UK Hydrographic Office

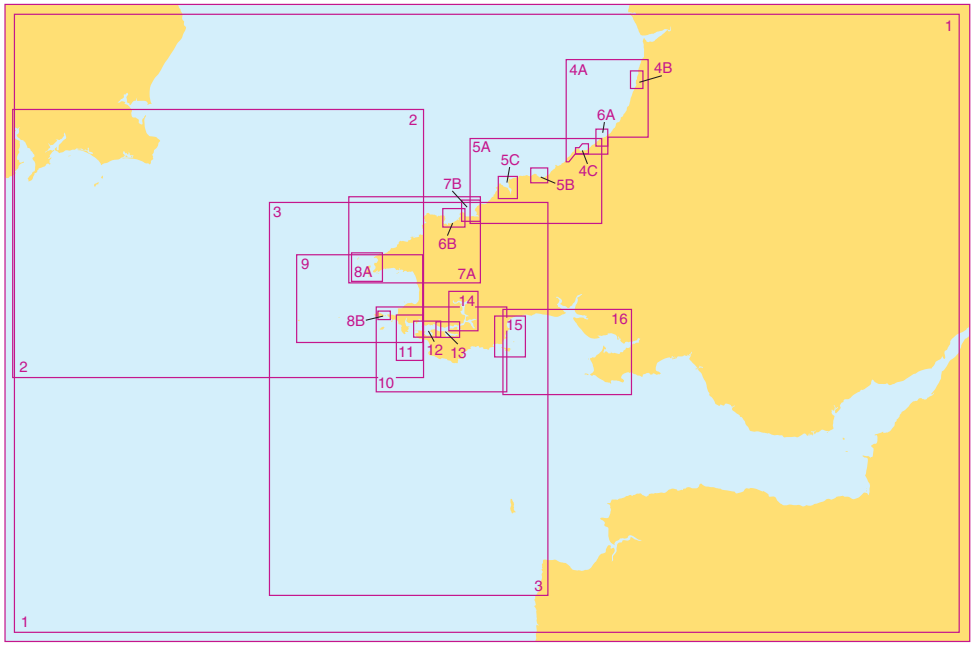
5620

Updated to June 2025

Version 1.0

South West Wales

Coverage Diagram



5620	Chart Title	Natural Scale 1:
1	Approaches to Saint George's Channel and Bristol Channel	500,000
2	Saint George's Channel	200,000
3	Fishguard to Hartland Point	200,000
4A	Aberystwyth to New Quay	75,000
4B	Aberystwyth	18,000
4C	New Quay	12,500
5A	Aberaeron to Newport	75,000
5B	Aberporth	30,000
5C	Approaches to Cardigan	37,500
6	Aberaeron and Fishguard Bay	
6A	Aberaeron	18,000
6B	Fishguard Bay	15,000
7A	Newport Bay to Ramsey Sound	75,000
7B	Newport Bay	37,500
8	Ramsey Sound and Jack Sound	
8A	Ramsey Sound	25,000
8B	Jack Sound	12,500

5620	Chart Title	Natural Scale 1:
9	Ramsey Sound to Milford Haven including The Smalls	75,000
10	Skomer Island to Caldey Island	75,000
11	Approaches to Milford Haven	25,000
12	Dale Road to Milford Shelf	12,500
13	Milford Shelf to Cleddau Bridge	12,500
14A	River Cleddau	12,500
14B	Carew River	50,000
14C	Continuation of River Cleddau	12,500
14D	Continuation of River Cleddau	50,000
15	Approaches to Tenby and Saundersfoot	25,000
16	Carmarthen Bay	75,000

Notes

Positions are referred to the WGS84 compatible datum, European Terrestrial Reference System 1989 Datum.
Depths are in metres and are reduced to Chart Datum, which is approximately the level of Lowest Astronomical Tide.
Heights are in metres. Underlined figures are drying heights above Chart Datum. Overhead clearance heights are above Highest Astronomical Tide. All other heights are above Mean High Water Springs.
Navigational marks: IALA Maritime Buoyage System-Region A (Red to port)

DATUM

All the charts are referred to WGS84. Any positions taken from GPS (referred to WGS84) or from ADMIRALTY Notices to Mariners (referred to ETRS89) can be plotted directly on all charts.

LIGHTS

Light stars without legends represent two fixed lights displayed vertically. They are seen as red to port and green to starboard, when proceeding upriver.

OVERHEAD CABLES

Overhead cables may conduct high voltages; contact with or proximity to these poses extreme danger. Sufficient clearance must be allowed.

OMISSION OF DETAIL

Within the limit marked _ _ _ _ and the coastline, this chart should only be used for planning purposes as features such as depths, platforms, wrecks, pipelines, minor aids to navigation and cables have been omitted. Larger scale ADMIRALTY charts are available for mariners intending to navigate in this area.

HIGH INTENSITY LIGHTS

High Intensity Lights for use in daylight in reduced visibility are available on request to Milford Haven Port Control.

OIL AND LNG TERMINALS - NAVIGATION

No unauthorised vessels should navigate within 100 metres of a berth or a tanker moored at the terminals. The marked boat passages provide inshore access for small craft.

MARINE FARMS

Marine farms exist within the area of this chart. They may not all be shown individually and their positions may change frequently. Marine farms may be marked by lit or unlit buoys or beacons. Mariners are advised to avoid these structures and their associated moorings.

TARGETS AND BUOYS

Targets, moorings and buoys marking scientific instruments exist within 25 miles of Pencribach (52°08′N 4°34′W). Some are marked by flashing lights and their positions change; for the latest information consult www.aberporth.qinetiq.com. For further details, see ADMIRALTY List of Radio Signals.

SUBMARINE CABLES AND PIPELINES

Mariners should not anchor, trawl or engage in seabed operations in the vicinity of submarine cables and pipelines. Submarine cables support national infrastructure; damage to them may affect critical services and can result in serious consequences, as well as creating a potential hazard to mariners. Wilful or neglectful damage to a cable may result in legal action. Pipelines are not always buried and their presence may significantly reduce the charted depth. They may also span seabed undulations and cause fishing gear to become irrecoverably snagged, putting a vessel in severe danger.

RESEARCH AREA - SAINT BRIDE'S BAY

Oceanographic instruments may be found within the research area (51°49′N 5°16′W) in Saint Bride's Bay. Vessels are cautioned against anchoring in this area.

HIGH SPEED CRAFT

High Speed Craft operate in the area of these charts. Mariners are advised to maintain a good lookout. Some high speed craft may generate large waves, which can have a serious impact on small craft and their moorings close to the shoreline and on shallow off-lying banks.

HISTORIC AND MILITARY WRECKS

The site of historic and military wrecks are protected from unauthorised interference

AREA TO BE AVOIDED BETWEEN THE SMALLS (51°43′N 5°40′W) AND GRASSHOLM (51°44′N 5°29′W)

To avoid the risk of pollution and damage to the environment, this area has been designated an Area to be Avoided. All vessels carrying dangerous or toxic cargoes, or any other vessel exceeding 500 GT, should avoid the area. This area is IMO-adopted.

LADEN TANKERS

1. Laden tankers should avoid the area between The Smalls Traffic Separation Scheme and The Smalls (51°43′N 5°40′W).
2. Laden tankers over 10, 000 GT should not use the channel between Grassholm (51°44′N 5°29′W) and Skomer Island (51°44′N 5°18′W) unless moving between Saint Bride's Bay and Milford Haven.

