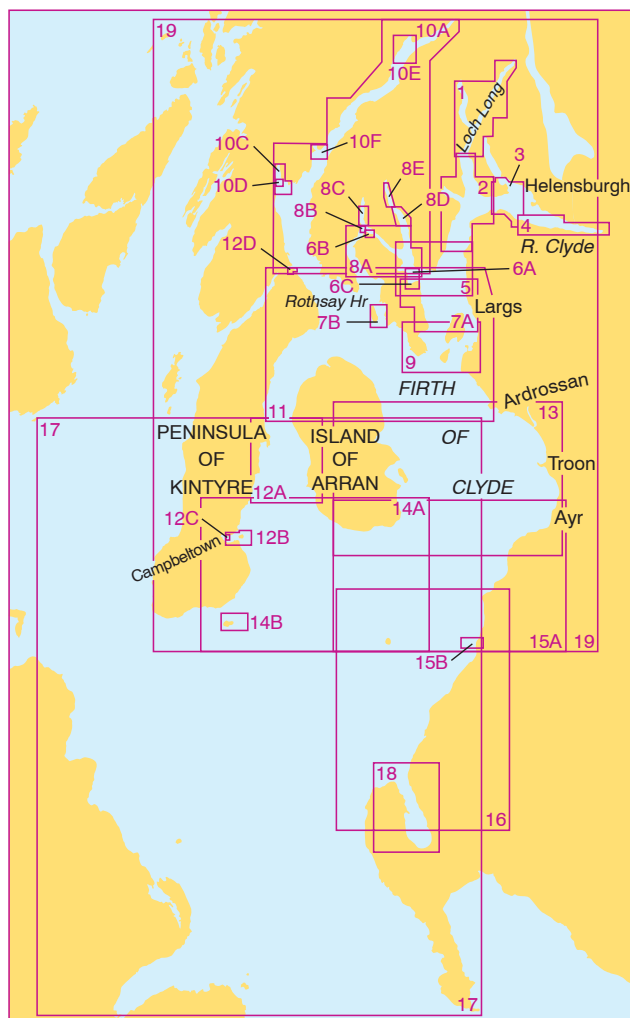




# Firth of Clyde

## Coverage Diagram



5610	Chart Title	Natural Scale 1:
1A	Loch Goil and Loch Long	25,000
1B	Continuation of Loch Long	25,000
1C	Largs Yacht Haven	12,500
1D	Millport	12,500
2A	Southern Approaches to Loch Long including Holy Loch	25,000
2B	Continuation of Loch Long	25,000
3A	Carttsyke to Helensburgh	15,000
3B	Rhu Narrows	12,500

5610	Chart Title	Natural Scale 1:
4	River Clyde	
4A	Greenock Bank to Pillar Bank	15,000
4B	Pillar Bank to Dumbarton Castle	15,000
4C	Dumbarton Castle to Bowling	15,000
5	Inverkip to Rothesay	25,000
6	Plans in the Kyles of Bute	
6A	Rothesay Bay	10,000
6B	Burnt Islands	5,000
6C	Rothesay Harbour	2,500
7A	Rothesay to Largs	25,000
7B	Inchmarnock Sound	25,000
8A	Kyles of Bute	25,000
8B	Caladh Harbour	10,000
8C	Loch Riddon	25,000
8D	Central Loch Striven	25,000
8E	Upper Loch Striven	25,000
9	Millport to Farland Head and Garroch Head	25,000
10A	Loch Fyne	75,000
10B	Continuation of Loch Fyne	75,000
10C	Loch Gilp	25,000
10D	Ardrishaig	10,000
10E	Inveraray	25,000
10F	Loch Gair	25,000
11	Tarbert to Ardrossan	75,000
12	Plans on the Mull of Kintyre	
12A	Kilbrannan Sound	75,000
12B	Campbeltown Loch	12,500
12C	Cambeltown Harbour	5,000
12D	East Loch Tarbert	6,250
13	Ardrossan to Pladda	75,000
14A	Kildonald Point to Ailsa Craig	75,000
14B	Sanda Island	30,000
15A	Pladda to Ailsa Craig and Ayr to Girvan	75,000
15B	Girvan	6,250
16	Ailsa Craig to Loch Ryan	75,000
17	North Channel and Approaches	200,000
18A	Loch Ryan	25,000
18B	Stranraer	10,000
19	Firth of Clyde	200,000

## 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 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.

### CHART ACCURACY

Owing to the age and quality of the source information, some detail on this chart may not be positioned accurately. Particular caution is advised when navigating in the vicinity of dangers, even when using an electronic positioning system such as GPS.

### 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.

### 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.

### 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.

### VESSEL REPORTING

For details of the Clydeport Local Port Service, see ADMIRALTY List of Radio Signals.

### SURFACED SUBMARINES

Within the area of this chart, submarines occasionally tow sonar equipment. Other vessels are recommended to remain 1500 metres clear when crossing astern of a surfaced submarine.

