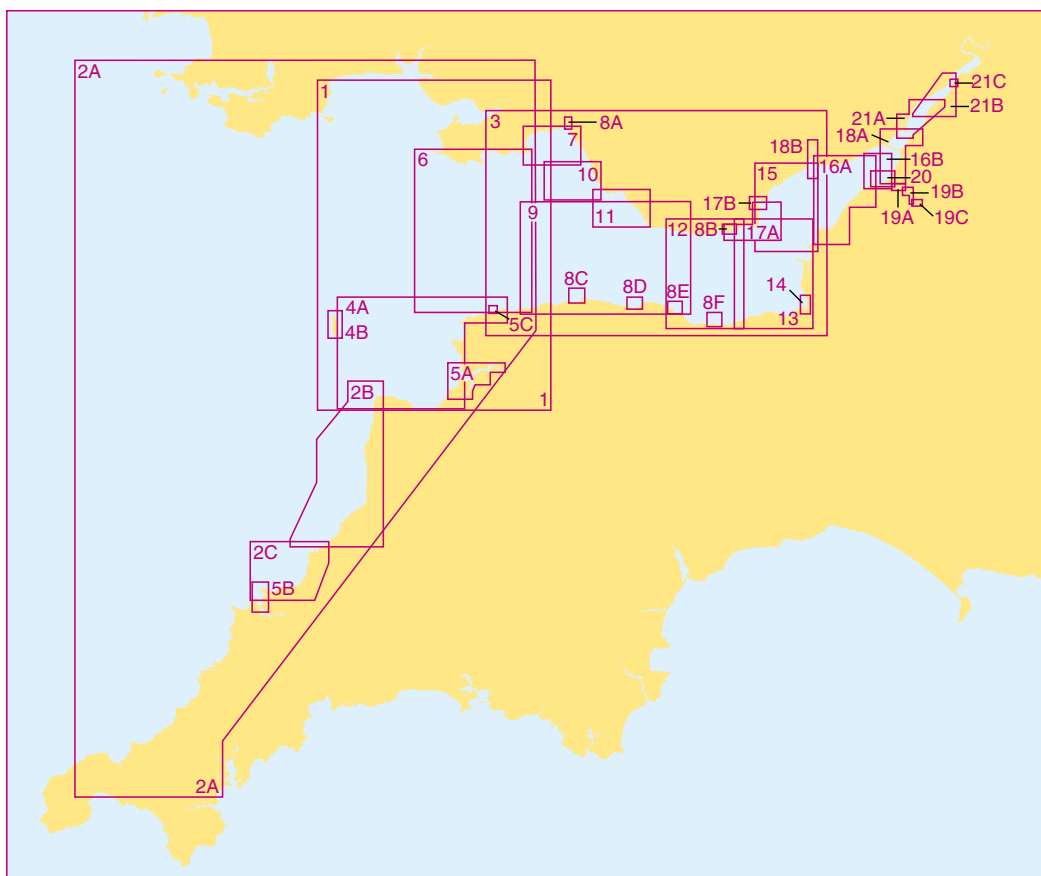




Bristol Channel



5608	Chart Title	Natural Scale 1:
1	Hartland Point to Worms Head	150,000
2A	Padstow to Saint Ann's Head	500,000
2B	Bosccastle to Hartland Point	75,000
2C	Padstow to Bosccastle	75,000
3	Mumbles Head and Ilfracombe to Burnham-on-Sea	150,000
4A	Hartland Point to Lundy and Ilfracombe	75,000
4B	Lundy	25,000
5A	Barnstaple and Bideford	25,000
5B	Padstow	25,000
5C	Ilfracombe	12,500
6	Ilfracombe to Worms Head and Mumbles Head	75,000
7	Swansea Bay	25,000
8A	River Neath	12,500
8B	Barry	12,500
8C	Lynmouth	20,000

5608	Chart Title	Natural Scale 1:
8D	Porlock	20,000
8E	Minehead	20,000
8F	Watchet	20,000
9	Foreland Point to Nash Point	75,000
10	Scarweather Sands to North Kenfig Patches	25,000
11	Porthcawl to Nash Point	25,000
12	Watchet to Barry	50,000
13	Barry to Stert Point	50,000
14	Burnham-On-Sea and Approaches	20,000
15	Flat Holm to East Usk	40,000
16A	Bristol Deep to King Road	40,000
16B	Continuation to Avonmouth	40,000
17A	Approaches to Barry and Cardiff	25,000
17B	Cardiff	15,000
18A	Avonmouth to Severn Bridge	25,000
18B	Newport	20,000
19A	Avonmouth Bridge to Sea Mills Creek	10,000
19B	Sea Mills Creek to Cumberland Basin	10,000
19C	Bristol City Docks	15,000
20	King Road and River Avon to the Avonmouth Bridge	10,000
21A&B	Severn Bridge to Sharpness	25,000
21C	Sharpness Docks	10,000

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

OVERHEAD CABLES

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

WRECKS AND WELLHEADS (Sheet 5608_2A)

Wrecks, obstructions and foulds are not shown inside the coastal 20 metre depth contour. Within the areas covered by larger scale sheets, wrecks with a depth of more than 28 metres are not shown.

Outside the areas of larger scale sheets, depths where known are shown for charted wrecks and wellheads.

Areas of numerous wrecks are covered by a legend.

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.

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.

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.

HISTORIC WRECKS

The sites of historic wrecks are protected from unauthorised interference.

VESSEL REPORTING

For details of the following vessel traffic services and vessel reporting systems, see ADMIRALTY List of Radio Signals:

- BARRY
- BRIDGWATER
- CARDIFF
- NEWPORT
- PORT TALBOT
- SHARPNESS
- SWANSEA

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.

PILOT BOARDING AREA

For vessels bound for Barry, Cardiff, Newport, Avonmouth, Bristol, Sharpness & Gloucester pilots board as follows;

(A) Vessels with a draught of 12.5m and over at 51°20'·9N 3°23'·3W.

(B) Vessels with a draught of less than 12.5m at 51°20'·9N 3°19'·0W.

(C) Certain vessels may be directed by the Harbour Authorities to a boarding position at 51°21'·50N 3°15'·50W.

MARINE CONSERVATION ZONE

A Marine Conservation Zone exists to protect the marine habitats and life around Lundy. Regulations relating to anchoring and other maritime activities exist within the area. For further details, see ADMIRALTY Sailing Directions.

CHANGES TO PORTRAYAL

Some small craft charts have had changes to the portrayal of certain charted features. For details of that change see <https://www.admiralty.co.uk/charts/additional-information>



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

FALMOUTH COASTGUARD (MRCC)

Tel: +44 (0) 1326 317575

MMSI: 002320014

e-mail: zone23@hmcg.gov.uk (FAO Falmouth Coastguard)

MILFORD HAVEN COASTGUARD (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 environment offshore is now well established, with users in all areas of the commercial, fishing and leisure communities.