FIRING PRACTICE AREAS

No restrictions are placed on the right to transit the firing practice areas at any time. The firing practice areas are operated using a clear range procedure: exercises and firing only take place when the areas are considered to be clear of all shipping.

avigating in the approaches to Milford Haven should do so with extreme caution as deep-draught vessels with limited manoeuvrability may be encountered. Small craft should monitor VHF channel 12 at all times when within the Haven.Passing vessels are advised to keep at least 5 miles off Middle Channel Rocks Lighthouse (51°40′·31N 5°09′·83W). Alternatively, contact Milford Haven Port Control to obtain information on movement of shipping in and out of the Port of Milford Haven.

MILFORD HAVEN INFORMATION

Passage planning advice and information regarding local Notices to Mariners, weather, tidal and other information can be obtained from Milford Haven Port Authority at www.mhpa.co.uk.

VESSEL REPORTING

For details of Milford Haven Port Control, see ADMIRALTY List of Radio Signals.

ANCHORAGE

Vessels wishing to anchor in Milford Haven are required to obtain advice on location from Milford Haven Port Control. Dale Roads (51°42′·21N 5°07′·00W) is the only anchorage for ships over 7 metres and under 12 metres draught. Mariners should take care when anchoring, not to obstruct the Great and Little Castle Head leading lights (039·7°).

RECOMMENDED CHANNELS

The West Channel is the channel used by the largest tankers; the East Channel is available to all vessels of suitable size. Vessels able to use the East Channel are requested to do so when larger tankers are entering or leaving via the West Channel. Vessels whose draft and minimum safe under-keel clearance allow, may use the North Channel after requesting permission from Milford Haven VTS. For the latest information on controlling depths within the channels, consult Milford Haven Port Authority at www.mhpa.co.uk

HM Coastguard Services and Safety Information

VHF MARITIME RADIO

Coastguard Maritime Rescue Co-ordination Centres are on constant watch on Channel 16 - the distress, safety and calling channel. Initial calls should normally be on Ch 16.

HM COASTGUARD
MILFORD HAVEN (MRCC)
Tel. +44 (0) 1646 690909
MMSI: 002320017
e-mail: zone28@hmcg.gov.uk (FAO Milford Haven Coastguard)

Distress and Safety Communication

Distress - Urgency

A Distress or Urgency message has absolute priority.
Make a call on VHF Channel 16 and give the following essential information:
Distress Call **MAYDAY MAYDAY MAYDAY**

- Name and Call Sign and MMSI number Position
- Nature of Distress
- Type of assistance required
- Type of boat - number of crew - intentions

Urgency (eg. if you break down in bad weather or a crewman requires medical attention)
Call **PANPAN PANPAN PANPAN** and give:

- Name and Call Sign and MMSI number Position
- Nature of Distress
- Type of assistance required
- Type of boat - number of crew - intentions

Other Distress Signals

Other recognised signals are:

- Red flares (parachute, multi stars or hand held) Orange smoke signal
- The flag signal NC
- The morse signal SOS ... --- ... by light
- An article of clothing on an oar
- Slowly and repeatedly raising and lowering outstretched arms
- A square flag with anything resembling a ball above or below it
- Continuous sounding of a siren or whistle will also be recognised, or smoke and flames from the vessel
- The carriage of an Emergency Position Indicating Radio Beacon (406 EPIRB) will improve your chances of being located if conventional means fail. 406 EPIRBs are detected by satellite, in addition to aircraft, and transmitted to a Coastguard Maritime Rescue Co-ordination Centre.

THE USE OF MOBILE TELEPHONES IN DISTRESS AND SAFETY COMMUNICATIONS

The use of mobile telephones in the marine environent offshore is now well established, with users in all areas of the commercial, fishing and leisure communities.

Incidents have occured where vessels requiring assistance from rescue services have used the inland emergency service, or alternatively telephoned direct to request assistance. (e.g. Lifeboat services). This procedure through a mobile telephone is strongly discouraged.

Use of mobile telephones by-passes the existing dedicated well-established international marine distress communications systems.

Mobile telephone coverage offshore is limited and does not afford the same extensive safety coverage as VHF Channel 16. Consequently a greater risk exists of communications difficulties or even a complete breakdown if an accident should occur at the edge of a cell coverage area.

Subsequent on-scene communications would be restricted and delayed if mobile telephone communications were exclusively maintained throughout. There is always a risk that elements of vital information could be lost or misinterpreted by the introduction of further relay links in the communication chain. Mobile telephones are also highly susceptible to failure due to water ingress.

It is not possible to communicate direct to another vessel able to render assistance unless that vessel is also fitted with a mobile telephone and the telephone number is known. Requests for assistance cannot be monitored by other vessels in a position to render assistance.
Valuable time would be lost whilst the relevent Coastguard Rescue Coordination Centre receives and then re-broadcasts the information to all ships on the appropriate distress channel(s).

In the interests of Safety Of Life At Sea (SOLAS), owners of vessels are urged to carry MARINE communications equipment onboard and to use this medium as the primary means of Distress and Safety communications.

Product Specifications

PRODUCT USAGE CAUTION

This product is specifically designed, in conjunction with other charts and publications, as an aid to the navigation of leisure craft and locally regulated workboats and fishing vessels and therefore should be used by competent (preferably qualified) maritime navigators. Although this product contains the best information available at the time of publication, the user should navigate with caution, particularly in areas of shallow or confined waters where the depth of water is likely to change due to local conditions. The information provided in this product comes from the latest source information held and is updated by Notice to Mariners upon receipt of new information critical to safe navigation. To help maintain this product for all users, users are asked to notify the United Kingdom Hydrographic Office of any differences found between what is depicted and actual conditions encountered.

KEEPING THIS CHART UPDATED

Updates for the charts are published using the Notices to Mariners Service on the ADMIRALTY Notices to Mariners page found on our website at admiralty.co.uk/msi. All updates for the latest edition of the chart are listed and can be quickly and easily downloaded. All the charts are derived from standard ADMIRALTY charts. No updates are applied to the charts by the United Kingdom Hydrographic Office or its agents after printing. For those who do not have internet access, please contact Tel. 01823 484444 for assistance.

TIDAL STREAMS

Full details of the tidal streams in the area covered by this folio are given in the following ADMIRALTY Tidal Stream Atlas: NP256 Irish Sea and Bristol Channel.

PROVIDE UPDATED INFORMATION

To help maintain this product users are asked to notify the United Kingdom Hydrographic Office of any differences found between what is depicted and actual conditions encountered. Users can do this by submitting a Hydrographic Note form, found on our website admiralty.co.uk/msi or by downloading our H-Note App. The H-Note App is freely available to download on Android and iOS devices. For more information please see here:

IMPROVEMENTS TO THIS PRODUCT

ADMIRALTY Small Craft Charts are designed for use on leisure craft and locally regulated workboats and fishing vessels, where the smaller format charts fit more conveniently into the limited space available. Users with specific suggestions for the improvement of this product or ideas for the expansion of the series are requested to forward their comments to:

Customer Services, The UK Hydrographic Office,
Admiralty Way, Taunton. +44(0)1823 484444

E-mail customerservices@ukho.gov.uk

To view all ADMIRALTY Products and services, visit admiralty.co.uk

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T: +44 (0)1823 484444 Find out more at **admiralty.co.uk**