### 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.

### RECOMMENDED ANCHORAGES

Anchorage shown in magenta on these charts in the Clydeport Harbour Authority area are recommended anchorages for use by pleasure craft. They are administered by the Clyde Moorings Committee.

### 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.

### SHELLFISH BEDS

Vessels should avoid grounding in areas of shellfish and mussel beds.

### 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.

### HISTORIC WRECKS

The sites of historic wrecks are protected from unauthorised interference.

## 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

#### BELFAST COASTGUARD (MRCC)

Tel. +33 (0) 2891 463933

MMSI: 002320021

e-mail: [zone34@hmcg.gov.uk](mailto:zone34@hmcg.gov.uk) (FAO Belfast 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](http://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: NP222 Firth of Clyde and Approaches.

### 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](http://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](mailto:customerservices@ukho.gov.uk)











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## Tidal Stream Information











### 5610\_2A Tidal Streams referred to HW at GREENOCK

Hours		Geographical Position	 A 55°58' 1N 4 52-7W	 B 55°58' 2N 4 50-9W	 C 55°58' 5N 4 48-6W		
Before High Water		Directions of streams (degrees)			128	0-1 0-1	-6
					099	0-2 0-1	-5
					084	0-3 0-2	-4
					087	0-5 0-3	-3
					100	0-6 0-3	-2
					113	0-5 0-3	-1
High Water		Rates at spring tides (knots)	Tidal streams are very weak.		120	0-2 0-1	0
					290	0-1 0-1	+1
					290	0-5 0-3	+2
					285	0-6 0-4	+3
					275	0-6 0-4	+4
					275	0-4 0-3	+5
After High Water		Rates at neap tides (knots)	Tidal streams are very weak.		183	0-1 0-1	+6

### 5610\_3A&B Tidal Streams referred to HW at GREENOCK

Hours		Geographical Position		55°58'49 N 4 48-57W		55°58'59 N 4 44-07W		55°59'04 N 4 45-32W		55°59'66 N 4 45-25W		56°00'23 N 4 46-20W		56°00'33 N 4 46-66W		56°00'52 N 4 47-09W		56°00'70 N 4 47-46W		56°00'93 N 4 47-65W			
Before High Water	<div><div>6</div><div>5</div><div>4</div><div>3</div><div>2</div><div>1</div></div>	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	128	0-1 0-1	350	0-7 0-4	033	0-5 0-3	019	0-5 0-3	284	0-5 0-3	286	0-9 0-5	318	0-2 0-1	310	0-6 0-4	325	0-6 0-4	-6
					099	0-2 0-1	056	0-2 0-1	042	0-3 0-2	009	0-4 0-2	301	0-5 0-3	299	0-6 0-4	292	0-3 0-2	330	0-7 0-4	340	0-8 0-5	-5
					084	0-3 0-2	111	0-7 0-4	046	0-2 0-1	357	0-3 0-2	297	0-6 0-4	325	0-4 0-2	281	0-4 0-2	317	0-6 0-4	343	0-5 0-3	-4
					087	0-5 0-3	117	1-1 0-6	047	0-2 0-1	358	0-2 0-1	323	0-4 0-2	321	0-4 0-2	306	0-6 0-4	313	0-5 0-3	345	0-4 0-2	-3
					100	0-6 0-3	125	0-8 0-5	048	0-2 0-1	355	0-2 0-1	338	0-3 0-2	293	0-3 0-2	322	0-3 0-2	324	0-4 0-2	344	0-6 0-4	-2
					113	0-5 0-3	144	0-5 0-3	050	0-2 0-1	347	0-2 0-1	353	0-3 0-2	289	0-2 0-1	323	0-3 0-2	316	0-4 0-2	339	0-3 0-2	-1
High Water			120	0-2 0-1	208	0-4 0-2	064	0-1 0-1	308	0-2 0-1	011	0-2 0-1	282	0-2 0-1	325	0-2 0-1	320	0-2 0-1	243	0-2 0-1	0		
After High Water	<div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div>	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	290	0-1 0-1	256	0-6 0-4	218	0-1 0-1	226	0-2 0-1	118	0-3 0-2	084	0-3 0-2	127	0-2 0-1	147	0-3 0-2	177	0-4 0-2	+1
					290	0-5 0-3	277	0-8 0-5	234	0-4 0-2	194	0-3 0-2	140	0-5 0-3	109	0-8 0-5	135	0-5 0-3	146	0-7 0-4	152	0-7 0-4	+2
					285	0-6 0-4	297	0-9 0-6	233	0-4 0-2	174	0-5 0-3	141	0-7 0-4	133	0-8 0-5	118	0-4 0-2	137	0-8 0-5	151	0-6 0-4	+3
					275	0-6 0-4	320	1-0 0-6	220	0-5 0-3	167	0-7 0-4	139	0-7 0-4	138	0-9 0-5	125	0-6 0-4	136	1-0 0-6	155	0-8 0-5	+4
					275	0-4 0-3	340	0-9 0-6	210	0-3 0-2	202	0-2 0-1	074	0-2 0-1	080	0-3 0-2	130	0-4 0-2	134	0-4 0-2	169	0-4 0-2	+5
					183	0-1 0-1	000	0-5 0-3	021	0-3 0-2	000	0-4 0-2	299	0-4 0-2	288	0-9 0-5	330	0-2 0-1	311	0-4 0-2	288	0-2 0-1	+6