Incidents have occurred 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 relevant 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 these charts are given in the following ADMIRALTY Tidal Stream Atlas: NP256 Irish Sea and Bristol Channel and NP 258 Bristol Channel (Lundy to Avonmouth).

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

Tidal Stream Information

5608_1

Tidal Streams referred to HW at PORT OF BRISTOL (AVONMOUTH)

Hours	Geographical Position	A	51°22'0"N 4 43-2W	B	51°36'9"N 4 37-2W	C	51°03'1"N 4 34-0W	D	51°30'5"N 4 24-6W	E	51°35'2"N 4 22-4W	F	51°21'5"N 4 19-4W	G	51°11'8"N 4 16-1W	H	51°22'0"N 4 15-1W	J	51°33'3"N 3 56-9W	K	51°27'0"N 3 55-6W
Before High Water	Directions of streams (degrees)	095	0.9 0.4	038	0.8 0.4	066	1.6 0.7	108	1.1 0.6	126	0.7 0.3	034	1.1 0.5	055	1.5 0.7	034	1.2 0.6	085	0.1 0.1	103	1.6 0.9
High Water	Rates at spring tides (knots)	075	1.4 0.6	045	1.4 0.6	059	2.6 1.2	115	1.9 1.0	123	0.9 0.4	067	2.2 1.1	045	2.9 1.4	062	2.2 1.2	068	0.6 0.3	106	2.5 1.3
After High Water	Rates at neap tides (knots)	076	1.7 0.8	052	1.6 0.7	060	2.6 1.2	116	2.2 1.2	121	0.8 0.4	085	2.5 1.2	042	2.9 1.4	079	3.0 1.6	059	1.1 0.5	106	2.6 1.4
		072	1.6 0.7	054	1.2 0.6	057	2.5 1.2	116	1.9 1.0	124	0.7 0.3	096	2.4 1.1	051	2.5 1.2	084	2.6 1.4	057	1.4 0.7	106	2.2 1.2
		064	0.9 0.4	054	0.7 0.3	061	1.7 0.8	116	1.0 0.5	122	0.4 0.2	100	1.6 0.7	052	1.8 0.8	101	1.8 1.0	060	1.2 0.6	107	1.3 0.7
		128	0.1 0.0	054	0.1 0.0	050	0.6 0.3	192	0.1 0.0	334	0.1 0.0	106	0.4 0.2	078	0.3 0.1	129	1.1 0.6	065	0.9 0.4	211	0.1 0.1
		247	0.6 0.3	230	0.5 0.2	257	1.4 0.7	287	1.0 0.6	321	0.6 0.3	225	1.0 0.5	226	1.3 0.6	205	1.1 0.6	110	0.3 0.2	280	1.5 0.8
		262	1.4 0.7	226	1.2 0.6	240	2.8 1.3	295	2.1 1.1	320	1.2 0.6	237	1.8 0.8	225	2.9 1.3	244	2.1 1.1	234	0.9 0.4	285	2.6 1.4
		265	1.8 0.8	230	1.6 0.7	228	3.0 1.4	296	2.4 1.3	328	1.5 0.7	250	2.8 1.3	231	3.2 1.5	258	2.9 1.5	249	1.5 0.7	285	2.8 1.5
		267	1.5 0.7	235	1.6 0.7	233	2.7 1.3	296	1.9 1.0	291	0.6 0.3	260	1.9 0.9	233	2.3 1.1	265	2.8 1.5	246	1.5 0.7	285	2.3 1.2
		245	1.1 0.5	231	1.0 0.4	239	1.8 0.8	296	1.0 0.5	236	0.3 0.2	276	1.7 0.8	237	1.2 0.6	281	1.9 1.0	247	1.0 0.5	288	0.8 0.4
		191	0.4 0.2	229	0.2 0.1	264	0.6 0.3	296	0.1 0.1	191	0.5 0.2	302	1.2 0.6	218	0.4 0.2	310	1.2 0.6	243	0.6 0.3	301	0.2 0.1
		105	0.7 0.3	035	0.4 0.2	058	1.1 0.5	106	0.7 0.4	150	0.7 0.3	007	0.9 0.4	062	1.5 0.7	010	0.9 0.5	218	0.1 0.0	090	1.0 0.6

5608_2(B)&(C)

5608_2(A) Tidal Streams referred to HW at DOVER

A	51°10'0"N 5 00-0W	B	50°50'0"N 5 30-1W	C	50°26'1"N 5 22-7W	
047	0.9 0.4	050	1.0 0.5	058	0.7 0.3	-6
025	0.4 0.2	023	0.6 0.3	126	0.3 0.1	-5
290	0.3 0.1	279	0.3 0.1	200	0.4 0.2	-4
256	1.0 0.5	239	0.7 0.3	225	1.0 0.5	-3
247	1.3 0.6	235	1.0 0.5	231	1.2 0.6	-2
236	1.2 0.5	235	1.2 0.6	233	1.1 0.5	-1
228	0.9 0.4	235	1.0 0.5	239	0.7 0.3	0
218	0.6 0.3	235	0.5 0.2	237	0.2 0.1	+1
175	0.2 0.1	112	0.1 0.0	033	0.3 0.1	+2
093	0.5 0.2	068	0.6 0.3	034	0.9 0.4	+3
070	1.1 0.5	066	1.0 0.5	039	1.2 0.6	+4
057	1.3 0.6	063	1.2 0.6	046	1.1 0.5	+5
050	1.1 0.5	054	1.0 0.5	052	0.9 0.4	+6

Tidal Streams referred to HW at MILFORD HAVEN

D	51°03'1"N 4 34-0W	E	50°34'5"N 4 57-7W	
034	0.3 0.1	047	0.5 0.3	-6
063	1.6 0.7	052	0.7 0.4	-5
060	2.5 1.2	061	0.8 0.5	-4
059	2.6 1.2	071	0.7 0.4	-3
058	2.4 1.1	080	0.5 0.3	-2
061	1.6 0.7	090	0.2 0.1	-1
054	0.5 0.2	243	0.9 0.6	0
256	1.4 0.6	234	1.1 0.7	+1
239	2.8 1.3	232	0.9 0.5	+2
229	3.0 1.4	240	0.5 0.3	+3
233	2.6 1.2	302	0.2 0.1	+4
239	1.7 0.8	016	0.3 0.2	+5
268	0.5 0.2	041	0.4 0.3	+6

5608_3

Tidal Streams referred to HW at PORT OF BRISTOL (AVONMOUTH)