Tidal Stream Information

5620_1

Tidal Streams referred to HW at DOVER

Hours	Geographical Position	A 52°02'.3 N 6 40·0W		B 51°34'.0 N 6 23·1W		C 52°06'.5 N 5 54·3W		D 51°15'.0 N 5 50·1W		E 52°00'.3 N 5 36·6W		F 50°50'.0 N 5 30·1W		G 52°24'.5 N 5 00·6W		H 51°10'.0 N 5 00·1W		
Before High Water 6	Directions of streams (degrees)	055	0·6 0·3	040	0·6 0·3	012	0·7 0·3	040	0·6 0·3	038	0·9 0·4	050	1·0 0·5	017	0·8 0·5	047	0·9 0·4	−6
Before High Water 5	Rates at spring tides (knots)	066	1·3 0·7	034	0·9 0·5	021	1·5 0·7	007	0·6 0·3	030	2·2 1·0	023	0·6 0·3	016	1·7 1·0	025	0·4 0·2	−5
Before High Water 4	Rates at neap tides (knots)	069	1·7 0·9	026	1·0 0·5	022	2·2 1·0	326	0·6 0·3	028	2·8 1·3	279	0·3 0·1	017	2·1 1·3	290	0·3 0·1	−4
Before High Water 3		081	1·5 0·8	014	0·8 0·4	023	2·3 1·1	304	0·7 0·3	024	2·6 1·2	239	0·7 0·3	017	2·1 1·2	256	1·0 0·5	−3
Before High Water 2		095	1·0 0·6	354	0·5 0·3	029	1·9 0·9	283	0·7 0·3	024	1·8 0·8	235	1·0 0·5	019	1·7 1·0	247	1·3 0·6	−2
Before High Water 1		111	0·5 0·3	280	0·2 0·1	039	1·2 0·5	258	0·6 0·3	020	0·9 0·4	235	1·2 0·6	025	0·8 0·5	236	1·2 0·5	−1
High Water		215	0·3 0·2	220	0·5 0·3	099	0·3 0·1	215	0·6 0·3	215	0·5 0·2	235	1·0 0·5	182	0·4 0·2	228	0·9 0·4	0
After High Water 1		246	1·0 0·6	211	0·9 0·4	200	1·3 0·6	179	0·7 0·3	208	1·8 0·8	235	0·5 0·2	194	1·4 0·8	218	0·6 0·3	+1
After High Water 2		250	1·7 0·9	208	1·0 0·5	205	2·2 1·0	148	0·6 0·3	207	2·8 1·3	112	0·1 0·0	200	2·1 1·2	175	0·2 0·1	+2
After High Water 3		258	1·9 1·0	201	0·9 0·4	206	2·6 1·2	123	0·6 0·3	210	2·8 1·3	068	0·6 0·3	201	2·3 1·4	093	0·5 0·2	+3
After High Water 4		270	1·3 0·7	183	0·5 0·3	207	2·1 1·0	102	0·6 0·3	207	2·1 1·0	066	1·0 0·5	202	1·9 1·1	070	1·1 0·5	+4
After High Water 5		284	0·6 0·3	122	0·3 0·1	208	1·3 0·6	079	0·5 0·3	194	1·1 0·5	063	1·2 0·6	198	1·0 0·6	057	1·3 0·6	+5
After High Water 6		046	0·3 0·2	049	0·5 0·2	000	0·2 0·1	049	0·5 0·3	064	0·4 0·2	054	1·0 0·5	025	0·2 0·1	050	1·1 0·5	+6

5620_2

Tidal Streams referred to HW at MILFORD HAVEN

Hours	Geographical Position	A 52°10'.50 N 6 56·40 W		B 52°02'.30 N 6 40·00 W		C 52°06'.72 N 6 24·56 W		D 52°10'.62 N 6 14·56 W		E 52°15'.10 N 6 18·30 W		F 52°12'.22 N 6 10·86 W		G 52°06'.52 N 5 54·36 W		H 52°00'.32 N 5 36·56 W		J 51°36'.5 N 5 17·1 W	
Before High Water 6	Directions of streams (degrees)	205	0·1 0·1	248	1·3 0·7	249	2·3 1·3	224	2·7 1·5	119	2·7 1·5	136	0·8 0·4	203	1·6 0·7	206	2·4 1·1	143	1·6 0·8
Before High Water 5	Rates at spring tides (knots)	005	0·3 0·2	253	1·9 1·0	249	2·7 1·5	234	2·5 1·4	120	2·3 1·3	133	2·0 1·1	206	2·4 1·1	208	2·9 1·3	137	2·2 1·0
Before High Water 4	Rates at neap tides (knots)	006	0·6 0·3	265	1·6 0·8	251	2·3 1·3	228	1·2 0·6	118	1·7 0·9	134	3·1 1·6	209	2·6 1·2	211	2·6 1·2	127	2·1 1·0
Before High Water 3		011	0·5 0·3	276	1·0 0·6	255	1·3 0·7	059	0·3 0·1	110	1·2 0·6	136	3·3 1·8	207	1·9 0·9	204	1·7 0·8	115	1·5 0·7
Before High Water 2		015	0·3 0·2	330	0·2 0·1	010	0·1 0·1	047	0·9 0·5	020	0·4 0·2	139	2·8 1·5	215	0·6 0·3	182	0·7 0·3	084	0·7 0·3
Before High Water 1		011	0·1 0·1	055	0·6 0·3	067	1·0 0·6	050	1·2 0·6	332	1·7 0·9	154	1·2 0·6	012	0·7 0·3	040	0·9 0·4	355	0·9 0·4
High Water		210	0·2 0·1	066	1·3 0·7	069	2·1 1·2	048	1·3 0·7	331	1·6 0·8	040	0·6 0·3	021	1·7 0·8	030	2·2 1·0	323	1·7 0·8
After High Water 1		206	0·9 0·5	069	1·7 0·9	070	2·4 1·3	048	1·7 0·9	331	1·0 0·5	043	3·4 1·8	023	2·2 1·0	028	2·8 1·3	318	2·1 1·0
After High Water 2		205	1·4 0·8	081	1·5 0·8	071	2·1 1·1	053	1·5 0·8	350	0·4 0·2	028	3·1 1·6	023	2·4 1·1	024	2·6 1·2	314	2·0 0·9
After High Water 3		205	1·5 0·8	095	1·0 0·6	073	1·2 0·7	059	0·8 0·4	077	0·4 0·2	033	3·2 1·7	030	1·9 0·9	023	1·7 0·8	306	1·5 0·7
After High Water 4		205	1·3 0·7	111	0·5 0·3	082	0·4 0·2	260	0·3 0·1	106	1·2 0·6	046	3·0 1·6	040	1·1 0·5	020	0·8 0·4	278	0·6 0·3
After High Water 5		205	1·0 0·5	215	0·3 0·2	243	0·7 0·4	226	1·2 0·6	117	2·1 1·1	054	1·2 0·6	130	0·3 0·1	216	0·5 0·2	189	0·6 0·3
After High Water 6		205	0·4 0·2	246	1·0 0·6	248	1·7 1·0	220	2·3 1·2	119	2·5 1·3	112	0·4 0·2	200	1·2 0·5	208	1·8 0·8	146	1·3 0·6

5620_2 continued

Hours	Geographical Position	K 52°15'.02 N 5 16·56 W		L 51°59'.92 N 5 10·16 W		
Before High Water 6	Directions of streams (degrees)	213	1·7 0·8	237	2·6 1·1	−6
Before High Water 5	Rates at spring tides (knots)	217	2·4 1·2	218	2·5 1·1	−5
Before High Water 4	Rates at neap tides (knots)	216	2·3 1·2	224	2·4 1·0	−4
Before High Water 3		220	1·6 0·8	206	0·7 0·3	−3
Before High Water 2		232	0·5 0·2	060	0·6 0·3	−2
Before High Water 1		027	0·7 0·4	044	1·7 0·7	−1
High Water		033	1·7 0·9	048	2·5 1·1	0
After High Water 1		036	2·3 1·1	051	2·6 1·1	+1
After High Water 2		038	2·3 1·1	045	1·4 0·6	+2
After High Water 3		039	1·5 0·8	069	0·5 0·2	+3
After High Water 4		036	0·6 0·3	292	0·5 0·2	+4
After High Water 5		209	0·4 0·2	237	1·3 0·6	+5
After High Water 6		211	1·3 0·6	240	2·3 1·0	+6