### 5610\_7A Tidal Streams referred to HW at GREENOCK

Hours	 Geographical Position	 55°48'9N 4 58-2W					
Before High Water	 Directions of streams (degrees)	 Rates at spring tides (knots)	 Rates at neap tides (knots)		000	0-1 0-1	-6
					027	0-2 0-1	-5
					054	0-2 0-1	-4
					030	0-2 0-1	-3
					024	0-1 0-1	-2
					120	0-1 0-1	-1
High Water		139	0-1 0-1	0			
After High Water	 Directions of streams (degrees)	 Rates at spring tides (knots)	 Rates at neap tides (knots)		257	0-1 0-1	+1
					279	0-2 0-1	+2
					217	0-2 0-1	+3
					265	0-4 0-2	+4
					272	0-2 0-1	+5
					000	0-0 0-0	+6

### 5610\_9 Tidal Streams referred to HW at GREENOCK

Hours	<div>Geographical Position</div>	<div>A55°43'0N 4 55-7W</div>	<div>B55°43'5N 4 59-2W</div>	<div>C55°44'6N 4 54-1W</div>																																																																																																																																																																																																																																																																																																																											
Before High Water	Directions of streams (degrees)	233	0-1 0-1	072	0-3 0-2	052	0-8 0-5	-6																																																																																																																																																																																																																																																																																																																							
		343	0-2 0-1	046	0-6 0-4	048	1-1 0-7	-5																																																																																																																																																																																																																																																																																																																							
		027	0-2 0-1	026	0-7 0-4	044	1-0 0-6	-4																																																																																																																																																																																																																																																																																																																							
		027	0-4 0-2	044	0-6 0-4	052	0-8 0-6	-3																																																																																																																																																																																																																																																																																																																							
		023	0-4 0-3	037	0-4 0-3	053	0-8 0-5	-2																																																																																																																																																																																																																																																																																																																							
		017	0-4 0-2	016	0-3 0-2	050	0-6 0-4	-1																																																																																																																																																																																																																																																																																																																							
High Water	Rates at spring tides (knots)	009	0-3 0-2	018	0-2 0-1	035	0-1 0-1	0																																																																																																																																																																																																																																																																																																																							
		Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	Directions of streams (degrees)	Rates at spring tides

### 5610\_10A Tidal Streams referred to HW at GREENOCK

Hours	 Geographical Position	 56°00'8N 5 21-5W		
Before High Water	Directions of streams (degrees)	023	0 5 0 3	-6
		038	1 1 0 7	-5
		043	0 9 0 5	-4
		041	0 7 0 4	-3
		038	0 6 0 4	-2
		035	0 5 0 3	-1
High Water		000	0 0 0 0	0
After High Water	Rates at spring tides (knots)	215	0 4 0 2	+1
		219	0 8 0 5	+2
		219	1 1 0 7	+3
		213	1 1 0 7	+4
		222	0 7 0 4	+5
		000	0 0 0 0	+6
	Rates at neap tides (knots)			

## 5610\_11

### Tidal Streams referred to HW at GREENOCK

Hours	Geographical Position	A 55°39'90N 5 25-27W	B 55°45'00N 5 13-37W	C 55°43'50N 4 59-17W	D 55°48'90N 4 58-17W	E 55°43'00N 4 55-67W	F 55°44'60N 4 54-07W	G 55°38'48N 4 50-01W
Before High Water	Directions of streams (degrees)	040 0-3 0-2 030 0-3 0-2 017 0-3 0-2 330 0-3 0-2 297 0-3 0-2 243 0-3 0-2	Tidal streams are irregular and very weak. Rate not exceeding 0.25 knots.	072 0-3 0-2 046 0-6 0-4 026 0-7 0-4 044 0-6 0-4 037 0-4 0-3 016 0-3 0-2	000 0-1 0-1 027 0-2 0-1 054 0-2 0-1 030 0-2 0-1 024 0-1 0-1 120 0-1 0-1	233 0-1 0-1 343 0-2 0-1 027 0-2 0-1 027 0-4 0-2 023 0-4 0-3 017 0-4 0-2	052 0-8 0-5 048 1-1 0-7 044 1-0 0-6 052 0-8 0-6 053 0-8 0-5 050 0-6 0-4	Tidal streams are weak. Rate not exceeding 0.25 knots.
High Water	Rates at spring tides (knots)	225 0-4 0-3		018 0-2 0-1	139 0-1 0-1	009 0-3 0-2	035 0-1 0-1	
After High Water	Rates at neap tides (knots)	215 0-5 0-3 205 0-4 0-3 194 0-3 0-2 121 0-1 0-1 062 0-2 0-1 044 0-3 0-2		257 0-4 0-3 235 0-9 0-5 215 0-9 0-6 209 0-8 0-5 152 0-4 0-2 085 0-2 0-1	257 0-1 0-1 279 0-2 0-1 217 0-2 0-1 265 0-4 0-2 272 0-2 0-1 0-0 0-0	000 0-0 0-0 193 0-3 0-2 198 0-3 0-2 196 0-5 0-3 196 0-7 0-4 204 0-2 0-1	231 0-6 0-4 237 1-3 0-8 229 1-4 0-9 229 1-3 0-8 230 0-8 0-5 119 0-6 0-4	
Before High Water	Directions of streams (degrees)							
High Water	Rates at spring tides (knots)							
After High Water	Rates at neap tides (knots)							

