | 52 W | 3.11 |
| MINE HEAD | 51 | 58 N | 7 | 38 W | 1.28 |
| MINEHEAD | 51 | 12 N | 3 | 28 W | 7.17 |
| MIXON SHOAL | 51 | 33 N | 3 | 58 W | 7.33 |
| MIZEN HEAD | 51 | 27 N | 9 | 49 W | 1.2 |
| MOCHRAS POINT | 52 | 49 N | 4 | 09 W | 8.11 |
| MONEY POINT TERMINAL | 52 | 36 N | 9 | 25 W | 3.38 |
| MONKSTONE | 51 | 25 N | 3 | 06 W | 7.44 |
| MORTE POINT | 51 | 11 N | 4 | 14 W | 7.14 |
| MOSTYN QUAY | 53 | 19 N | 3 | 14 W | 9.16 |
| MOUNT ERRISBEG | 53 | 24 N | 9 | 57 W | 4.15 |
| MOUNT TRENCHARD | 52 | 36 N | 9 | 09 W | 3.41 |
| MUCKLAGHMORE | 52 | 20 N | 9 | 56 W | 3.32 |
| MULL OF GALLOWAY | 54 | 38 N | 4 | 51 W | 10.20 |
| MULLAGHMORE HEAD | 54 | 28 N | 8 | 27 W | 5.11 |
| MULROY BAY | 55 | 15 N | 7 | 46 W | 5.18 |
| MUMBLES HEAD | 51 | 34 N | 3 | 58 W | 7.33 |
| MUMBLES OUTER ROADSTEAD | 53 | 34 N | 3 | 57 W | 7.35 |
| MUTTON ISLAND | 53 | 15 N | 9 | 03 W | 4.12 |

## N

| | | | | | |
|---|---|---|---|---|---|
| NASH POINT | 51 | 24 N | 3 | 34 W | 7.39 |
| NASH SANDS | 51 | 25 N | 3 | 36 W | 7.40 |
| NEATH | 51 | 37 N | 3 | 50 W | 7.37 |
| NEW QUAY HEAD | 52 | 13 N | 4 | 22 W | 8.8 |
| NEW ROSS | 52 | 23 N | 6 | 57 W | 1.32 |
| NEWCASTLE | 54 | 12 N | 5 | 53 W | 2.28 |
| NEWPORT | 51 | 33 N | 2 | 59 W | 7.47 |
| NEWPORT BAY | 52 | 02 N | 4 | 52 W | 8.7 |
| NEWPORT HARBOUR | 53 | 53 N | 9 | 33 W | 4.25 |
| NEWQUAY | 50 | 25 N | 5 | 05 W | 7.6 |
| NORTH MORECAMBE GAS FIELD | 53 | 57 N | 3 | 40 W | 10.3 |
| NORTH STACK | 53 | 19 N | 4 | 41 W | 9.1 |
| NORTH WEST BANK | 51 | 12 N | 4 | 44 W | 7.11 |

## O

| | | | | | |
|---|---|---|---|---|---|
| OLD HEAD | 53 | 47 N | 9 | 46 W | 4.24 |
| OLD HEAD OF KINSALE | 51 | 36 N | 8 | 32 W | 1.20 |
| ONE FATHOM BANK | 51 | 21 N | 3 | 12 W | 7.44 |
| OUTER GREEN GROUNDS | 51 | 33 N | 3 | 55 W | 7.33 |
| OXWICH BAY | 51 | 33 N | 4 | 07 W | 7.32 |
| OYSTER HAVEN | 51 | 41 N | 8 | 27 W | 1.22 |