A	51°33'3"N 3 56-9W	B	51°27'0"N 3 55-6W	C	51°32'5"N 3 53-5W	D	51°20'1"N 3 50-3W	E	51°16'0"N 3 47-4W	F	51°26'8"N 3 42-3W	G	51°19'3"N 3 32-4W	H	51°14'2"N 3 21-1W	J	51°21'0"N 3 20-6W	K	51°22'9"N 3 15-1W	L	51°21'5"N 3 09-5W	M	51°19'6"N 3 04-8W
085	0.1 0.1	103	1.6 0.9	109	0.3 0.2	132	0.7 0.3	087	2.1 1.0	118	0.8 0.4	060	0.5 0.2	103	0.9 0.5	094	1.2 0.7	070	0.9 0.5	251	0.8 0.4	144	0.2 0.1
068	0.6 0.3	106	2.5 1.3	083	0.8 0.4	090	2.1 0.9	097	3.3 1.6	118	1.8 1.0	078	2.4 1.1	106	2.2 1.2	094	3.1 1.7	076	1.7 0.9	071	2.0 1.0	049	1.4 0.7
059	1.1 0.5	106	2.6 1.4	083	1.3 0.6	092	3.2 1.4	093	4.0 1.9	116	2.4 1.3	094	3.0 1.4	102	2.8 1.5	094	4.3 2.3	076	2.2 1.1	072	3.3 1.7	048	3.2 1.7
057	1.4 0.7	106	2.2 1.2	077	1.3 0.6	097	3.4 1.5	092	3.6 1.7	113	2.4 1.3	094	3.2 1.5	112	2.9 1.5	094	3.9 2.1	073	2.9 1.5	075	3.6 1.9	053	3.2 1.7
060	1.2 0.6	107	1.3 0.7	085	0.9 0.4	101	2.3 1.0	094	2.6 1.2	112	1.8 0.9	102	2.6 1.2	108	2.4 1.3	094	3.0 1.6	069	2.2 1.1	072	3.1 1.6	043	2.3 1.2
065	0.9 0.4	211	0.1 0.1	075	0.6 0.3	120	1.0 0.4	092	1.0 0.5	119	0.8 0.4	094	1.2 0.6	100	1.1 0.6	093	1.7 0.9	075	1.1 0.6	072	1.7 0.9	041	1.7 0.9
110	0.3 0.2	280	1.5 0.8	246	0.2 0.1	200	0.6 0.3	239	1.3 0.6	289	0.8 0.4	269	0.4 0.2	312	0.5 0.3	273	0.6 0.3	244	1.1 0.6	315	0.2 0.1	045	0.2 0.1
234	0.9 0.4	285	2.6 1.4	257	1.0 0.4	284	2.5 1.1	271	3.7 1.7	296	2.4 1.3	276	2.2 1.0	293	1.9 1.0	273	2.7 1.4	250	3.2 1.6	253	2.5 1.3	245	1.3 0.7
249	1.5 0.7	285	2.8 1.5	253	1.5 0.7	291	3.3 1.4	276	4.6 2.1	294	2.8 1.5	272	2.9 1.4	286	2.8 1.5	274	4.3 2.3	254	3.1 1.6	253	3.1 1.6	230	2.3 1.2
246	1.5 0.7	285	2.3 1.2	258	1.4 0.6	274	3.3 1.4	275	3.9 1.8	293	2.3 1.2	271	3.2 1.5	283	3.0 1.6	274	4.4 2.4	258	2.7 1.4	254	2.7 1.4	222	3.0 1.6
247	1.0 0.5	288	0.8 0.4	266	0.6 0.3	280	2.4 1.1	278	2.5 1.2	301	1.3 0.7	272	2.5 1.3	283	2.3 1.3	274	3.4 1.8	256	2.0 1.0	252	2.3 1.2	231	2.4 1.2
243	0.6 0.3	301	0.2 0.1	305	0.4 0.2	270	1.0 0.5	275	1.3 0.6	305	0.5 0.3	271	1.4 0.7	284	1.3 0.7	274	1.9 1.0	253	1.5 0.7	251	1.9 1.0	228	1.8 1.0
218	0.1 0.0	090	1.0 0.6	126	0.2 0.1	170	0.4 0.2	093	0.8 0.4	117	0.5 0.3	054	0.1 0.0	090	0.4 0.2	099	0.2 0.1	253	0.0 0.0	251	1.3 0.7	203	0.6 0.3

5608_4 Tidal Streams referred to HW at PORT OF BRISTOL (AVONMOUTH)

A	51°11'8"N 4 16-1W	B	51°04'8"N 4 16-0W	C	51°03'1"N 4 34-0W	
055	1.5 0.7	359	0.6 0.3	066	1.6 0.7	-6
045	2.9 1.4	038	0.3 0.1	059	2.6 1.2	-5
042	2.9 1.4	060	0.7 0.3	060	2.6 1.2	-4
051	2.5 1.2	060	1.0 0.5	057	2.5 1.2	-3
052	1.8 0.8	065	0.8 0.4	061	1.7 0.8	-2
078	0.3 0.1	083	0.4 0.2	050	0.6 0.3	-1
226	1.3 0.6	184	0.8 0.4	257	1.4 0.7	0
225	2.9 1.3	198	0.9 0.4	240	2.8 1.3	+1
231	3.2 1.5	212	0.9 0.4	228	3.0 1.4	+2
233	2.3 1.1	225	0.8 0.4	233	2.7 1.3	+3
237	1.2 0.6	290	0.6 0.3	239	1.8 0.8	+4
218	0.4 0.2	313	0.7 0.3	264	0.6 0.3	+5
062	1.5 0.7	340	0.7 0.3	058	1.1 0.5	+6

5608_5(A)

Tidal Streams referred to HW at PORT OF BRISTOL (AVONMOUTH)

Hours	Geographical Position	A	51°04'83"N 4 15'97W	
Before High Water	Directions of streams (degrees)	359	0.6 0.3	-6
High Water	Rates at spring tides (knots)	038	0.3 0.1	-5
After High Water	Rates at neap tides (knots)	060	0.7 0.3	-4
		060	1.0 0.5	-3
		065	0.8 0.4	-2
		083	0.4 0.2	-1
		184	0.8 0.4	0
		198	0.9 0.4	+1
		212	0.9 0.4	+2
		225	0.8 0.4	+3
		290	0.6 0.3	+4
		313	0.7 0.3	+5
		340	0.7 0.3	+6

5608_5(B)

Tidal Streams referred to HW at MILFORD HAVEN

B	50°34'47"N 4 57-73W	
-6	047	0.5 0.3
-5	052	0.7 0.4
-4	061	0.8 0.5
-3	071	0.7 0.4
-2	080	0.5 0.3
-1	090	0.2 0.1
0	243	0.9 0.6
+1	234	1.1 0.7
+2	232	0.9 0.5
+3	240	0.5 0.3
+4	302	0.2 0.1
+5	016	0.3 0.2
+6	041	0.4 0.3