## 5610\_12B

### Tidal Streams referred to HW at GREENOCK

Hours	Geographical Position	A 55°25'90N 5°32'46W
Before High Water	Directions of streams (degrees)	-6 -5 -4 -3 -2 -1 0
High Water	Rates at spring tides (knots)	+1 +2 +3 +4 +5 +6
After High Water	Rates at neap tides (knots)	

## 5610\_13

### Tidal Streams referred to HW at GREENOCK

Hours	Geographical Position	A 55°30'30N 5 04-27W	B 55°32'90N 4 56-77W
Before High Water	Directions of streams (degrees)	000 0-4 0-2 000 0-4 0-2 000 0-4 0-2 000 0-4 0-2 000 0-3 0-2 000 0-1 0-1	048 0-3 0-2 059 0-3 0-2 055 0-2 0-1 083 0-2 0-1 106 0-3 0-2 000 0-0 0-0
High Water	Rates at spring tides (knots)	180 0-1 0-1 180 0-4 0-2 180 0-6 0-4 180 0-6 0-4 180 0-4 0-2 000 0-1 0-0 000 0-4 0-2	215 0-3 0-2 253 0-3 0-2 277 0-2 0-1 238 0-3 0-2 246 0-2 0-1 000 0-0 0-0 064 0-2 0-1
After High Water	Rates at neap tides (knots)		

## 5610\_14A

### Tidal Streams referred to HW at GREENOCK

Hours	Geographical Position	A 55°15'10N 5 37-27W	B 55°24'80N 5 24-26W	C 55°16'60N 5 07-67W	D 55°21'20N 5 00-67W
Before High Water	Directions of streams (degrees)	095 2-5 1-5 093 3-2 2-0 091 3-3 2-0 088 2-5 1-6 076 0-5 0-3 282 1-0 0-6	343 0-5 0-3 359 0-6 0-3 003 0-5 0-3 010 0-4 0-3 032 0-3 0-2 094 0-2 0-1	055 0-2 0-1 067 0-3 0-2 075 0-4 0-2 090 0-4 0-3 100 0-4 0-2 107 0-3 0-2	231 0-1 0-0 353 0-1 0-1 005 0-3 0-2 354 0-3 0-2 354 0-4 0-3 005 0-4 0-3
High Water	Rates at spring tides (knots)	276 2-1 1-3 273 3-0 1-9 270 3-3 2-0 268 2-4 1-5 262 1-3 0-8 118 0-5 0-3 097 1-8 1-1	157 0-2 0-1 175 0-4 0-3 183 0-6 0-4 192 0-6 0-4 201 0-4 0-3 228 0-1 0-1 339 0-4 0-2	165 0-1 0-1 243 0-2 0-1 257 0-4 0-3 265 0-6 0-4 268 0-5 0-3 277 0-3 0-2 000 0-1 0-1	066 0-3 0-2 109 0-4 0-3 136 0-6 0-4 217 0-4 0-2 231 0-5 0-3 233 0-4 0-2 225 0-2 0-1
After High Water	Rates at neap tides (knots)				

## 5610\_15A

### Tidal Streams referred to HW at GREENOCK

Hours	Geographical Position	A 55°16'60N 5 07-67W	B 55°21'20N 5 00-67W
Before High Water	Directions of streams (degrees)	055 0-2 0-1 067 0-3 0-2 075 0-4 0-2 090 0-4 0-3 100 0-4 0-2 107 0-3 0-2	231 0-1 0-0 353 0-1 0-1 005 0-3 0-2 354 0-3 0-2 354 0-4 0-3 005 0-4 0-3
High Water	Rates at spring tides (knots)	165 0-1 0-1 243 0-2 0-1 257 0-4 0-3 265 0-6 0-4 268 0-5 0-3 277 0-3 0-2 000 0-1 0-1	066 0-3 0-2 109 0-4 0-3 136 0-6 0-4 217 0-4 0-2 231 0-5 0-3 233 0-4 0-2 225 0-2 0-1
After High Water	Rates at neap tides (knots)		

