UK Hydrographic Office

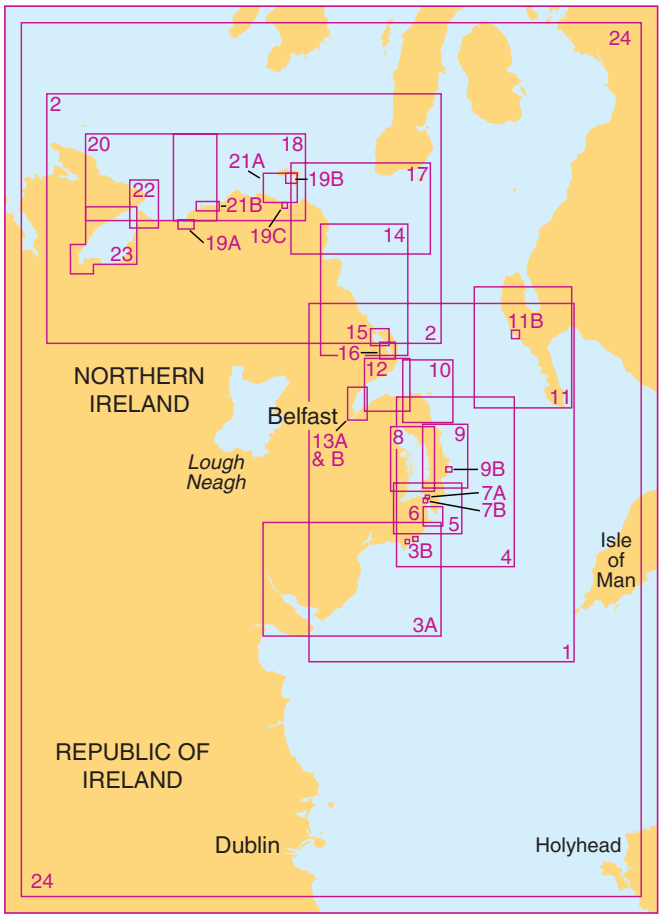
5612

Updated to September 2024

Version 1.0

Northern Ireland - Carlingford Lough to Lough Foyle

Coverage Diagram



5612	Chart Title	Natural Scale 1:
1	Southern Approaches to North Channel	200,000
2	Western Approaches to North Channel	200,000
3A	Carlingford Lough to Ardglass	100,000
3B	Ardglass and Killough Harbours	15,000
4	Ardglass to Donaghadee	100,000
5	Strangford Lough Entrance	37,500
6	Strangford Narrows - Southern Part	12,500
7A	Strangford Narrows - Northern Part	12,500
7B	Strangford	5,000

5612	Chart Title	Natural Scale 1:
8	Strangford Lough	37,500
9A	Portavogie to Ballywalter	37,500
9B	Portavogie	5,000
10A	Approaches to Donaghadee Sound	37,500
10B	Donaghadee Sound	15,000
11A	Mull of Galloway to Craig Laggan	75,000
11B	Portpatrick	4,000
12A	Belfast Lough Entrance	37,500
12B	Bangor Bay	17,500
12C	Carrickfergus Marina	15,000
13A	Approaches to Belfast	37,500
13B	Belfast	12,500
14A	Larne Lough to Cushendun Bay	75,000
15	Larne Lough Northern Part	10,000
16	Larne Lough Southern Part	10,000
17	North Channel Northern Entrance	75,000
18	Ballycastle to Portstewart including Rathlin Island	75,000
19A	River Bann to Coleraine	20,000
19B	Rathlin Harbour	2,500
19C	Ballycastle	2,500
20	Portrush to Culdaff including Entrance to Lough Foyle	75,000
21A	Rathlin Sound	37,500
21B	Approaches to Portrush	20,000
21C	Portrush	2,500
22A	Lough Foyle Entrance	25,000
22B	Continuation to Moville	25,000
23A	Lough Foyle	50,000
23B	Culmore Point to Ballynagard	15,000
23C	Ballynagard to Londonderry	15,000
24	North Channel and Irish Sea (Western Part)	500,000

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 these charts 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.

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 these charts. 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.