5620_3

Tidal Streams referred to HW at MILFORD HAVEN

Hours	Geographical Position	A 52°00'.3 N 5 36·6 W		B 51°36'.5 N 5 17·1 W		C 51°22'.0 N 4 43·2 W		D 51°10'.0 N 5 00·1 W		E 51°00'.4 N 5 31·8 W		
Before High Water 6	Directions of streams (degrees)	206	2·4 1·1	143	1·6 0·8	160	0·5 0·2	205	0·4 0·2	199	0·5 0·2	−6
Before High Water 5	Rates at spring tides (knots)	208	2·9 1·3	137	2·2 1·0	095	0·9 0·4	122	0·3 0·1	132	0·5 0·2	−5
Before High Water 4	Rates at neap tides (knots)	211	2·6 1·2	127	2·1 1·0	076	1·4 0·6	077	0·9 0·4	092	0·8 0·3	−4
Before High Water 3		204	1·7 0·8	115	1·5 0·7	075	1·7 0·8	062	1·4 0·7	074	1·0 0·4	−3
Before High Water 2		182	0·7 0·3	084	0·7 0·3	070	1·4 0·7	054	1·2 0·6	063	1·1 0·5	−2
Before High Water 1		040	0·9 0·4	355	0·9 0·4	065	0·8 0·4	047	0·9 0·4	050	0·9 0·4	−1
High Water		030	2·2 1·0	323	1·7 0·8	097	0·2 0·1	025	0·4 0·2	028	0·6 0·2	0
After High Water 1		028	2·8 1·3	318	2·1 1·0	243	0·6 0·3	290	0·3 0·1	323	0·4 0·2	+1
After High Water 2		024	2·6 1·2	314	2·0 0·9	260	1·4 0·6	256	1·0 0·5	278	0·7 0·3	+2
After High Water 3		023	1·7 0·8	306	1·5 0·7	265	1·8 0·8	247	1·3 0·6	263	1·0 0·4	+3
After High Water 4		020	0·8 0·4	278	0·6 0·3	267	1·5 0·7	236	1·2 0·5	252	1·0 0·4	+4
After High Water 5		216	0·5 0·2	189	0·6 0·3	246	1·1 0·5	228	0·9 0·4	240	1·0 0·4	+5
After High Water 6		208	1·8 0·8	146	1·3 0·6	190	0·4 0·2	218	0·6 0·3	216	0·6 0·3	+6

5620_6

Tidal Streams referred to HW at MILFORD HAVEN (Current included)

Hours	Geographical Position	A 52°01'.8N 4 59·6W		B 52°01'.7N 4 57·1W		C 52°00'.9N 4 57·6W		
Before High Water 6	Directions of streams (degrees)	262	1·8 0·8	230	1·1 0·5	240	0·4 0·2	−6
Before High Water 5	Rates at spring tides (knots)	262	1·8 0·8	227	1·0 0·4	206	0·3 0·1	−5
Before High Water 4	Rates at neap tides (knots)	262	1·1 0·5	210	0·4 0·2	162	0·2 0·1	−4
Before High Water 3		262	0·3 0·1	079	0·5 0·2	116	0·5 0·2	−3
Before High Water 2		138	0·5 0·2	085	1·0 0·4	116	0·7 0·3	−2
Before High Water 1		094	1·7 0·7	079	0·7 0·3	138	0·5 0·2	−1
High Water		094	0·8 0·3	090	0·5 0·2	150	0·5 0·2	0
After High Water 1		257	1·8 0·8	135	0·4 0·2	162	0·3 0·1	+1
After High Water 2		262	2·0 0·9	186	0·5 0·2	251	0·2 0·1	+2
After High Water 3		262	2·0 0·9	222	0·2 0·1	263	0·2 0·1	+3
After High Water 4		262	1·9 0·8	232	0·6 0·3	274	0·4 0·2	+4
After High Water 5		262	1·9 0·8	232	0·8 0·4	284	0·5 0·2	+5
After High Water 6		262	1·8 0·8	232	1·2 0·5	251	0·4 0·2	+6

5620_7

Tidal Streams referred to HW at MILFORD HAVEN

Hours	Geographical Position	A 51°59·9N 5 10·2W		B 52°01·8N 4 59·6W		C 52°00·9N 4 57·6W		D 52°01·7N 4 57·1W		
Before High Water 6	Directions of streams (degrees)	237	2·6 1·1	262	1·8 0·8	240	0·4 0·2	230	1·1 0·5	−6
Before High Water 5		218	2·5 1·1	262	1·8 0·8	206	0·3 0·1	227	1·0 0·4	−5
Before High Water 4		224	2·4 1·0	262	1·1 0·5	162	0·2 0·1	210	0·4 0·2	−4
Before High Water 3		206	0·7 0·3	262	0·3 0·1	116	0·5 0·2	079	0·5 0·2	−3
Before High Water 2		060	0·6 0·3	138	0·5 0·2	116	0·7 0·3	085	1·0 0·4	−2
Before High Water 1		044	1·7 0·7	094	1·7 0·7	138	0·5 0·2	079	0·7 0·3	−1
High Water	Rates at spring tides (knots)	048	2·5 1·1	094	0·8 0·3	150	0·5 0·2	090	0·5 0·2	0
After High Water 1	Rates at neap tides (knots)	051	2·6 1·1	257	1·8 0·8	162	0·3 0·1	135	0·4 0·2	+1
After High Water 2		045	1·4 0·6	262	2·0 0·9	251	0·2 0·1	186	0·5 0·2	+2
After High Water 3		069	0·5 0·2	262	2·0 0·9	263	0·2 0·1	222	0·2 0·1	+3
After High Water 4		292	0·5 0·2	262	1·9 0·8	274	0·4 0·2	232	0·6 0·3	+4
After High Water 5		237	1·3 0·6	262	1·9 0·8	284	0·5 0·2	232	0·8 0·4	+5
After High Water 6		240	2·3 1·0	262	1·8 0·8	251	0·4 0·2	232	1·2 0·5	+6

5620_9

Tidal Streams referred to HW at MILFORD HAVEN

Hours	Geographical Position	A 51°41′·1N 5 08·9W		B 51°40′·2N 5 11·1W		C 51°39′·9N 5 10·5W	
Before High Water 6	Directions of streams (degrees)		0·0 0·0	127	2·1 0·9	118	1·8 0·8	−6
Before High Water 5		013	0·3 0·1	122	2·0 0·9	122	1·6 0·7	−5
Before High Water 4		023	0·8 0·4	074	0·8 0·3	083	0·9 0·4	−4
Before High Water 3		027	1·1 0·5	003	0·6 0·3	009	0·6 0·2	−3
Before High Water 2		023	1·0 0·5	322	1·1 0·5	321	0·6 0·2	−2
Before High Water 1		017	0·7 0·3	310	1·3 0·6	300	0·8 0·3	−1
High Water	Rates at spring tides (knots)	354	0·3 0·1	300	1·6 0·7	292	1·4 0·6	0
After High Water 1	Rates at neap tides (knots)	214	0·5 0·2	296	1·8 0·8	292	1·5 0·6	+1
After High Water 2		207	0·9 0·4	288	1·5 0·6	288	1·3 0·6	+2
After High Water 3		207	1·1 0·5	264	0·6 0·3	273	0·8 0·3	+3
After High Water 4		200	1·1 0·5	131	0·9 0·4	156	0·5 0·2	+4
After High Water 5		187	0·6 0·3	128	2·4 1·0	121	1·8 0·8	+5
After High Water 6		120	0·1 0·1	126	2·3 1·0	115	1·9 0·8	+6