5608_6

Tidal Streams referred
to HW at SWANSEA

A	51°21'5N 4 19.4W	B	51°22'0N 4 15.1W	
333	0.9 0.4	342	0.9 0.5	-6
034	1.1 0.5	042	1.3 0.7	-5
067	2.2 1.1	065	2.4 1.3	-4
085	2.5 1.2	080	3.0 1.6	-3
096	2.4 1.1	087	2.9 1.5	-2
100	1.6 0.7	104	1.7 0.9	-1
106	0.4 0.2	140	1.1 0.6	0
225	1.0 0.5	215	1.3 0.7	+1
237	1.8 0.8	247	2.3 1.2	+2
250	2.8 1.3	259	2.9 1.6	+3
260	1.9 0.9	267	2.3 1.2	+4
276	1.7 0.8	284	1.7 0.9	+5
302	1.2 0.6	318	1.1 0.6	+6

5608_7

Tidal Streams referred to
HW at SWANSEA

A	51°33'3N 3 56.9W	B	51°32'5N 3 53.5W	C	51°34'4N 3 50.2W	
110	0.1 0.0	305	0.3 0.2	090	0.3 0.1	-6
070	0.5 0.3	119	0.3 0.1	103	0.5 0.2	-5
060	1.0 0.5	076	0.7 0.3	109	0.4 0.2	-4
057	1.4 0.6	082	1.3 0.6	114	0.4 0.2	-3
060	1.3 0.6	077	1.4 0.6	122	0.2 0.1	-2
063	1.0 0.5	087	0.9 0.4	135	0.1 0.0	-1
090	0.5 0.2	083	0.6 0.3	270	0.1 0.1	0
230	0.7 0.4	240	0.1 0.1	274	0.3 0.1	+1
248	1.4 0.7	259	0.9 0.4	275	0.5 0.2	+2
246	1.6 0.8	253	1.4 0.7	289	0.5 0.2	+3
247	1.1 0.5	257	1.4 0.7	297	0.3 0.1	+4
244	0.7 0.4	264	0.7 0.3	350	0.1 0.0	+5
230	0.2 0.1	300	0.4 0.2	081	0.2 0.1	+6

5608_9

Tidal Streams referred to HW at SWANSEA

A	51°27'0N 3 55.6W	B	51°20'1N 3 50.3W	C	51°16'0N 3 47.4W	D	51°26'8N 3 42.3W	E	51°19'3N 3 32.4W	
076	0.3 0.2	244	0.5 0.3	225	0.4 0.2	320	0.1 0.0	280	0.9 0.4	-6
103	1.6 0.9	130	0.8 0.4	087	2.1 1.0	118	0.8 0.4	060	0.5 0.2	-5
106	2.5 1.3	089	2.3 1.1	097	3.3 1.6	118	1.8 1.0	078	2.4 1.1	-4
106	2.6 1.4	093	3.3 1.6	093	4.0 1.9	116	2.4 1.3	094	3.0 1.4	-3
106	2.2 1.2	097	3.3 1.6	092	3.6 1.7	113	2.4 1.3	096	3.2 1.5	-2
107	1.3 0.7	101	2.3 1.1	094	2.6 1.2	112	1.8 0.9	102	2.6 1.2	-1
211	0.1 0.1	122	0.9 0.4	092	1.0 0.5	119	0.8 0.4	094	1.2 0.6	0
280	1.5 0.8	207	0.6 0.3	239	1.3 0.6	289	0.8 0.4	269	0.4 0.2	+1
285	2.6 1.4	286	2.7 1.3	271	3.7 1.7	296	2.4 1.3	276	2.2 1.0	+2
285	2.8 1.5	291	3.3 1.6	276	4.6 2.1	294	2.8 1.5	272	2.9 1.4	+3
285	2.3 1.2	272	3.2 1.6	275	3.9 1.8	293	2.3 1.2	271	3.2 1.5	+4
288	0.8 0.4	281	2.3 1.1	278	2.5 1.2	301	1.3 0.7	272	2.5 1.3	+5
301	0.2 0.1	265	0.9 0.4	275	1.3 0.6	305	0.5 0.3	271	1.4 0.7	+6

5608_10

Tidal Streams referred
to HW at SWANSEA

Hours	A	Geographical Position	A	51°32'5N 3 53.5W	
Before High Water	6	Directions of streams (degrees) Rates at spring tides (knots) Rates at neap tides (knots)	305	0.3 0.2	-6
	5		119	0.3 0.1	-5
	4		076	0.7 0.3	-4
	3		082	1.3 0.6	-3
	2		077	1.4 0.6	-2
	1		087	0.9 0.4	-1
After High Water	1		083	0.6 0.3	0
	2		240	0.1 0.1	+1
	3		259	0.9 0.4	+2
	4		253	1.4 0.7	+3
	5		257	1.4 0.7	+4
	6		264	0.7 0.3	+5
			300	0.4 0.2	+6

5608_11

Tidal Streams referred
to HW at SWANSEA

A	51°26'8N 3°42'3W	
320	0.1 0.0	-6
118	0.8 0.4	-5
118	1.8 1.0	-4
116	2.4 1.3	-3
113	2.4 1.3	-2
112	1.8 0.9	-1
119	0.8 0.4	0
289	0.8 0.4	+1
296	2.4 1.3	+2
294	2.8 1.5	+3
293	2.3 1.2	+4
301	1.3 0.7	+5
305	0.5 0.3	+6

5608_12

Tidal Streams referred to HW at
PORT OF BRISTOL (AVONMOUTH)

A	51°14'2N 3 21.1W	B	51°21'0N 3 20.6W	C	51°22'9N 3 15.1W	
103	0.9 0.5	094	1.2 0.7	070	0.9 0.5	-6
106	2.2 1.2	094	3.1 1.7	076	1.7 0.9	-5
102	2.8 1.5	094	4.3 2.3	076	2.2 1.1	-4
112	2.9 1.5	094	3.9 2.1	073	2.9 1.5	-3
108	2.4 1.3	094	3.0 1.6	069	2.2 1.1	-2
100	1.1 0.6	093	1.7 0.9	075	1.1 0.6	-1
312	0.5 0.3	273	0.6 0.3	244	1.1 0.6	0
293	1.9 1.0	273	2.7 1.4	250	3.2 1.6	+1
286	2.8 1.5	274	4.3 2.3	254	3.1 1.6	+2
283	3.0 1.6	274	4.4 2.4	256	2.7 1.4	+3
283	2.3 1.3	274	3.4 1.8	256	2.0 1.0	+4
284	1.3 0.7	274	1.9 1.0	253	1.5 0.7	+5
090	0.4 0.2	099	0.2 0.1		0.0 0.0	+6

5608_13

Tidal Streams referred to HW at
PORT OF BRISTOL (AVONMOUTH)