## P

| | | | | | |
|---|---|---|---|---|---|
| PADSTOW | 50 | 33 N | 4 | 56 W | 7.8 |
| PEEL HARBOUR | 54 | 14 N | 4 | 42 W | 11.10 |
| PEN ANGLAS | 52 | 01 N | 4 | 59 W | 8.5 |
| PEN BWCH POINT | 52 | 37 N | 4 | 08 W | 8.10 |
| PEN TRWYN | 53 | 20 N | 3 | 50 W | 9.9 |
| PENARTH HEAD | 51 | 27 N | 3 | 10 W | 7.43 |
| PENCRIBACH | 52 | 09 N | 4 | 34 W | 8.8 |
| PENDEEN POINT | 50 | 10 N | 5 | 40 W | 7.3 |
| PENINSULA POINT | 55 | 10 N | 8 | 09 W | 5.17 |
| PENMAEN-BACH POINT | 53 | 17 N | 3 | 53 W | 9.8 |
| PENMAENMAWR POINT | 53 | 16 N | 3 | 57 W | 9.7 |
| PETERSTONE FLATS | 51 | 30 N | 3 | 02 W | 7.46 |
| POINT LYNAS | 53 | 25 N | 4 | 17 W | 9.3 |
| POINT OF AYR | 53 | 21 N | 3 | 19 W | 9.12 |
| POINT OF AYRE | 54 | 25 N | 4 | 22 W | 11.8 |
| POLLOCK SHOAL | 53 | 40 N | 10 | 02 W | 4.22 |
| PORT CARDIGAN | 52 | 07 N | 4 | 42 W | 8.8 |
| PORT ERIN | 54 | 05 N | 4 | 46 W | 11.12 |
| PORT EYNON BAY | 51 | 32 N | 4 | 11 W | 7.32 |
| PORT EYNON POINT | 51 | 32 N | 4 | 12 W | 7.31 |
| PORT ISAAC | 50 | 36 N | 4 | 50 W | 7.9 |
| PORT OF LIVERPOOL BUILDING | 53 | 24 N | 3 | 00 W | 9.17 |
| PORT ORIEL | 53 | 48 N | 6 | 13 W | 2.21 |
| PORT PENRHYN | 53 | 14 N | 4 | 07 W | 9.6 |
| PORT RADAR STATION | 53 | 28 N | 3 | 02 W | 9.17 |
| PORT ST. MARY | 54 | 04 N | 4 | 44 W | 11.3 |
| PORT TALBOT | 51 | 35 N | 3 | 49 W | 7.38 |
| PORTAVOGIE | 54 | 27 N | 5 | 26 W | 6.23 |
| PORTBALLINTRAE | 55 | 13 N | 6 | 33 W | 6.10 |
| PORTH NEIGWEL | 52 | 48 N | 4 | 35 W | 8.14 |
| PORTHCAWL | 51 | 28 N | 3 | 42 W | 7.39 |
| PORTHMADOG | 52 | 55 N | 4 | 08 W | 8.12 |
| PORTNAFRANKAGH | 54 | 14 N | 10 | 06 W | 5.3 |
| PORTREATH | 50 | 16 N | 5 | 18 W | 7.5 |
| PORTRUSH | 55 | 13 N | 6 | 40 W | 6.10 |
| PORTSTEWART | 55 | 11 N | 6 | 43 W | 6.9 |
| PORTSTEWART POINT | 55 | 11 N | 6 | 43 W | 6.7 |
| POWER HEAD | 51 | 47 N | 8 | 10 W | 1.25 |
| PUFFIN ISLAND | 51 | 50 N | 10 | 24 W | 3.24 |
| PUFFIN ISLAND | 53 | 19 N | 4 | 02 W | 9.6 |
| PWLLHELI | 52 | 53 N | 4 | 24 W | 8.12 |