5620_10

Tidal Streams referred to HW at MILFORD HAVEN

Hours	Geographical Position	A 51°36′·5N 5 17·1W		
Before High Water 6	Directions of streams (degrees)	143	1·6 0·8	−6
Before High Water 5		137	2·2 1·0	−5
Before High Water 4		127	2·1 1·0	−4
Before High Water 3		115	1·5 0·7	−3
Before High Water 2		084	0·7 0·3	−2
Before High Water 1		355	0·9 0·4	−1
High Water	Rates at spring tides (knots)	323	1·7 0·8	0
After High Water 1	Rates at neap tides (knots)	318	2·1 1·0	+1
After High Water 2		314	2·0 0·9	+2
After High Water 3		306	1·5 0·7	+3
After High Water 4		278	0·6 0·3	+4
After High Water 5		189	0·6 0·3	+5
After High Water 6		146	1·3 0·6	+6

Tidal Streams referred to HW at SWANSEA

Hours	Geographical Position	B 51°31′·3N 5 01·1W		C 51°38′·8N 4 42·8W		
Before High Water 6	Directions of streams (degrees)	115	0·7 0·3	077	1·4 0·7	−6
Before High Water 5		104	1·6 0·7	076	2·1 1·0	−5
Before High Water 4		100	2·4 1·1	076	2·6 1·2	−4
Before High Water 3		099	2·4 1·1	075	2·4 1·1	−3
Before High Water 2		097	1·7 0·8	078	1·4 0·7	−2
Before High Water 1		092	0·5 0·2	250	0·5 0·2	−1
High Water	Rates at spring tides (knots)	334	0·4 0·2	256	1·9 0·9	0
After High Water 1	Rates at neap tides (knots)	288	1·4 0·6	253	2·2 1·0	+1
After High Water 2		282	2·2 1·0	257	2·2 1·0	+2
After High Water 3		279	2·2 1·0	258	1·9 0·9	+3
After High Water 4		276	2·0 0·9	259	1·0 0·4	+4
After High Water 5		270	1·1 0·5	067	0·2 0·1	+5
After High Water 6		159	0·2 0·1	077	1·2 0·6	+6

5620_11

Tidal Streams referred to HW at MILFORD HAVEN

Hours	Geographical Position	A 51°39·03N 5 11·09W		B 51°39·90N 5 10·53W		C 51°40·23N 5 11·08W		D 51°41·13N 5 08·86W		
Before High Water 6	Directions of streams (degrees)	133	1·7 0·7	118	1·8 0·8	127	2·1 0·9		0·0 0·0	−6
Before High Water 5		118	1·7 0·7	122	1·6 0·7	122	2·0 0·9	013	0·3 0·1	−5
Before High Water 4		091	1·3 0·6	083	0·9 0·4	074	0·8 0·3	023	0·8 0·4	−4
Before High Water 3		086	1·3 0·5	009	0·6 0·2	003	0·6 0·3	027	1·1 0·5	−3
Before High Water 2		041	0·7 0·3	321	0·6 0·2	322	1·1 0·5	023	1·0 0·5	−2
Before High Water 1		318	0·8 0·3	300	0·8 0·3	310	1·3 0·6	017	0·7 0·3	−1
High Water	Rates at spring tides (knots)	291	1·3 0·6	292	1·4 0·6	300	1·6 0·7	354	0·3 0·1	0
After High Water 1	Rates at neap tides (knots)	294	1·7 0·7	292	1·5 0·6	296	1·8 0·8	214	0·5 0·2	+1
After High Water 2		292	1·5 0·6	288	1·3 0·6	288	1·5 0·6	207	0·9 0·4	+2
After High Water 3		286	1·0 0·4	273	0·8 0·3	264	0·6 0·3	207	1·1 0·5	+3
After High Water 4		212	0·5 0·2	156	0·5 0·2	131	0·9 0·4	200	1·1 0·5	+4
After High Water 5		160	1·1 0·5	121	1·8 0·8	128	2·4 1·0	187	0·6 0·3	+5
After High Water 6		139	1·4 0·6	115	1·9 0·8	126	2·3 1·0	120	0·1 0·1	+6

5620_12

Tidal Streams referred to HW at MILFORD HAVEN

Hours	Geographical Position	A 51°41·83N 5 05·56W		B 51°41·83N 5 04·36W		C 51°41·93N 5 01·76W		
Before High Water 6	Directions of streams (degrees)	003	0·3 0·2	310	0·4 0·2	100	0·1 0·0	−6
Before High Water 5		060	0·6 0·3	073	0·4 0·2	097	0·7 0·3	−5
Before High Water 4		086	1·2 0·6	085	1·0 0·5	095	1·0 0·4	−4
Before High Water 3		088	1·7 0·8	089	1·5 0·7	095	1·1 0·5	−3
Before High Water 2		087	1·5 0·7	097	1·3 0·6	097	1·4 0·6	−2
Before High Water 1		084	0·9 0·4	098	1·1 0·5	102	0·9 0·4	−1
High Water	Rates at spring tides (knots)	017	0·1 0·0	083	0·3 0·2	100	0·1 0·0	0
After High Water 1	Rates at neap tides (knots)	266	0·4 0·2	294	0·4 0·2	285	1·1 0·5	+1
After High Water 2		260	1·2 0·5	272	1·0 0·5	280	1·2 0·5	+2
After High Water 3		260	1·7 0·8	263	1·1 0·5	278	1·1 0·5	+3
After High Water 4		261	1·4 0·7	257	1·3 0·6	276	0·9 0·4	+4
After High Water 5		265	1·0 0·5	263	1·2 0·6	270	0·5 0·2	+5
After High Water 6		317	0·6 0·3	278	0·7 0·3	258	0·2 0·1	+6

5620_13

Tidal Streams referred to HW at MILFORD HAVEN

Hours	Geographical Position	A 51°41′·9N 5 01·8W		B 51°41′·7N 4 58·9W		C 51°42′·1N* 4 56·9W		
Before High Water 6	Directions of streams (degrees)	100	0·1 0·0		0·0 0·0	171	0·2 0·1	−6
Before High Water 5		097	0·7 0·3	067	0·6 0·3	116	0·8 0·4	−5
Before High Water 4		095	1·0 0·4	082	1·5 0·7	107	1·6 0·7	−4
Before High Water 3		095	1·1 0·5	083	1·8 0·8	103	2·1 1·0	−3
Before High Water 2		097	1·4 0·6	081	1·8 0·8	100	2·3 1·2	−2
Before High Water 1		102	0·9 0·4	081	1·5 0·7	095	1·9 0·9	−1
High Water	Rates at spring tides (knots)	100	0·1 0·0	089	0·3 0·1	079	0·7 0·3	0
After High Water 1	Rates at neap tides (knots)	285	1·1 0·5	256	1·0 0·5	280	1·2 0·6	+1
After High Water 2		280	1·2 0·5	262	1·7 0·8	033	0·3 0·1	+2
After High Water 3		278	1·1 0·5	259	1·9 0·9	066	0·4 0·2	+3
After High Water 4		276	0·9 0·4	259	1·7 0·8	300	0·2 0·1	+4
After High Water 5		270	0·5 0·2	260	1·0 0·5	270	0·4 0·2	+5
After High Water 6		258	0·2 0·1	267	0·2 0·1	240	0·2 0·1	+6