## 5610\_16

### Tidal Streams referred to HW at BELFAST

Hours	Geographical Position	A 55°16'6N 5 07-7W
Before High Water	Directions of streams (degrees)	274 0-3 0-2 330 0-1 0-1 062 0-2 0-1 071 0-3 0-2 081 0-4 0-2 094 0-4 0-2
High Water	Rates at spring tides (knots)	103 0-3 0-2 117 0-2 0-1 216 0-1 0-1 250 0-3 0-2 259 0-5 0-3 267 0-5 0-3 270 0-4 0-2
After High Water	Rates at neap tides (knots)	



## 5610\_17

### Tidal Streams referred to HW at GREENOCK

Hours	Geographical Position	A	B	C	D	E	F	G	H
		55°32'9"N 4 56-8W	55°27'2"N 6 04-8W	55°24'8"N 5 24-3W	55°22'9"N 6 06-0W	55°16'6"N 5 07-7W	55°15'1"N 5 37-3W	54°49'1"N 5 38-1W	54°48'0"N 5 17-1W
Before High Water	6 5 4 3 2 1	048 059 055 083 106 000	164 158 147 135 125 080	343 359 003 010 032 094	128 128 121 114 105 010	055 067 075 090 100 107	095 093 091 088 076 282	155 152 150 148 146 005	142 146 140 140 147 248
After High Water	1 2 3 4 5 6	215 253 277 238 246 000 064	344 320 313 323 335 320 172	157 175 183 192 201 228 339	301 298 300 303 302 290 130	165 243 257 265 268 277 000	276 273 270 268 262 118 097	336 335 333 333 332 255 157	305 312 321 332 342 033 134
		0.3 0.2 0.3 0.2 0.2 0.1 0.2 0.1 0.3 0.2 0.0 0.0 0.2 0.1	0.8 0.5 1.5 0.9 1.8 1.1 1.6 1.0 1.0 0.6 0.4 0.2 0.4 0.2	0.5 0.3 0.6 0.3 0.5 0.3 0.4 0.3 0.3 0.2 0.2 0.1 0.4 0.2	1.6 0.8 2.5 1.3 2.5 1.3 2.1 1.1 1.3 0.7 0.2 0.1 0.7 0.4	0.2 0.1 0.3 0.2 0.4 0.2 0.4 0.3 0.4 0.2 0.3 0.2 0.1 0.1	2.5 1.5 3.2 2.0 3.3 2.0 2.5 1.6 0.5 0.3 1.0 0.6 1.8 1.1	1.1 0.6 1.6 0.8 1.8 0.9 1.3 0.7 0.7 0.3 0.2 0.1 0.8 0.4	1.2 0.7 2.0 1.2 2.0 1.2 1.6 1.0 1.1 0.7 0.2 0.1 0.8 0.5

## 5610\_18A

### Tidal Streams referred to HW at GREENOCK

Hours	Geographical Position	A	B	C	D
		55°00'30"N 5 03-87W	54°58'50"N 5 02-07W	54°58'20"N 5 01-77W	54°57'90"N 5 01-47W
Before High Water	6 5 4 3 2 1	124 145 160 162 162 179	145 145 145 145 145 145	150 150 150 150 150 150	150 150 150 150 150 150
After High Water	1 2 3 4 5 6	264 315 333 340 347 023 113	000 300 300 300 300 300 145	000 330 330 330 330 330 150	000 340 340 340 340 340 150
		0.5 0.3 0.7 0.4 0.8 0.5 0.8 0.5 0.7 0.4 0.4 0.2 0.3 0.2	0.6 0.4 1.1 0.7 1.3 0.8 1.0 0.6 0.6 0.4 0.2 0.1 0.0 0.0	0.5 0.3 1.0 0.6 1.3 0.8 1.1 0.7 0.8 0.5 0.4 0.2 0.0 0.0	0.3 0.2 0.8 0.5 1.2 0.7 1.2 0.7 0.9 0.5 0.2 0.1 0.2 0.1

## 5610\_19

### Tidal Streams referred to HW at GREENOCK

Hours	Geographical Position	A	B	C	D	E
		55°39'9"N 5 25-3W	55°32'9"N 4 56-8W	55°24'8"N 5 24-3W	55°16'6"N 5 07-7W	55°15'1"N 5 37-3W
Before High Water	6 5 4 3 2 1	040 030 017 330 297 243	048 059 055 083 106 000	343 359 003 010 032 094	055 067 075 090 100 107	095 093 091 088 076 282
After High Water	1 2 3 4 5 6	225 215 205 194 121 062 044	215 253 277 238 246 000 064	157 175 183 192 201 228 339	165 243 257 265 268 277 000	276 273 270 268 262 118 097
		0.3 0.2 0.3 0.2 0.3 0.2 0.3 0.2 0.3 0.2 0.2 0.1 0.3 0.2	0.3 0.2 0.3 0.2 0.2 0.1 0.2 0.1 0.3 0.2 0.0 0.0 0.2 0.1	0.5 0.3 0.6 0.3 0.5 0.3 0.4 0.3 0.3 0.2 0.2 0.1 0.4 0.2	0.2 0.1 0.3 0.2 0.4 0.2 0.4 0.3 0.4 0.2 0.3 0.2 0.1 0.1	2.5 1.5 3.2 2.0 3.3 2.0 2.5 1.6 0.5 0.3 1.0 0.6 1.8 1.1