A	51°22'9N 3 15.1W	B	51°21'5N 3 09.5W	C	51°24'4N 3 07.5W	D	51°23'2N 3 05.0W	E	51°19'6N 3 04.8W	F	51°21'7N 3 01.3W	
070	0.9 0.5	251	0.8 0.4	243	0.1 0.0	197	0.7 0.4	144	0.2 0.1	214	1.2 0.6	-6
076	1.7 0.9	071	2.0 1.0	031	2.3 1.2	047	2.7 1.4	049	1.4 0.7	039	1.5 0.8	-5
076	2.2 1.1	072	3.3 1.7	037	3.1 1.6	044	3.5 1.9	048	3.2 1.7	033	3.6 1.8	-4
073	2.9 1.5	075	3.6 1.9	035	3.8 2.0	037	3.8 2.0	053	3.2 1.7	034	4.2 2.2	-3
069	2.2 1.1	072	3.1 1.6	039	3.6 1.9	036	3.6 1.9	043	2.3 1.2	035	4.0 2.1	-2
075	1.1 0.6	072	1.7 0.9	039	2.6 1.3	041	2.7 1.5	041	1.7 0.9	035	2.8 1.4	-1
244	1.1 0.6	315	0.2 0.1	095	0.2 0.1	070	0.7 0.4	045	0.2 0.1	059	0.6 0.3	0
250	3.2 1.6	253	2.5 1.3	221	3.0 1.5	222	1.6 0.8	245	1.3 0.7	219	2.3 1.2	+1
254	3.1 1.6	253	3.1 1.6	218	3.6 1.8	222	3.6 1.9	230	2.3 1.2	214	3.3 1.7	+2
258	2.7 1.4	254	2.7 1.4	222	3.3 1.7	225	3.3 1.7	222	3.0 1.6	213	3.2 1.7	+3
256	2.0 1.0	252	2.3 1.2	224	2.8 1.4	218	3.3 1.8	231	2.4 1.2	213	3.0 1.5	+4
253	1.5 0.7	251	1.9 1.0	218	2.3 1.2	222	2.9 1.5	228	1.8 1.0	214	2.6 1.3	+5
	0.0 0.0	251	1.3 0.7	235	0.6 0.3	217	1.4 0.8	203	0.6 0.3	214	1.7 0.9	+6

5608_15

Tidal Streams referred to HW at PORT OF BRISTOL (AVONMOUTH)

A	51°21'53N 3 09.48W	B	51°26'23N 3 07.68W	C	51°24'43N 3 07.48W	D	51°23'23N 3 05.07W	E	51°21'73N 3 01.28W	F	51°27'03N 2 59.58W	G	51°29'83N 2 57.88W	
251	0.8 0.4	038	0.1 0.1	243	0.1 0.0	197	0.7 0.4	214	1.2 0.6	246	0.2 0.1	232	1.4 0.8	-6
071	2.0 1.0	037	1.5 0.8	031	2.3 1.2	047	2.7 1.4	039	1.5 0.8	046	1.9 1.0	056	1.7 0.9	-5
072	3.3 1.7	033	2.0 1.0	037	3.1 1.6	044	3.5 1.9	033	3.6 1.8	049	3.9 2.1	053	3.2 1.7	-4
075	3.6 1.9	025	2.0 1.0	035	3.8 2.0	037	3.8 2.0	034	4.2 2.2	048	4.0 2.1	054	4.0 2.1	-3
072	3.1 1.6	021	1.8 0.9	039	3.6 1.9	036	3.6 1.9	035	4.0 2.1	048	3.2 1.7	056	3.4 1.8	-2
072	1.7 0.9	022	1.1 0.6	039	2.6 1.3	041	2.7 1.5	035	2.8 1.4	051	2.0 1.1	059	1.9 1.0	-1
315	0.2 0.1	251	0.3 0.1	095	0.2 0.1	070	0.7 0.4	059	0.6 0.3	079	0.5 0.3	077	0.5 0.2	0
253	2.5 1.3	213	1.6 0.8	221	3.0 1.5	222	1.6 0.8	219	2.3 1.2	220	1.9 1.0	234	1.7 0.9	+1
253	3.1 1.6	202	2.0 1.0	218	3.6 1.8	222	3.6 1.9	214	3.3 1.7	229	3.3 1.8	241	2.9 1.5	+2
254	2.7 1.4	201	1.9 1.0	222	3.3 1.7	225	3.3 1.7	213	3.2 1.7	230	3.6 1.9	238	3.0 1.6	+3
252	2.3 1.2	210	1.6 0.8	224	2.8 1.4	218	3.3 1.8	213	3.0 1.5	229	3.0 1.6	233	2.8 1.5	+4
251	1.9 1.0	215	1.1 0.6	218	2.3 1.2	222	2.9 1.5	214	2.6 1.3	228	2.3 1.2	232	2.4 1.3	+5
251	1.3 0.7	209	0.2 0.1	235	0.6 0.3	217	1.4 0.8	214	1.7 0.9	232	1.2 0.6	232	1.9 1.0	+6

5608_16Ⓐ&Ⓑ

Tidal Streams referred to HW at
PORT OF BRISTOL (AVONMOUTH)

Hours	Geographical Position	A 51°29'83N 2 57-88W	B 51°28'13N 2 51-08W	C 51°29'63N 2 48-18W	D 51°30'53N 2 43-58W	
Before High Water	Directions of streams (degrees)	232 1-4 0.8	253 2-9 1-6	250 2-8 1-5	230 3-0 1-7	-6
		056 1-7 0.9	054 0-4 0.2	055 1-7 0-9	240 0-6 0-3	-5
		053 3-2 1-7	068 5-2 2-8	054 4-1 2-2	044 4-3 2-3	-4
		054 4-0 2-1	059 5-2 2-8	055 4-8 2-6	050 4-6 2-4	-3
		056 3-4 1-8	057 4-2 2-3	058 4-6 2-5	051 3-1 1-6	-2
		059 1-9 1-0	063 2-8 1-5	061 3-8 2-0	046 2-5 1-3	-1
After High Water	Directions of streams (degrees)	077 0-5 0-2	079 1-5 0-8	061 1-9 1-0	060 2-0 1-0	0
		234 1-7 0-9	246 1-2 0-6	220 1-4 0-8	234 0-6 0-3	+1
		241 2-9 1-5	238 3-2 1-7	237 3-6 1-9	236 2-1 1-1	+2
		238 3-0 1-6	244 3-6 1-9	236 3-6 1-9	234 2-3 1-2	+3
		233 2-8 1-5	238 3-7 2-0	237 3-8 2-0	228 3-0 1-6	+4
		232 2-4 1-3	243 3-6 2-0	236 4-0 2-2	223 3-2 1-7	+5
		232 1-9 1-0	248 3-2 1-8	244 3-4 1-8	227 3-2 1-7	+6

5608_17

Tidal Streams referred to HW at
PORT OF BRISTOL (AVONMOUTH)