* Normal river current included

5620_14

Tidal Streams referred to HW at MILFORD HAVEN

Hours	Geographical Position	A 51°42′·2N* 4 55·1W		
Before High Water 6	Directions of streams (degrees)	210	0·3 0·1	−6
Before High Water 5		058	0·1 0·1	−5
Before High Water 4		042	0·4 0·2	−4
Before High Water 3		058	0·9 0·4	−3
Before High Water 2		062	1·3 0·6	−2
Before High Water 1		063	1·1 0·5	−1
High Water	Rates at spring tides (knots)	082	0·2 0·1	0
After High Water 1	Rates at neap tides (knots)	244	1·7 0·8	+1
After High Water 2		245	2·5 1·2	+2
After High Water 3		243	2·4 1·1	+3
After High Water 4		238	1·9 0·8	+4
After High Water 5		233	1·2 0·5	+5
After High Water 6		224	0·5 0·2	+6

* Normal river current included

5620_15

Tidal Streams referred to HW at AVONMOUTH

Hours	Geographical Position	A 51°38′8N 4 42·8W		B 51°40′4N 4 41·2W		C 51°39′4N 4 40·9W		
Before High Water 6	Directions of streams (degrees)	076	2·1 1·0	007	0·9 0·4	031	1·4 0·6	−6
Before High Water 5		076	2·6 1·2	007	0·8 0·4	058	1·1 0·5	−5
Before High Water 4		075	2·4 1·1	357	0·5 0·2	041	0·8 0·4	−4
Before High Water 3		078	1·4 0·7	002	0·4 0·2	021	1·1 0·5	−3
Before High Water 2		250	0·5 0·2	142	0·1 0·1	310	0·7 0·3	−2
Before High Water 1		256	1·9 0·9	177	0·8 0·4	217	1·1 0·5	−1
High Water	Rates at spring tides (knots)	253	2·2 1·0	184	0·9 0·4	220	1·4 0·6	0
After High Water 1	Rates at neap tides (knots)	257	2·2 1·0	182	0·9 0·4	216	1·2 0·6	+1
After High Water 2		258	1·9 0·9	188	0·7 0·3	212	1·2 0·6	+2
After High Water 3		259	1·0 0·4	195	0·3 0·2	214	0·7 0·3	+3
After High Water 4		067	0·2 0·1	356	0·3 0·1	068	0·2 0·1	+4
After High Water 5		077	1·2 0·6	003	0·9 0·4	048	0·9 0·4	+5
After High Water 6		076	1·8 0·8	006	0·9 0·4	040	1·2 0·5	+6

5620_16

Tidal Streams referred to HW at SWANSEA

Hours	Geographical Position	A 51°38′8N 4 42·8W		B 51°40′4N 4 41·2W		C 51°39′4N 4 40·9W		D 51°36′9N 4 37·2W		E 51°30′5N 4 24·6W		F 51°35′2N 4 22·4W		G 51°40′4N 4 15·0W		
Before High Water 6	Directions of streams (degrees)	077	1·4 0·7	004	0·9 0·4	049	1·1 0·5		0 0 0 0	104	0·3 0·1	181	0·5 0·2	210	0·8 0·4	−6
Before High Water 5		076	2·1 1·0	007	0·9 0·4	031	1·4 0·6	038	0·8 0·4	108	1·1 0·6	138	0·7 0·3	022	0·1 0·0	−5
Before High Water 4		076	2·6 1·2	007	0·8 0·4	058	1·1 0·5	045	1·4 0·6	115	1·9 1·0	123	0·9 0·4	023	1·7 0·7	−4
Before High Water 3		075	2·4 1·1	357	0·5 0·2	041	0·8 0·4	052	1·6 0·7	116	2·2 1·2	122	0·8 0·4	023	2·1 0·9	−3
Before High Water 2		078	1·4 0·7	002	0·4 0·2	021	1·1 0·5	054	1·2 0·6	116	1·9 1·0	124	0·7 0·3	029	2·0 0·8	−2
Before High Water 1		250	0·5 0·2	142	0·1 0·1	310	0·7 0·3	054	0·7 0·3	116	1·0 0·5	121	0·5 0·2	031	1·4 0·6	−1
High Water	Rates at spring tides (knots)	256	1·9 0·9	177	0·8 0·4	217	1·1 0·5	054	0·1 0·0	192	0·1 0·0	330	0·1 0·0	040	0·6 0·2	0
After High Water 1	Rates at neap tides (knots)	253	2·2 1·0	184	0·9 0·4	220	1·4 0·6	230	0·5 0·2	287	1·0 0·6	321	0·6 0·3	220	0·7 0·3	+1
After High Water 2		257	2·2 1·0	182	0·9 0·4	216	1·2 0·6	226	1·2 0·6	295	2·1 1·1	319	1·2 0·6	225	1·7 0·7	+2
After High Water 3		258	1·9 0·9	188	0·7 0·3	212	1·2 0·6	230	1·6 0·7	296	2·4 1·3	328	1·5 0·7	219	2·6 1·1	+3
After High Water 4		259	1·0 0·4	195	0·3 0·2	214	0·7 0·3	235	1·6 0·7	296	1·9 1·0	289	0·6 0·3	213	4·0 1·7	+4
After High Water 5		067	0·2 0·1	356	0·3 0·1	068	0·2 0·1	231	1·0 0·4	296	1·0 0·5	238	0·3 0·1	208	3·1 1·3	+5
After High Water 6		077	1·2 0·6	003	0·9 0·4	048	0·9 0·4	229	0·2 0·1	296	0·1 0·1	193	0·5 0·2	209	1·4 0·6	+6