## SCOTLAND, WEST COAST

PLACE	Lat. N	Long. W	TIME DIFFERENCES				HEIGHT DIFFERENCES (IN METRES)			
			High Water	Low Water	Zone UT(GMT)		MHWS	MHWN	MLWN	MLWS
<b>GREENOCK</b> .....	<b>55 57</b>	<b>4 46</b>	<b>0000 and 1200</b>	<b>0600 and 1800</b>	<b>0000 and 1200</b>	<b>0600 and 1800</b>	<b>3.4</b>	<b>2.8</b>	<b>1.0</b>	<b>0.3</b>
<i>Firth of Clyde</i>										
Southend (Kintyre) .....	55 19	5 38	-0030	-0010	+0005	+0035	-1.3	-1.2	-0.5	-0.2
Carradale .....	55 36	5 28	-0015	-0005	-0005	+0005	-0.3	-0.2	+0.1	+0.1
Loch Ranza .....	55 43	5 18	-0015	-0005	-0010	-0005	-0.4	-0.3	-0.1	0.0
<i>Firth of Clyde (cont.)</i>										
Campbeltown .....	55 25	5 36	STANDARD PORT				See Table of NON-REFERENCE STANDARD PORTS			
<i>Loch Fyne</i>										
East Loch Tarbert, Loch Fyne .....	55 52	5 24	-0005	-0005	0000	-0005	+0.2	+0.1	0.0	0.0
Inveraray .....	56 14	5 04	+0011	+0011	+0034	+0034	-0.1	+0.1	-0.5	-0.2
<i>Kyles of Bute</i>										
Rubha a'Bhodaich .....	55 55	5 09	-0020	-0010	-0007	-0007	-0.2	-0.1	+0.2	+0.2
Tighnabruaich .....	55 55	5 13	+0007	-0010	-0002	-0015	0.0	+0.2	+0.4	+0.5
<i>Firth of Clyde (cont.)</i>										
Millport .....	55 45	4 56	STANDARD PORT				See Table of NON-REFERENCE STANDARD PORTS			
Rothesay Bay .....	55 50	5 03	-0020	-0015	-0010	-0002	+0.2	+0.2	+0.2	+0.2
Wemyss Bay .....	55 53	4 53	-0005	-0005	-0005	-0005	0.0	0.0	+0.1	+0.1
<i>Loch Long</i>										
Coulport .....	56 03	4 53	STANDARD PORT				See Table of NON-REFERENCE STANDARD PORTS			
Lochgailhead .....	56 10	4 54	+0015	0000	-0005	-0005	-0.2	-0.3	-0.3	-0.3
Arrochar .....	56 12	4 45	-0005	-0005	-0005	-0005	0.0	0.0	-0.1	-0.1
<i>Gare Loch</i>										
Rosneath .....	56 00	4 47	-0005	-0005	-0005	-0005	-0.1	-0.1	-0.1	-0.2
Rhu Marina .....	56 01	4 46	-0007	-0007	-0007	-0007	-0.1	-0.1	-0.1	-0.2
Faslane .....	56 04	4 49	+0003	+0003	+0003	+0003	+0.1	+0.1	+0.1	0.0
Garelochhead .....	56 05	4 50	0000	0000	0000	0000	0.0	0.0	0.0	-0.1
<i>River Clyde</i>										
Helensburgh .....	56 00	4 44	0000	0000	0000	0000	0.0	0.0	0.0	0.0
Port Glasgow .....	55 56	4 41	+0010	+0005	+0010	+0020	+0.2	+0.1	0.0	0.0
Bowling .....	55 56	4 29	+0020	+0010	+0030	+0055	+0.6	+0.5	+0.3	+0.1
Clydebank (Rothesay Dock) .....	55 54	4 24	+0025	+0015	+0035	+0100	+1.1	+0.9	+0.6	+0.3c
Glasgow .....	55 51	4 16	STANDARD PORT				See Table of NON-REFERENCE STANDARD PORTS			
<i>Firth of Clyde (cont.)</i>										
Brodick Bay .....	55 35	5 08	-0013	-0013	-0008	-0008	-0.2	-0.1	0.0	+0.1
Lamlash .....	55 32	5 07	-0016	-0036	-0024	-0004	-0.2	-0.2	⊙	⊙
Ardrossan .....	55 38	4 49	-0020	-0010	-0010	-0010	-0.2	-0.2	+0.1	+0.1
Irvine .....	55 36	4 42	-0020	-0020	-0030	-0010	-0.3	-0.3	-0.1	0.0
Troon .....	55 33	4 41	-0025	-0025	-0020	-0020	-0.2	-0.2	0.0	0.0
Ayr .....	55 28	4 39	-0025	-0025	-0030	-0015	-0.4	-0.3	+0.1	+0.1
Girvan .....	55 15	4 52	-0025	-0040	-0035	-0010	-0.3	-0.3	-0.1	0.0
<i>Loch Ryan</i>										
<b>STRANRAER</b> .....	<b>54 55</b>	<b>5 02</b>	STANDARD PORT				See Table of NON-REFERENCE STANDARD PORTS			