A	51°22'93N 3 15-08W	B	51°24'43N 3 07-48W	C	51°26'23N 3 07-68W	
070	0-9 0-5	243	0-1 0-0	038	0-1 0-1	-6
076	1-7 0-9	031	2-3 1-2	037	1-5 0-8	-5
076	2-2 1-1	037	3-1 1-6	033	2-0 1-0	-4
073	2-9 1-5	035	3-8 2-0	025	2-0 1-0	-3
069	2-2 1-1	039	3-6 1-9	021	1-8 0-9	-2
075	1-1 0-6	039	2-6 1-3	022	1-1 0-6	-1
244	1-1 0-6	095	0-2 0-1	251	0-3 0-1	0
250	3-2 1-6	221	3-0 1-5	213	1-6 0-8	+1
254	3-1 1-6	218	3-6 1-8	202	2-0 1-0	+2
258	2-7 1-4	222	3-3 1-7	201	1-9 1-0	+3
256	2-0 1-0	224	2-8 1-4	210	1-6 0-8	+4
253	1-5 0-7	218	2-3 1-2	215	1-1 0-6	+5
	0-0 0-0	235	0-6 0-3	209	0-2 0-1	+6

5608_18

Tidal Streams referred to HW at
PORT OF BRISTOL (AVONMOUTH)

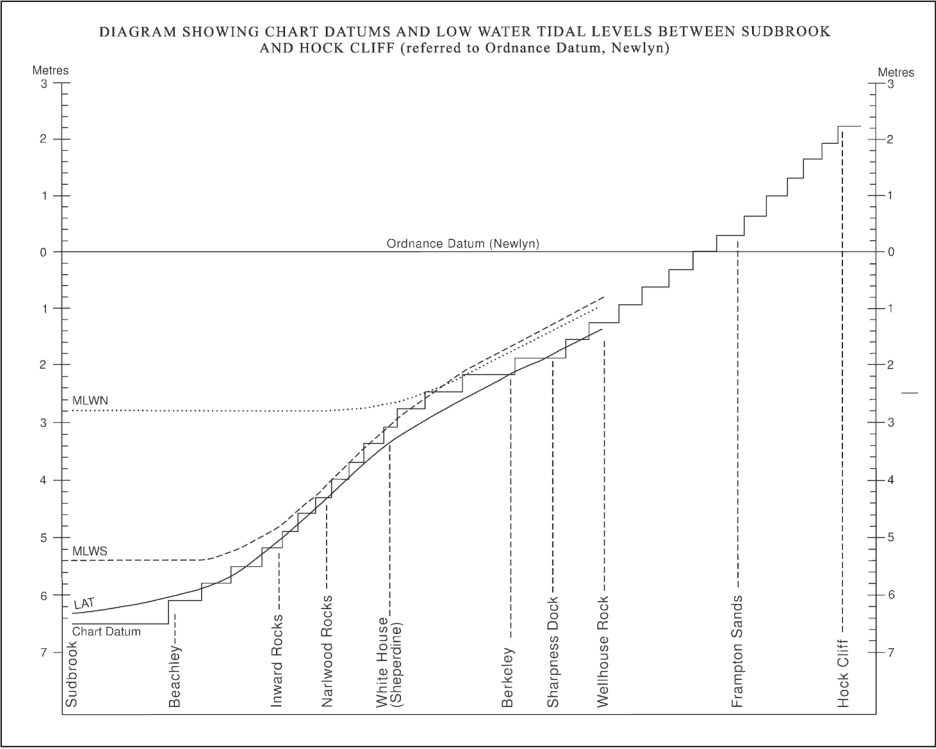
51°30'53N 2 43-58W
230 3-0 1-7 240 0-6 0-3 044 4-3 2-3 050 4-6 2-4 051 3-1 1-6 046 2-5 1-3 060 2-0 1-0 234 0-6 0-3 236 2-1 1-1 234 2-3 1-2 228 3-0 1-6 223 3-2 1-7 227 3-2 1-7
-6 -5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5 +6

5608_20

Tidal Streams referred to HW at
PORT OF BRISTOL (AVONMOUTH)

51°30'53N 2 43-58W
230 3-0 1-7 240 0-6 0-3 044 4-3 2-3 050 4-6 2-4 051 3-1 1-6 046 2-5 1-3 060 2-0 1-0 234 0-6 0-3 236 2-1 1-1 234 2-3 1-2 228 3-0 1-6 223 3-2 1-7 227 3-2 1-7
-6 -5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5 +6

Non-Reference Standard Ports				
STANDARD PORT	MHWS	MHWN	MLWN	MLWS
SWANSEA	9.5	7.2	3.1	0.9
PORT TALBOT	9.7	7.3	3.5	1.1
CARDIFF	12.3	9.1	4.0	1.2
NEWPORT	12.3	8.9	3.6	0.8
SHARPNESS DOCK	9.3	5.6	0.5	0.6
CUMBERLAND BASIN ENTRANCE	10.3	6.8	-	-