TIME & HEIGHT DIFFERENCES FOR PREDICTING THE TIDE AT SECONDARY PORTS

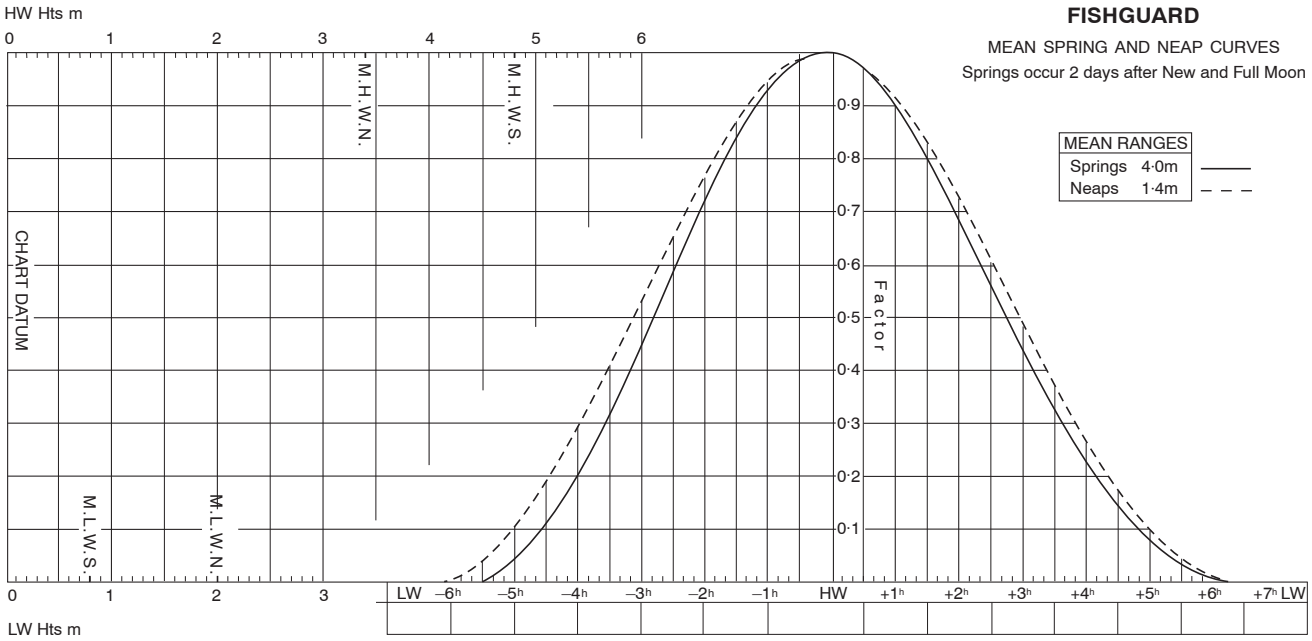
PLACE	Lat. N	Long. W	TIME DIFFERENCES High Water		Low Water		HEIGHT DIFFERENCES (IN METRES) MHWS	MHWN	MLWN	MLWS
			Zone UT(GMT)							
MILFORD HAVEN	**51 42**	**5 03**	**0100** and **1300**	**0800** and **2000**	**0100** and **1300**	**0700** and **1900**	**7.0**	**5.2**	**2.5**	**0.7**
Cardigan Bay										
Aberdaron	52 48	4 43	+0210	+0200	+0240	+0310	-2.4	-1.9	-0.6	-0.2
St. Tudwal's Roads	52 49	4 29	+0155	+0145	+0240	+0310	-2.2	-1.9	-0.7	-0.2
Pwllheli	52 53	4 24	+0210	+0150	+0245	+0320	-1.9	-1.6	-0.6	-0.1
Criccieth	52 55	4 14	+0210	+0155	+0255	+0320	-2.0	-1.8	-0.7	-0.3
Porthmadog	52 55	4 08	+0235	+0210	⊙	⊙	-1.9	-1.8	⊙	⊙
Barmouth	52 43	4 03	+0207	+0200	+0300	+0233	-2.0	-1.5	-0.6	0.0
Aberdovey	52 33	4 03	+0215	+0200	+0230	+0305	-2.0	-1.7	-0.5	0.0
Aberystwyth	52 24	4 05	+0145	+0130	+0210	+0245	-2.0	-1.7	-0.7	0.0
New Quay	52 13	4 21	+0150	+0125	+0155	+0230	-2.1	-1.8	-0.6	-0.1
Aberporth	52 08	4 33	+0135	+0120	+0150	+0220	-2.1	-1.8	-0.6	-0.1
Port Cardigan	52 07	4 41	+0140	+0120	+0220	+0130	-2.3	-1.8	-0.5	0.0
Cardigan (Town)	52 05	4 40	+0220	+0150	⊙	⊙	-2.2	-1.6	⊙	⊙
FISHGUARD	52 01	4 59	STANDARD PORT				See Table of NON-REFERENCE STANDARD PORTS			
Porthgain	51 57	5 11	+0055	+0045	+0045	+0100	-2.5	-1.8	-0.6	0.0
Ramsey Sound	51 53	5 19	+0030	+0030	+0030	+0030	-1.9	-1.3	-0.3	0.0
Solva	51 52	5 12	+0015	+0010	+0035	+0015	-1.5	-1.0	-0.2	0.0
Little Haven	51 46	5 07	+0010	+0010	+0025	+0015	-1.1	-0.8	-0.2	0.0
Martin's Haven	51 44	5 15	+0010	+0010	+0015	+0015	-0.8	-0.5	+0.1	+0.1
Skomer Island	51 44	5 17	-0005	-0005	+0005	+0005	-0.4	-0.1	0.0	0.0
Dale Roads	51 42	5 09	-0005	-0005	-0008	-0008	0.0	0.0	0.0	-0.1
MILFORD HAVEN	**51 42**	**5 03**	**STANDARD PORT**							
Cleddau River										
NEYLAND	51 42	4 57	STANDARD PORT				See Table of NON-REFERENCE STANDARD PORTS			
Black Tar	51 45	4 54	+0010	+0020	+0005	0000	+0.1	+0.1	0.0	-0.1
Haverfordwest	51 48	4 58	+0010	+0025	§	§	-4.8	-4.9	§	§
Stackpole Quay	51 37	4 54	-0005	+0025	-0010	-0010	+0.9	+0.7	+0.2	+0.3
Tenby	51 40	4 42	-0015	-0010	-0015	-0020	+1.4	+1.1	+0.5	+0.2
Towey River										
Ferryside	51 46	4 22	0000	-0010	+0220	0000	-0.3	-0.7	-1.7	-0.6
Carmarthen	51 51	4 18	+0010	0000	§	§	-4.4	-4.8	§	§
Burry Inlet										
Burry Port	51 41	4 15	+0003	+0003	+0007	+0007	+1.6	+1.4	+0.5	+0.4
Llanelli	51 40	4 10	-0003	-0003	+0150	+0020	+0.8	+0.6	⊙	⊙
COBH	**51 51**	**8 18**	**0500** and **1700**	**1100** and **2300**	**0500** and **1700**	**1100** and **2300**	**4.1**	**3.2**	**1.3**	**0.4**
Baginbun Head	52 10	6 50	+0003	+0003	-0008	-0008	-0.2	-0.1	+0.2	+0.2
Fethard-on-Sea	52 12	6 49	+0004	+0004	-0004	-0004	0.0	0.0	+0.2	+0.2
Great Saltee	52 07	6 37	+0019	+0009	-0004	+0006	-0.3	-0.4	⊙	⊙
ROSSLARE EUROPORT	**52 15**	**6 21**	**0000** and **1200**	**0600** and **1800**	**0500** and **1700**	**1100** and **2300**	**2.3**	**1.8**	**1.1**	**0.7**
Kilmore Quay	52 10	6 35	-0017	-0023	0000	+0015	+1.3	+1.0	+0.1	-0.3
Carnsore Point	52 10	6 22	-0016	-0016	-0017	+0013	+0.7	+0.4	⊙	⊙
ROSSLARE EUROPORT	**52 15**	**6 20**	**STANDARD PORT**							
Wexford Harbour	52 20	6 27	+0040	+0030	+0100	+0120	-0.3	-0.4	-0.2	-0.2

⊙ No Data.
§ Dries out except for river water.