⊙ No data

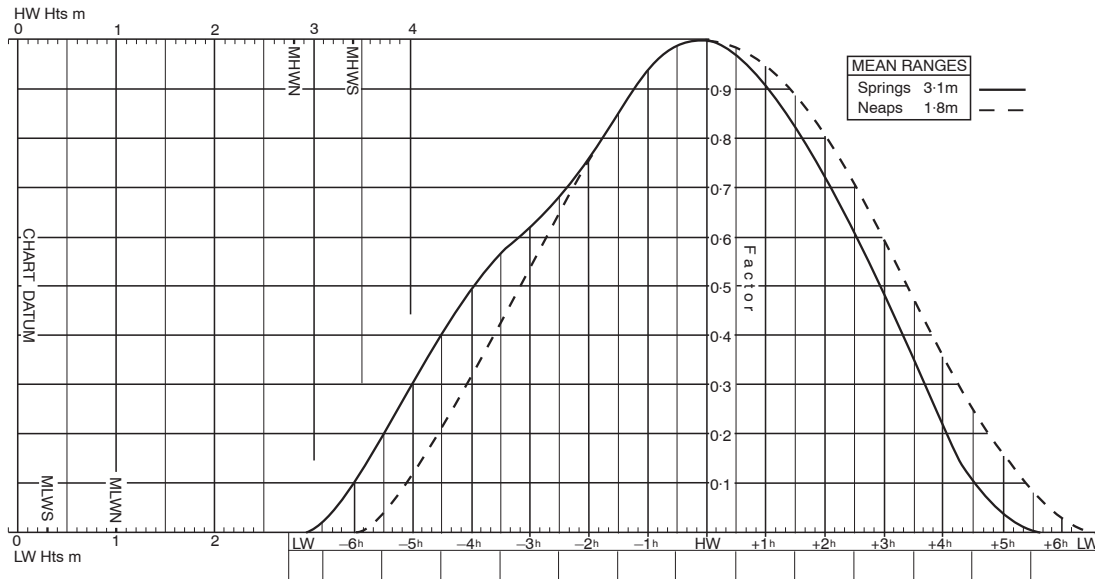
c For intermediate heights, use harmonic constants (see Admiralty Tide Table Vol I, Part III)

Non-Reference Standard Ports				
STANDARD PORT	MHWS	MHWN	MLWN	MLWS
CAMPBELTOWN	2.9	2.5	1.1	0.5
MILLPORT	3.4	2.7	1.0	0.4
COULPORT	3.4	2.8	1.0	0.3
GLASGOW	4.8	3.9	1.8	0.7
STRANRAER	3.2	2.7	1.0	0.4