## Q

| | | | | | |
|---|---|---|---|---|---|
| QUAY ISLAND | 52 | 41 N | 8 | 49 W | 3.44 |

## R

| | | | | | |
|---|---|---|---|---|---|
| RAM HEAD | 51 | 57 N | 7 | 43 W | 1.27 |
| RAMORE HEAD | 55 | 13 N | 6 | 40 W | 6.9 |
| RAMSEY HARBOUR | 54 | 19 N | 4 | 23 W | 11.7 |
| RAMSEY ISLAND | 51 | 52 N | 5 | 20 W | 8.2 |
| RATHLIN ISLAND | 55 | 18 N | 6 | 12 W | 6.3 |
| RATHLIN O'BIRNE ISLAND | 54 | 40 N | 8 | 50 W | 5.12 |
| RATHLIN SOUND | 55 | 14 N | 6 | 10 W | 6.3 |
| RATHMULLAN | 55 | 06 N | 7 | 32 W | 5.21 |
| RAVENGLASS | 54 | 21 N | 3 | 24 W | 10.10 |
| REANIES POINT | 51 | 43 N | 8 | 20 W | 1.22 |
| RED GAP POINT | 52 | 36 N | 9 | 15 W | 3.40 |
| RED ISLAND | 53 | 35 N | 6 | 06 W | 2.18 |
| RHOOSE POINT | 51 | 23 N | 3 | 20 W | 7.41 |
| RHOS POINT | 53 | 19 N | 3 | 44 W | 9.10 |
| RHOSSILI BAY | 51 | 35 N | 4 | 19 W | 7.30 |
| RHYL | 53 | 19 N | 3 | 29 W | 9.11 |
| RIVER SHANNON | 52 | 34 N | 9 | 56 W | 3.34 |
| RIVER WYE | 51 | 37 N | 2 | 40 W | 7.52 |
| ROARINGWATER BAY | 51 | 32 N | 9 | 26 W | 1.10 |
| ROBERTS' HEAD | 51 | 44 N | 8 | 19 W | 1.22 |
| ROCK FERRY | 53 | 22 N | 3 | 00 W | 9.17 |
| ROCK ISLAND | 53 | 09 N | 9 | 51 W | 4.3 |
| ROONAH HEAD | 53 | 46 N | 9 | 54 W | 4.23 |
| ROSMONEY HILL | 53 | 49 N | 9 | 37 W | 4.24 |
| ROSSALL POINT | 53 | 55 N | 3 | 03 W | 10.2 |
| ROSSLARE | 52 | 15 N | 6 | 20 W | 2.8 |
| RUMPS POINT | 50 | 36 N | 4 | 55 W | 7.9 |
| RUSK CHANNEL | 52 | 30 N | 6 | 10 W | 2.10 |

## S

| | | | | | |
|---|---|---|---|---|---|
| SAINT BRIDES BAY | 51 | 49 N | 5 | 13 W | 8.1 |
| SAINT JOHN'S POINT | 54 | 13 N | 5 | 40 W | 2.29 |
| SAINT JOHN'S POINT | 54 | 34 N | 8 | 27 W | 5.12 |
| SAINT MICHAELS CHURCH | 54 | 06 N | 3 | 10 W | 10.3 |
| SALTEE ISLANDS | 52 | 07 N | 6 | 37 W | 1.33 |
| SAND BAY | 51 | 22 N | 2 | 58 W | 7.22 |
| SARN BADRIG | 52 | 45 N | 4 | 14 W | 8.11 |
| SARN WALLOG | 52 | 27 N | 4 | 05 W | 8.9 |
| SAUNDERSFOOT | 51 | 43 N | 4 | 42 W | 7.29 |
| SCARIFF ISLAND | 51 | 44 N | 10 | 15 W | 3.21 |
| SCARWEATHER SANDS | 51 | 28 N | 3 | 50 W | 7.34 |
| SCATTERY ISLAND | 52 | 37 N | 9 | 31 W | 3.36 |
| SCATTERY ROADS | 52 | 36 N | 9 | 30 W | 3.36 |
| SELKER ROCKS | 54 | 17 N | 3 | 27 W | 10.9 |
| SEVEN HEADS | 51 | 34 N | 8 | 43 W | 1.18 |
| SHAMROCK PINNACLE | 55 | 21 N | 6 | 24 W | 6.2 |
| SHARPNESS | 51 | 43 N | 2 | 29 W | 7.53 |
| SHEELA POINT | 51 | 32 N | 9 | 07 W | 1.16 |
| SHEEP HAVEN | 55 | 12 N | 7 | 54 W | 5.18 |
| SHEEP ISLAND | 51 | 40 N | 5 | 07 W | 7.25 |
| SHELL FLAT | 53 | 51 N | 3 | 20 W | 10.3 |
| SHIP POINT | 52 | 53 N | 9 | 26 W | 4.8 |
| SHOT HEAD | 51 | 40 N | 9 | 40 W | 3.15 |
| SILLOTH | 54 | 52 N | 3 | 24 W | 10.15 |
| SKERDMORE | 53 | 15 N | 10 | 00 W | 4.16 |
| SKERNAGHAN POINT | 54 | 51 N | 5 | 46 W | 6.15 |
| SKERRIES ISLANDS | 54 | 14 N | 4 | 42 W | 2.19 |
| SKERRIES LIGHT | 53 | 25 N | 4 | 36 W | 9.2 |
| SKOKHOLM ISLAND | 51 | 42 N | 5 | 16 W | 7.24 |
| SKOMER ISLAND | 51 | 44 N | 5 | 18 W | 7.24 |