LADEN TANKERS

1. **North Channel** (55°20′N 6°00′W). Laden tankers of over 10 000 GT should avoid the area between the North Channel Traffic Separation Scheme and the adjacent coasts of Rathlin Island and the Mull of Kintyre. No laden tankers should use the narrow passage through Rathlin Sound.
2. **The Skerries** (53°25′N 4°37′W). Laden tankers should avoid the area between the Skerries Traffic Separation Scheme and the adjacent coast.

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.

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.

WETREP

Tankers of more than 600 dwt carrying heavy crude oil, heavy fuel oil or bitumen and tar and their emulsions are required to participate in the Western European Tanker Reporting System (WETREP). See ADMIRALTY List of Radio Signals for further details.

OIL AND GAS FIELDS

Production platforms and associated structures, including tanker moorings, storage tankers and platforms on pipelines, generally exhibit Mo(U) lights, aircraft obstruction lights, and audible fog signals. Unauthorised navigation is prohibited within 500 metres of all such structures.

UNEXPLODED ORDNANCE

Potentially hazardous unexploded ordnance is reported to exist on the seabed, both along the route of the gas pipeline (54°51′·3N 5°44′·9W to 54°58′·9N 5°10′·8W) and also in the areas indicated adjacent to the limits of the Beaufort's Dyke Explosives Dumping Ground (54°43′·0N 5°12′·6W). It is recommended that any activity which is likely to disturb the seabed should not be carried out in these areas.

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 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.

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.

SHELLFISH BEDS

Vessels should avoid grounding in areas of shellfish beds.

VESSEL REPORTING

For details of the following vessel traffic services, see ADMIRALTY List of Radio Signals:
- Belfast VTS
- Larne VTS.

MARINE NATURE RESERVE

To avoid the risk of pollution and damage to the environment, Strangford Lough and its approaches has been designated a Marine Nature Reserve. Further details can be found on the Northern Ireland Environment Agency website at www.ni-environment.gov.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
BELFAST COASTGUARD (MRCC)
Tel. +44 (0) 2891 463933
MMSI: 002320021
e-mail: 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 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 Atlases: NP218 North Coast of Ireland and West Coast of Scotland, NP 222 Firth of Clyde and Approaches and NP 256 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

Published by the UK Hydrographic Office, Admiralty Way, Taunton, United Kingdom 11th November 2021
T: +44 (0)1823 484444 Find out more at **admiralty.co.uk**

Tidal Stream Information

5612_1

Tidal Streams referred to HW at LIVERPOOL

Hours	Geographical Position		A 54°49′·1 N 5 38 ·0 W			B 54°48′·0 N 5 17 ·0 W			C 54°41′·7 N 5 28 ·1 W			D 54°35′·6 N 4 50 ·1 W			E 54°32′·2 N 5 25 ·4 W			F 54°24′·4 N 5 21 ·3 W			G 54°18′·5 N 5 27 ·3 W			
	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)																					
Before High Water 6				-6	238	0·2	0·1	060	0·4	0·3	126	2·8	1·9	226	0·7	0·4	160	0·8	0·5	173	0·4	0·2	225	0·4	0·3	-6
Before High Water 5				-5	162	0·8	0·4	130	1·1	0·6	136	3·4	2·3	108	1·4	0·8	160	1·9	1·0	174	0·9	0·5	206	0·8	0·5	-5
Before High Water 4				-4	153	1·4	0·8	144	1·8	1·0	133	3·3	2·2	085	3·5	1·9	160	2·4	1·3	176	1·3	0·7	209	0·8	0·5	-4
Before High Water 3				-3	151	1·8	0·9	141	2·0	1·2	125	3·0	2·0	085	4·4	2·4	160	2·1	1·1	180	1·3	0·7	221	0·5	0·3	-3
Before High Water 2				-2	148	1·5	0·7	140	1·7	1·0	116	2·3	1·6	087	4·2	2·3	160	1·4	0·8	182	0·9	0·4	250	0·3	0·2	-2
Before High Water 1				-1	149	1·0	0·5	149	1·2	0·7	064	1·2	0·8	090	2·9	1·6	160	0·3	0·2	187	0·4	0·2	306	0·2	0·1	-1
High Water				0	078	0·2	0·2	215	0·6	0·4	008	1·9	1·2	111	1·3	0·7	313	0·8	0·4	331	0·5	0·3	356	0·3	0·2	0
After High Water 1				+1	351	0·7	0·4	291	1·1	0·6	343	2·4	1·6	217	1·4	0·8	340	1·7	0·9	357	0·9	0·5	028	0·5	0·3	+1
After High Water 2				+2	335	1·4	0·7	311	1·9	1·1	345	2·7	1·8	245	2·9	1·7	340	2·3	1·3	358	1·3	0·7	045	0·7	0·4	+2
After High Water 3				+3	335	1·8	0·9	320	2·1	1·2	351	2·4	1·5	247	3·6	2·1	340	2·1	1·1	359	1·3	0·7	065	0·8	0·5	+3
After High Water 4				+4	333	1·6	0·8	330	1·7	1·0	359	1·5	1·0	244	3·2	1·8	340	1·6	0·8	000	1·0	0·5	050	0·7	0·4	+4
After High Water 5				+5	334	1·2	0·6	341	1·2	0·7	072	0·7	0·5	248	2·7	1·5	340	0·6	0·3	003	0·5	0·2	337	0·4	0·2	+5
After High Water 6				+6	318	0·3	0·2	025	0·4	0·3	119	2·0	1·3	241	1·2	0·7	187	0·5	0·3	145	0·2	0·1	249	0·3	0·2	+6