## Tidal Curve Diagrams

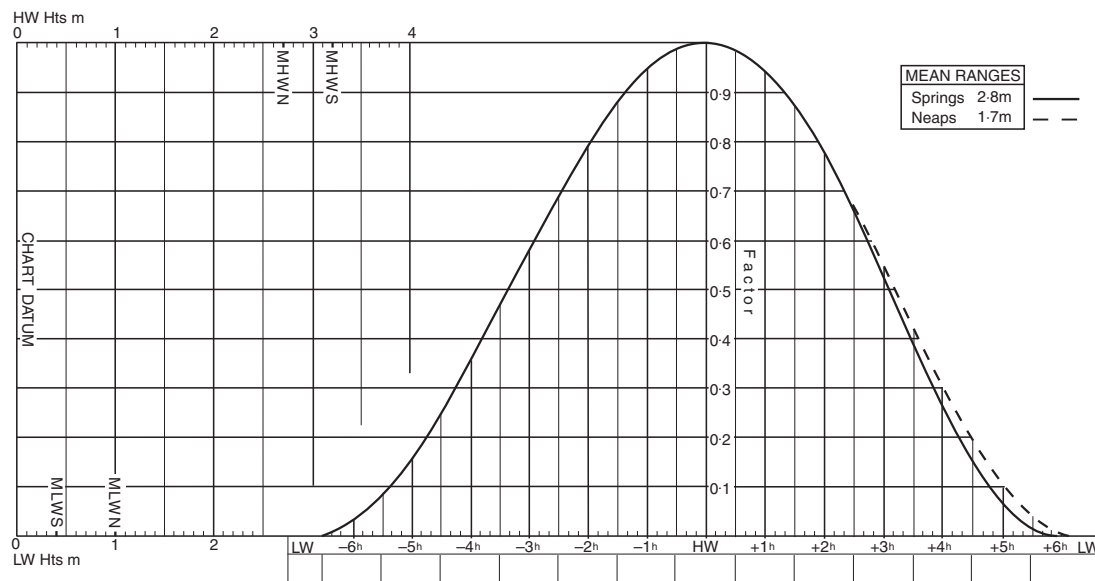
### GREENOCK

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



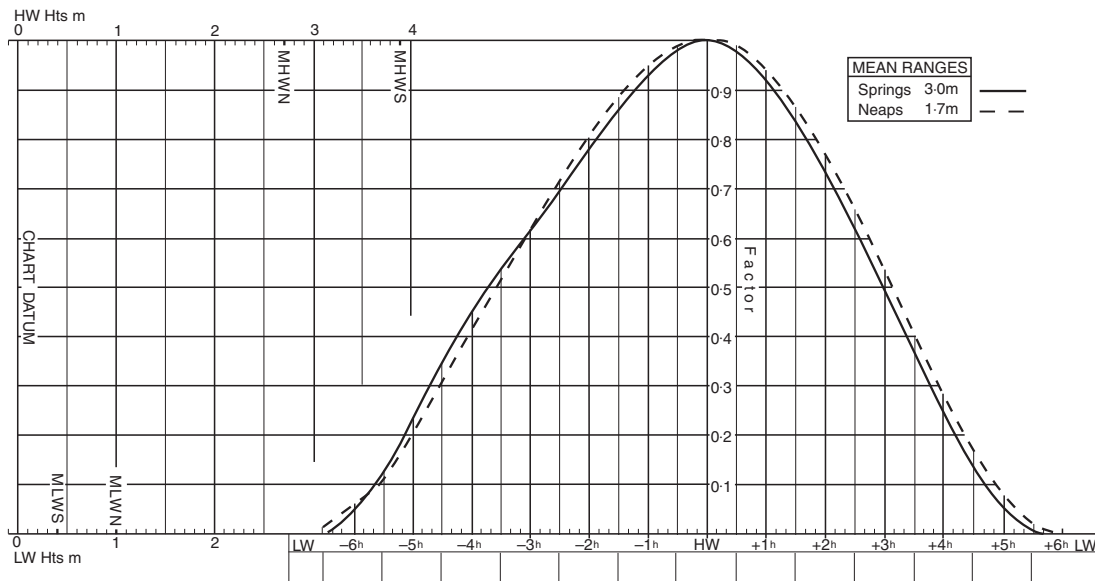
### STRANRAER

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



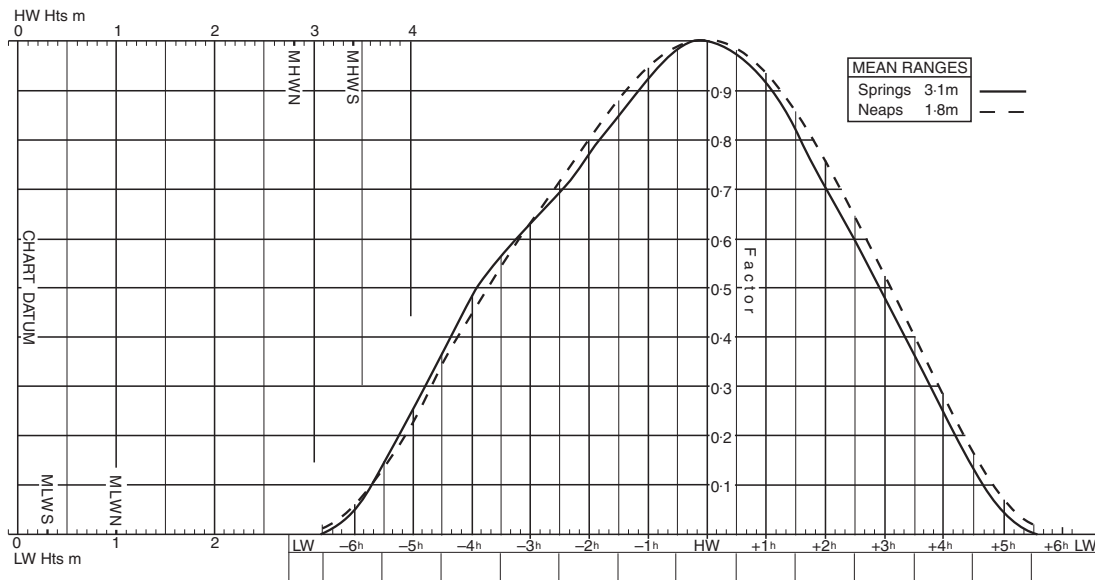
### MILLPORT

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



### COULPORT

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



# GLASGOW

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