| | Position ° | ' | ° | ' | Sec. Para |
|---|---|---|---|---|---|
| SKULL HARBOUR | 51 | 31 N | 9 | 32 W | 1.9 |
| SLEA HEAD | 52 | 06 N | 10 | 27 W | 3.5 |
| SLIEVE CALLAN | 52 | 50 N | 9 | 16 W | 4.8 |
| SLIEVE CROOB | 54 | 20 N | 5 | 58 W | 2.28 |
| SLIEVE DONARD | 54 | 11 N | 5 | 55 W | 2.1 |
| SLIGO BAY | 54 | 18 N | 8 | 45 W | 5.7 |
| SLIGO HARBOR | 54 | 16 N | 8 | 28 W | 5.10 |
| SLYNE HEAD | 53 | 24 N | 10 | 14 W | 4.16 |
| SMERWICK HARBOUR | 52 | 12 N | 10 | 24 W | 3.30 |
| SNAEFELL | 54 | 16 N | 4 | 28 W | 11.1 |
| SNEEM HARBOUR | 51 | 48 N | 9 | 53 W | 3.23 |
| SOD ISLAND | 52 | 41 N | 8 | 51 W | 3.43 |
| SOLDIERS POINT | 54 | 02 N | 6 | 05 W | 2.23 |
| SOLVA | 51 | 52 N | 5 | 12 W | 8.1 |
| SOUND ROCK | 52 | 04 N | 10 | 36 W | 3.4 |
| SOUTH CHANNEL | 52 | 40 N | 8 | 53 W | 3.43 |
| SOUTH HARBOUR | 51 | 26 N | 9 | 30 W | 1.12 |
| SOUTH MORECAMBE GAS FIELD | 53 | 51 N | 3 | 35 W | 10.3 |
| SOUTH ROCK LIGHTED BUOY | 54 | 24 N | 5 | 22 W | 6.24 |
| SOUTH STACK | 53 | 18 N | 4 | 42 W | 8.19 |
| SPANISH HEAD | 54 | 03 N | 4 | 46 W | 11.2 |
| SPILLING ROCK | 52 | 40 N | 8 | 47 W | 3.44 |
| ST. AGNES HEAD | 50 | 19 N | 5 | 14 W | 7.5 |
| ST. ANN'S HEAD | 51 | 41 N | 5 | 10 W | 7.25 |
| ST. BEES HEAD | 54 | 31 N | 3 | 38 W | 10.10 |
| ST. DAVID'S HEAD | 51 | 54 N | 5 | 19 W | 8.4 |
| ST. GEORGE'S CHANNEL | 52 | 20 N | 6 | 00 W | 2.1 |
| ST. GOVAN'S HEAD | 51 | 36 N | 4 | 55 W | 7.27 |
| ST. GOWAN SHOALS | 51 | 33 N | 4 | 57 W | 7.27 |
| ST. IVES HEAD | 50 | 13 N | 5 | 29 W | 7.4 |
| ST. MICHAEL'S ISLAND | 54 | 04 N | 4 | 36 W | 11.5 |
| ST. PATRICKS CAUSEWAY | 52 | 45 N | 4 | 14 W | 8.11 |
| ST. TUDWALS ISLANDS | 52 | 48 N | 4 | 28 W | 8.13 |
| STACKPOLE HEAD | 51 | 37 N | 4 | 54 W | 7.28 |
| STANLEY BANK | 51 | 13 N | 4 | 37 W | 7.11 |
| STEEP HOLM | 51 | 20 N | 3 | 06 W | 7.22 |
| STEPPER POINT | 50 | 34 N | 4 | 57 W | 7.7 |
| STOKE BLUFF | 51 | 12 N | 3 | 12 W | 7.19 |
| STRANGFORD LOUGH | 54 | 25 N | 5 | 36 W | 6.26 |
| STRANGFORD LOUGH NARROWS | 54 | 20 N | 5 | 30 W | 6.25 |
| STRUMBLE HEAD | 52 | 02 N | 5 | 04 W | 8.5 |
| SUMMER COVE | 51 | 42 N | 8 | 30 W | 1.21 |
| SWANSEA BAY | 51 | 35 N | 3 | 54 W | 7.33 |