Non-Reference Standard Ports

STANDARD PORT	MHWS	MHWN	MLWN	MLWS
FISHGUARD	4.8	3.4	2.0	0.8
NEYLAND	7.0	5.2	2.5	0.7

Tidal Curve Diagrams

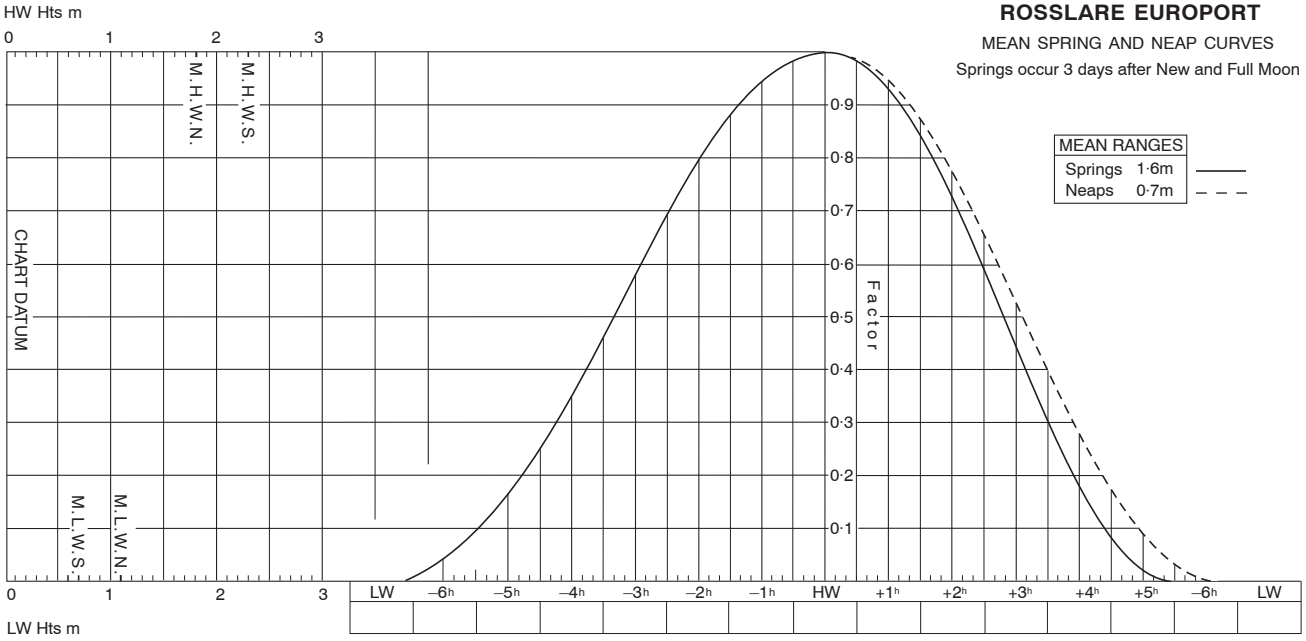


FISHGUARD

MEAN SPRING AND NEAP CURVES

Springs occur 2 days after New and Full Moon

MEAN RANGES	
Springs	4·0m
Neaps	1·4m

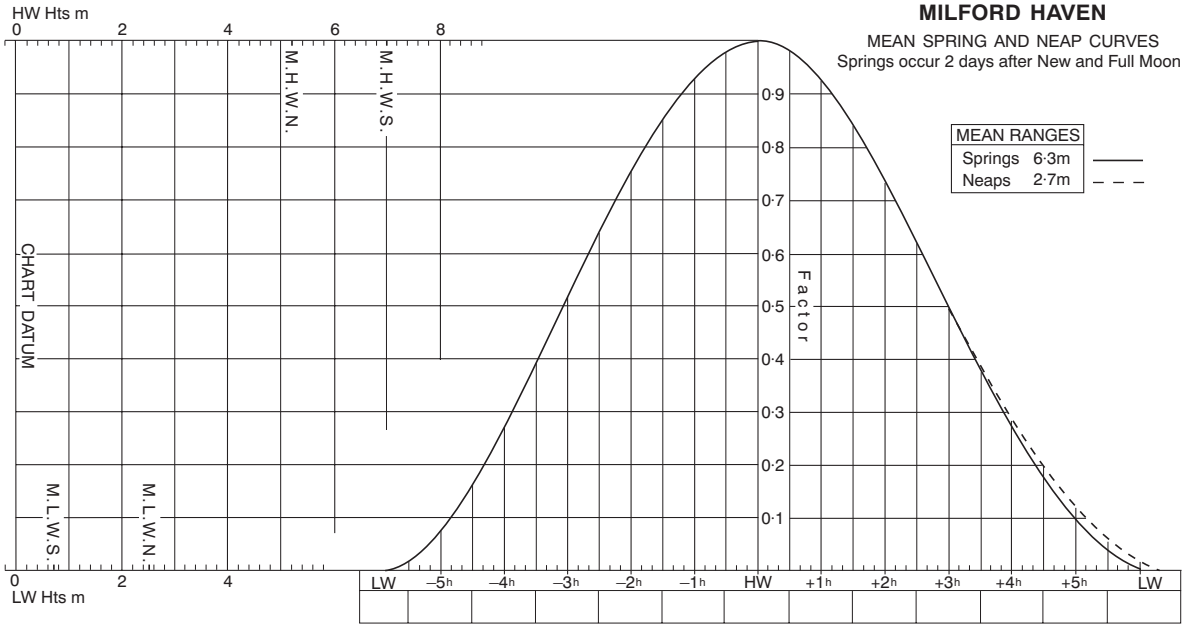


ROSSLARE EUROPORT

MEAN SPRING AND NEAP CURVES

Springs occur 3 days after New and Full Moon

MEAN RANGES	
Springs	1·6m
Neaps	0·7m

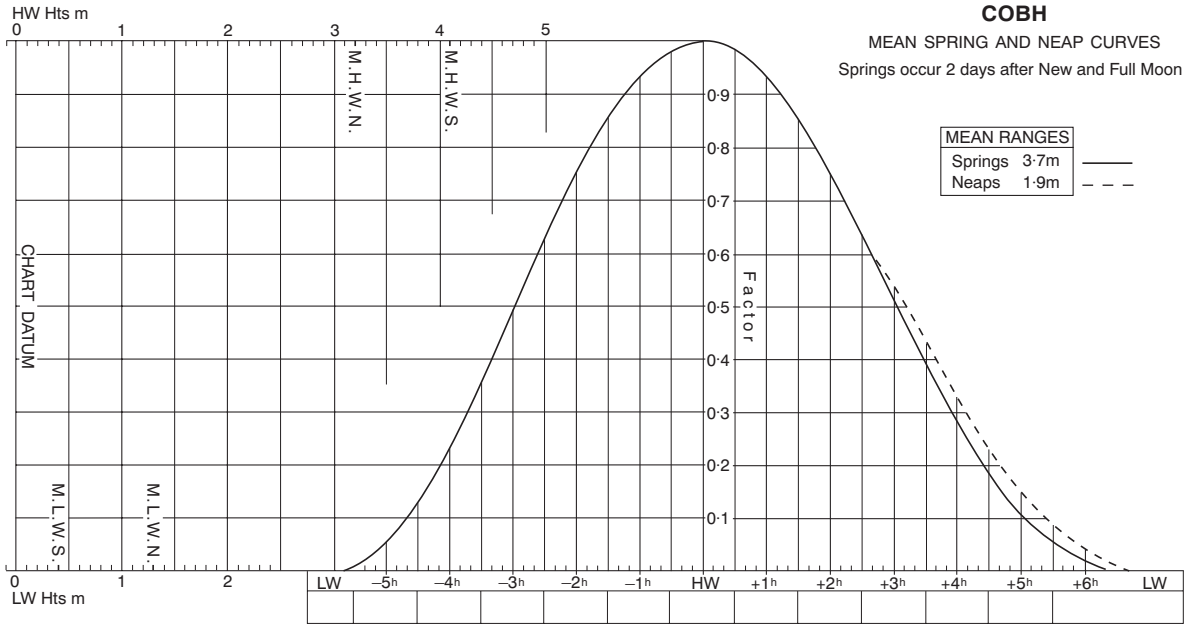


MILFORD HAVEN

MEAN SPRING AND NEAP CURVES

Springs occur 2 days after New and Full Moon

MEAN RANGES	
Springs	6·3m
Neaps	2·7m



COBH

MEAN SPRING AND NEAP CURVES

Springs occur 2 days after New and Full Moon

MEAN RANGES	
Springs	3·7m
Neaps	1·9m