TIME & HEIGHT DIFFERENCES FOR PREDICTING THE TIDE AT SECONDARY PORTS

PLACE	Lat. N	Long. W	TIME DIFFERENCES				HEIGHT DIFFERENCES (IN METRES)			
			High Water	Low Water			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	7.1	5.5	2.5	0.9
Ilfracombe	51 13	4 07	-0016	-0016	-0041	-0031	+2.1	+1.4	+0.6	+0.1
Rivers Taw and Torridge										
Appledore	51 03	4 12	-0020	-0025	+0015	-0045	+0.6	+0.3	-0.1	-0.1
Yelland Marsh	51 04	4 10	-0010	-0015	+0100	-0015	0.0	-0.7	-1.2	-0.8
Fremington	51 05	4 07	-0010	-0015	+0030	-0030	-1.2	-2.1	-2.2	-0.7
Barnstaple	51 05	4 04	+0000	-0015	-0155	-0245	-3.0	-4.1	-2.2	-0.6
Bideford	51 01	4 12	-0020	-0025	+0000	+0000	-1.2	-1.9	-2.5	-0.9
Clovelly	51 00	4 24	-0030	-0030	-0020	-0040	+1.2	+0.8	+0.2	0.0
Lundy	51 10	4 39	-0025	-0025	-0035	-0030	+0.9	+0.5	+0.2	-0.1
River Camel										
Padstow	50 33	4 56	-0055	-0050	-0040	-0050	+0.2	+0.1	+0.1	-0.1
WALES										
Burry Inlet										
Burry Port	51 41	4 15	+0003	+0003	+0007	+0007	+1.5	+1.1	+0.5	+0.2
Llanelli	51 40	4 10	-0003	-0003	+0150	+0020	+0.7	+0.3	⊖	⊖
Mumbles	51 34	3 58	+0001	+0003	-0012	-0005	+2.4	+1.7	+0.8	+0.2
SWANSEA	51 37	3 55	STANDARD PORT				See Table of Non-Reference Standard Ports			
River Neath										
Entrance	51 37	3 51	+0002	+0011	§	§	+2.6	+1.9	§	§
PORT TALBOT	51 35	3 49	STANDARD PORT				See Table of Non-Reference Standard Ports			
Porthcawl	51 28	3 42	+0005	+0010	-0010	-0005	+2.8	+2.0	+0.8	+0.1
PORT OF BRISTOL (AVONMOUTH)										
	51 30	2 44	0600 and 1800	1100 and 2300	0300 and 1500	0800 and 2000	13.2	9.8	3.8	1.0
Barry	51 23	3 16	-0025	-0025	-0130	-0045	-1.5	-1.1	0.0	+0.2
Flat Holm	51 23	3 07	-0015	-0015	-0035	-0035	-1.4	-1.0	-0.5	0.0
Steep Holm	51 20	3 06	-0020	-0020	-0040	-0040	-1.7	-1.1	-0.5	-0.4
CARDIFF	51 27	3 10	STANDARD PORT				See Table of Non-Reference Standard Ports			
NEWPORT	51 33	2 59	STANDARD PORT				See Table of Non-Reference Standard Ports 2			
River Wye										
Chepstow	51 39	2 40	+0020	+0020	⊖	⊖	⊖	⊖	⊖	⊖
PORT OF BRISTOL (AVONMOUTH)										
	51 30	2 44	0000 and 1200	0600 and 1800	0000 and 1200	0700 and 1900	13.2	9.8	3.8	1.0
River Severn										
Sudbrook	51 35	2 43	+0010	+0010	+0025	+0015	+0.2	+0.1	-0.1	+0.1
ENGLAND										
Beachley (Aust)	51 36	2 38	+0010	+0015	+0040	+0025	-0.2	-0.2	-0.5	-0.3
Inward Rocks	51 39	2 37	+0020	+0020	+0105	+0045	-1.0	-1.1	-1.4	-0.6
Narlwood Rocks	51 39	2 36	+0025	+0025	+0120	+0100	-1.9	-2.0	-2.3	-0.8
White House	51 40	2 33	+0025	+0025	+0145	+0120	-3.0	-3.1	-3.6	-1.0
Berkeley	51 42	2 30	+0030	+0045	+0245	+0220	-3.8	-3.9	-3.4	-0.5
SHARPNESS DOCK	51 43	2 29	STANDARD PORT				See Table of Non-Reference Standard Ports 4			
Wellhouse Rock	51 44	2 29	+0040	+0055	+0320	+0305	-4.1	-4.4	-3.1	-0.2
Epney	51 49	2 21	+0130	⊖	⊖	⊖	-9.4	⊖	⊖	⊖
Minsterworth	51 51	2 20	+0140	⊖	⊖	⊖	-10.1	⊖	⊖	⊖
Llanthony	51 52	2 16	+0215	⊖	⊖	⊖	-10.7	⊖	⊖	⊖

PORT OF BRISTOL (AVONMOUTH)	51 30	2 44	0200 and 1400	0800 and 2000	0300 and 1500	0800 and 2000	13.2	9.8	3.8	1.0
<i>River Avon</i>										
Shirehampton	51 29	2 41	0000	0000	+0035	+0010	-0.7	-0.7	-0.8	0.0
Sea Mills	51 29	2 39	+0005	+0005	+0105	+0030	-1.4	-1.5	-1.7	-0.1
CUMBERLAND BASIN ENTRANCE	51 27	2 37	STANDARD PORT		See Table of Non-Reference Standard Ports					
Portishead	51 30	2 45	-0002	0000	⊖	⊖	-0.1	-0.1	⊖	⊖
Clevedon	51 27	2 52	-0010	-0020	-0025	-0015	-0.4	-0.2	+0.2	0.0
St Thomas Head	51 24	2 56	0000	0000	-0030	-0030	-0.4	-0.2	+0.1	+0.1
English and Welsh Grounds	51 28	2 59	-0008	-0008	-0030	-0030	-0.5	-0.8	-0.3	0.0
Weston-Super-Mare	51 21	2 59	-0020	-0030	-0130	-0030	-1.2	-1.0	-0.8	-0.2
<i>River Parrett</i>										
Burnham-on-Sea	51 14	3 00	-0020	-0025	-0030	0000	-2.3	-1.9	-1.4	-1.1 †
Bridgwater	51 08	3 00	-0015	-0030	+0305	+0455	-8.6	-8.1	§	§ 6
Hinkley Point	51 13	3 08	-0032	-0028	-0055	-0049	-1.4	-1.1	-0.1	0.0
Watchet	51 11	3 20	-0035	-0050	-0145	-0040	-1.9	-1.5	+0.1	+0.1
Minehead	51 13	3 28	-0037	-0052	-0155	-0045	-2.6	-1.9	-0.2	0.0
Porlock Bay	51 13	3 38	-0045	-0055	-0205	-0050	-3.0	-2.2	-0.1	-0.1
Lynmouth	51 14	3 50	-0055	-0115	⊖	⊖	-3.6	-2.7	⊖	⊖

For seasonal changes in Mean Level see NP201B.

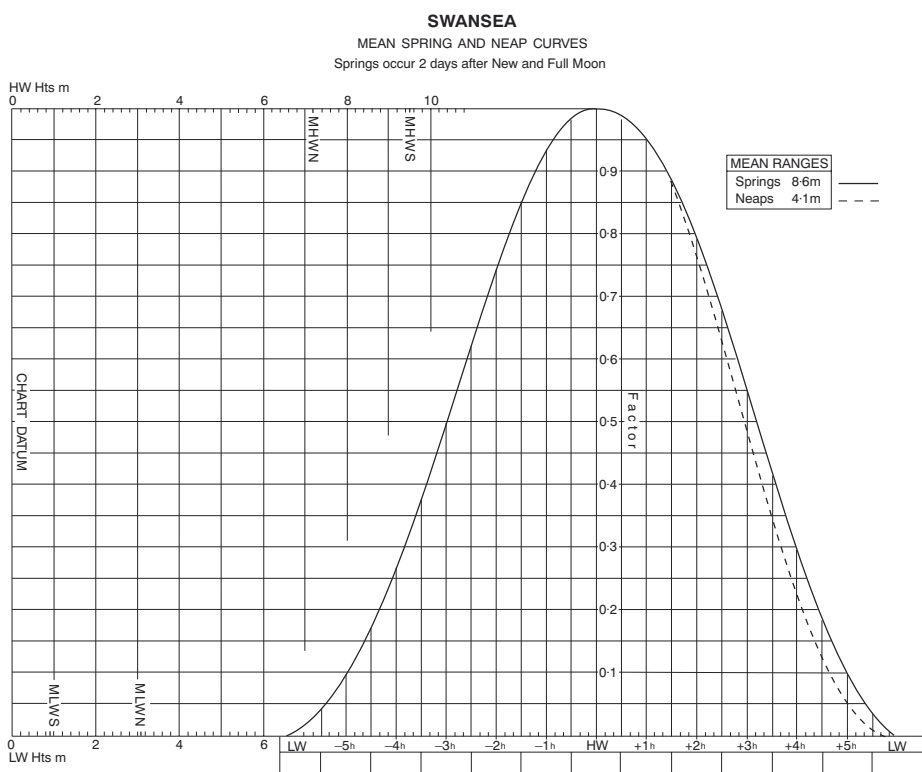
○ No Data

§ Dries out except for river water.