| SWANSEA | 51 | 37 N | 3 | 57 W | 7.36 |
| SWINES HEAD | 52 | 08 N | 7 | 02 W | 1.29 |
| SYBIL POINT | 52 | 11 N | 10 | 28 W | 3.29 |
| **T** | | | | | |
| TABLE ROAD | 53 | 19 N | 4 | 05 W | 9.3 |
| TARBERT ISLAND | 52 | 35 N | 9 | 22 W | 3.39 |
| TEARAGHT ISLAND | 52 | 05 N | 10 | 40 W | 4.9 |
| TENBY | 51 | 41 N | 4 | 42 W | 7.29 |
| THE ARAN ISLANDS | 53 | 07 N | 9 | 40 W | 4.2 |
| THE BAILIES | 52 | 12 N | 6 | 17 W | 2.3 |
| THE BRANDIES | 52 | 06 N | 6 | 35 W | 1.34 |
| THE BREACHES | 53 | 05 N | 6 | 02 W | 2.14 |
| THE BULL | 51 | 35 N | 10 | 18 W | 3.2 |
| THE DEVIL'S TAIL | 52 | 38 N | 4 | 41 W | 8.15 |
| THE GARVAN ISLES | 55 | 23 N | 7 | 19 W | 6.2 |
| THE GLOUCESTER CANAL | 51 | 43 N | 2 | 29 W | 7.53 |
| THE ISLAND | 50 | 13 N | 5 | 29 W | 7.4 |
| THE ISLE OF MAN | 54 | 15 N | 4 | 30 W | 11.1 |
| THE LEDGE | 54 | 18 N | 8 | 43 W | 5.9 |
| THE MAIDENS | 54 | 56 N | 5 | 44 W | 6.3 |
| THE RAVEN POINT | 52 | 21 N | 6 | 21 W | 2.9 |
| THE SCARLETS | 52 | 40 N | 8 | 46 W | 3.44 |
| THE SEVEN HOGS | 52 | 20 N | 10 | 03 W | 3.31 |
| THE SKELLIGS | 51 | 46 N | 10 | 32 W | 3.24 |
| THE SKERRIES | 53 | 25 N | 4 | 36 W | 9.1 |
| THE SKERRIES | 55 | 13 N | 6 | 38 W | 6.10 |
| THE SMALLS | 51 | 43 N | 5 | 40 W | 7.23 |
| THE STAG ROCKS | 55 | 04 N | 8 | 29 W | 5.16 |
| THE STAGS | 51 | 28 N | 9 | 13 W | 1.14 |
| THE STAGS | 54 | 22 N | 9 | 47 W | 5.5 |
| THE STORKS | 55 | 13 N | 6 | 35 W | 6.10 |
| THE THREE SISTERS | 52 | 12 N | 10 | 25 W | 3.30 |
| THE TRIPODS | 52 | 49 N | 4 | 46 W | 8.16 |
| THREE CASTLE HEAD | 51 | 29 N | 9 | 50 W | 3.6 |
| THUNDER ROCK | 52 | 02 N | 10 | 36 W | 3.4 |
| TINTAGELL HEAD | 50 | 40 N | 4 | 46 W | 7.9 |
| TOBER POINT | 51 | 32 N | 9 | 24 W | 1.10 |
| TOE HEAD | 51 | 29 N | 9 | 14 W | 1.14 |
| TOORMORE BAY | 51 | 30 N | 9 | 39 W | 1.5 |
| TORR HEAD | 55 | 12 N | 6 | 04 W | 6.12 |
| TORY ISLAND | 55 | 16 N | 8 | 13 W | 5.17 |
| TOWAN HEAD | 50 | 25 N | 5 | 06 W | 7.6 |
| TRABAAN POINT | 53 | 14 N | 9 | 39 W | 4.11 |
| TRALEE BAY | 52 | 17 N | 9 | 56 W | 3.32 |
| TRAMADROUM | 51 | 29 N | 9 | 23 W | 1.12 |
| TRAMORE BAY | 52 | 08 N | 7 | 10 W | 1.29 |
| TRAWBREAGA BAY | 55 | 20 N | 7 | 25 W | 5.22 |
| TREMADOG BAY | 52 | 50 N | 4 | 15 W | 8.12 |
| TREVOSE HEAD | 50 | 33 N | 5 | 02 W | 7.7 |
| TRWYN CILAN | 52 | 47 N | 4 | 32 W | 8.13 |
| TRWYN DWLBAN | 53 | 19 N | 4 | 12 W | 9.5 |
| TRWYN PORTH DINLLAEN | 52 | 57 N | 4 | 34 W | 8.16 |
| TRWYN-DU | 53 | 19 N | 4 | 03 W | 9.5 |
| TRWYN-Y-TAL | 53 | 00 N | 4 | 26 W | 8.16 |
| TULLY MOUNTAIN | 53 | 35 N | 10 | 00 W | 4.19 |
| TURBOT BANK | 51 | 37 N | 5 | 08 W | 7.26 |
| TURK HEAD | 51 | 30 N | 9 | 25 W | 1.12 |
| TUSKAR ROCK | 52 | 12 N | 6 | 12 W | 2.2 |
| **V** | | | | | |
| VALENCIA ISLAND | 51 | 55 N | 10 | 21 W | 3.25 |
| VALENTIA ISLAND | 51 | 55 N | 10 | 21 W | 3.25 |
| VENTRY HARBOUR | 52 | 07 N | 10 | 20 W | 3.28 |
| **W** | | | | | |
| WALLIS ROCK | 51 | 29 N | 9 | 23 W | 1.13 |
| WALNEY LIGHT | 54 | 03 N | 3 | 11 W | 10.3 |
| WALTER SCOTT ROCK | 51 | 39 N | 9 | 54 W | 3.13 |
| WARRENPOINT | 54 | 06 N | 6 | 15 W | 2.27 |
| WARRINGTON BRIDGE | 53 | 23 N | 2 | 35 W | 9.17 |
| WATCHET | 51 | 11 N | 3 | 20 W | 7.18 |
| WATERFORD | 52 | 08 N | 6 | 57 W | 1.31 |
| WELSH GROUNDS | 51 | 31 N | 2 | 52 W | 7.48 |
| WELSH HOOK | 51 | 31 N | 2 | 55 W | 7.46 |
| WELSHMANS GUT | 53 | 22 N | 3 | 16 W | 9.15 |
| WESTON BAY | 51 | 20 N | 3 | 00 W | 7.22 |
| WESTPORT BAY | 53 | 48 N | 9 | 36 W | 4.24 |
| WESTPORT HARBOUR | 53 | 48 N | 9 | 32 W | 4.25 |
| WEXFORD HARBOUR | 52 | 20 N | 6 | 27 W | 2.9 |
| WHIDDY ISLAND | 51 | 41 N | 9 | 30 W | 3.17 |
| WHIDDY ISLAND | 51 | 41 N | 9 | 32 W | 3.19 |
| WHITE OYSTER LEDGE | 51 | 31 N | 4 | 00 W | 7.33 |
| WHITEHAVEN | 54 | 33 N | 3 | 36 W | 10.12 |
| WICKLOW HARBOUR | 52 | 59 N | 6 | 02 W | 2.13 |
| WICKLOW HEAD | 52 | 58 N | 6 | 00 W | 2.12 |
| WIGTOWN BAY | 54 | 45 N | 4 | 15 W | 10.18 |
| WOLF ROCK | 49 | 57 N | 5 | 49 W | 7.2 |
| WOOLTACK POINT | 51 | 44 N | 5 | 15 W | 7.24 |
| WORKINGTON | 54 | 39 N | 3 | 34 W | 10.13 |
| WORMS HEAD | 51 | 34 N | 4 | 20 W | 7.30 |
| WYLFA HEAD | 53 | 25 N | 4 | 28 W | 9.2 |
| **Y** | | | | | |
| YNYS DULAS | 53 | 23 N | 4 | 15 W | 9.4 |
| YNYS MOELFRE | 53 | 22 N | 4 | 14 W | 9.4 |
| YOUGHAL BAY | 51 | 55 N | 7 | 50 W | 1.27 |