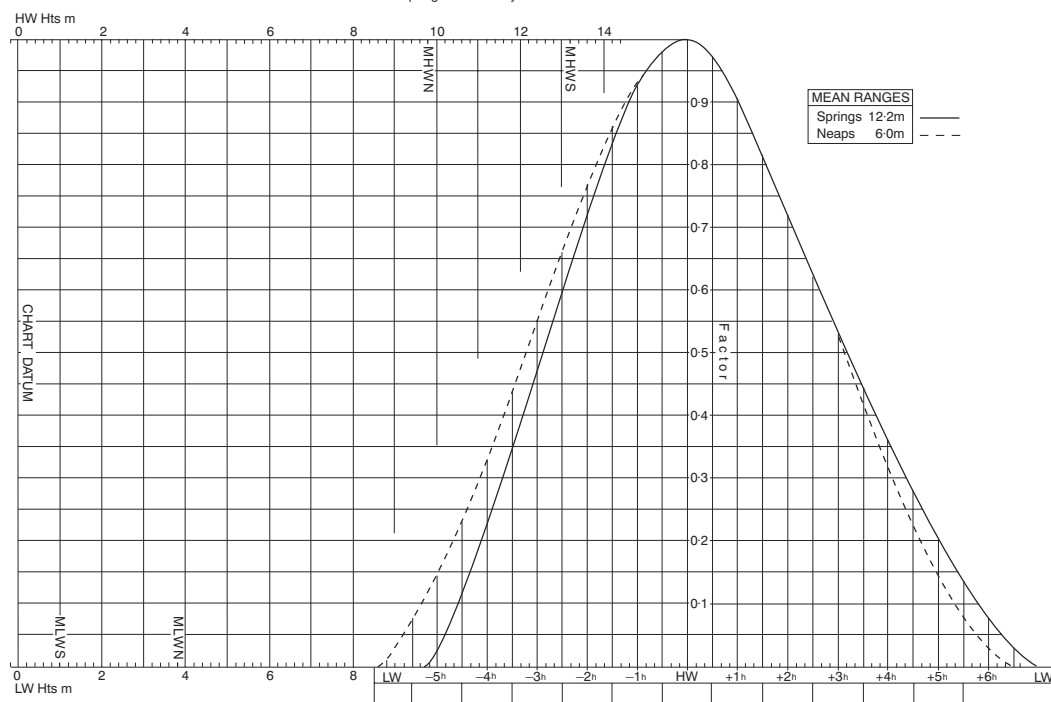
† The tide does not normally fall below this level.

1. At Fremington there is a low water stand of 2 to 2½ hours at springs; the 0100/1300 low water time differences gives the beginning of the stand. At neaps there is no stand.
2. At Barnstaple there is a low water stand lasting until 1 hour 45 minutes before high water. The low water time differences gives the beginning of the stand.
3. At Bideford there is a low water stand of 2 to 3 hours at springs. the low water time differences gives the beginning of the stand.
4. The height of low water at Newport does not normally fall below MLWS; tidal heights are calculated for an average minimum flow; maximum river flow may raise the height of low water by as much as 0.3m.
5. The effect of the tide in the River Wye is felt as far as Saint Briavel, where the height of MHWS is about 8m above Ordnance Datum (Newlyn), when the river flow at Redbrook is 21 cumecs. At Saint Briavel the tidal range at springs may be as much as 1.8m but changes in level due to river water may be greater than this.
6. Above Inward Rocks the height of low water is greatly affected by the amount of fresh water coming down the River Severn and its tributaries. The tidal levels given are for a low rate of river flow (about 35 cumecs at Wellhouse Rock). Flood water can increase the height of low water by as much as 0.6 to 1m but the height of high water is scarcely affected by river flow except, perhaps, for freak conditions which occur less than once a year.
7. Time and height differences refer to springs only. At neaps, the river in this area is non-tidal. The Bore on the River Severn can usually be seen when the range of tide at Avonmouth is 13.5m or more. It usually arrives at Minsterworth about 45 minutes and at Stonebench about 60 minutes after the time of High Water at Avonmouth. For further information, see West Coasts of England and Wales Pilot (NP 37).
8. At Bridgwater, the tide falls to normal river level, which is about 1.8m above Ordnance Datum (Newlyn). Low water time differences give the end of the low water stand, which lasts for 1½ to 2½ hours at springs and 7½ to 8½ hours at neaps. The onset of the rising tide is often accompanied by a bore.

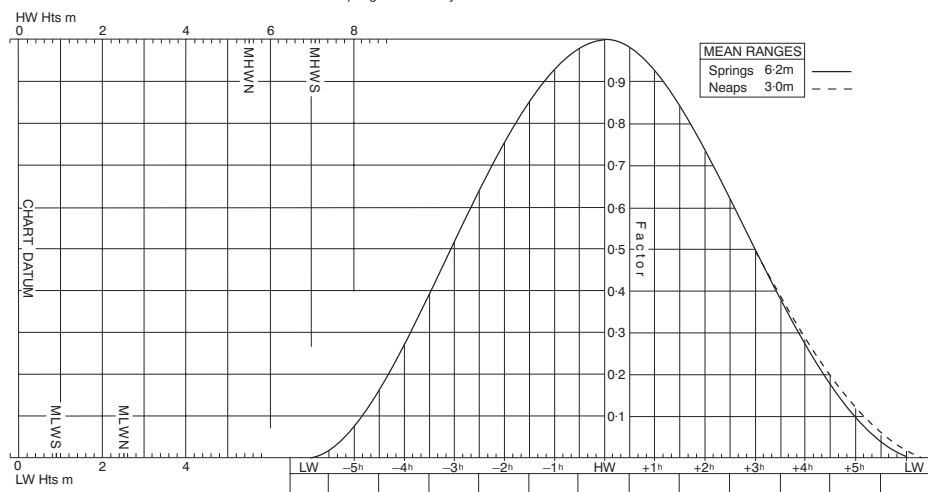
Tidal Curve Diagrams



AVONMOUTH
 MEAN SPRING AND NEAP CURVES
 Springs occur 2 days after New and Full Moon



MILFORD HAVEN
 MEAN SPRING AND NEAP CURVES
 Springs occur 2 days after New and Full Moon



For guidance on the use of Standard Curve Diagrams, see ADMIRALTY Tide Tables and NP201B