5612_2

Tidal Streams referred to HW at OBAN

Hours	Geographical Position		A 55°27′·8 N 7 09·6W			B 55°14′·0 N 6 54·0W			C 55°29′·7 N 6 51·4W		
	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)								
Before High Water 6				256	0·9	0·5	013	1·9	0·9	306	0·8	0·5
Before High Water 5				283	1·6	0·8	344	1·4	0·7	310	1·9	1·2
Before High Water 4				294	2·1	1·1	325	1·4	0·7	298	2·6	1·6
Before High Water 3				303	2·2	1·1	317	1·3	0·6	297	2·4	1·4
Before High Water 2				308	2·0	1·0	302	0·7	0·3	322	1·7	1·0
Before High Water 1				314	1·2	0·6	225	0·5	0·2	355	1·0	0·6
High Water				005	0·3	0·1	173	0·8	0·4	081	1·0	0·6
After High Water 1				100	1·3	0·7	155	1·3	0·7	112	1·9	1·1
After High Water 2				104	2·5	1·3	137	1·4	0·7	128	2·4	1·4
After High Water 3				111	2·8	1·5	101	1·4	0·7	138	2·2	1·3
After High Water 4				127	2·2	1·2	061	1·3	0·7	142	1·9	1·1
After High Water 5				143	1·3	0·7	040	1·7	0·8	150	1·1	0·6
After High Water 6				220	0·6	0·2	026	2·0	1·0	275	0·3	0·2

5612_2

Tidal Streams referred to HW at GREENOCK

Hours	Geographical Position		D 55°24′·4 N 6 28·3W			E 55°27′·2 N 6 04·8W			F 55°22′·9 N 6 06·0W			G 55°15′·1 N 5 37·3W			H 54°49′·1 N 5 38·1W		
	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)															
Before High Water 6				139	1·2	0·7	164	0·8	0·5	128	1·6	0·8	095	2·5	1·5	155	1·1	0·6
Before High Water 5				122	2·0	1·2	158	1·5	0·9	128	2·5	1·3	093	3·2	2·0	152	1·6	0·8
Before High Water 4				114	2·6	1·5	147	1·8	1·1	121	2·5	1·3	091	3·3	2·0	150	1·8	0·9
Before High Water 3				101	2·1	1·2	135	1·6	1·0	114	2·1	1·1	088	2·5	1·6	148	1·3	0·7
Before High Water 2				091	1·3	0·8	125	1·0	0·6	105	1·3	0·7	076	0·5	0·3	146	0·7	0·3
Before High Water 1				030	0·5	0·3	080	0·4	0·2	010	0·2	0·1	282	1·0	0·6	005	0·2	0·1
High Water				326	1·3	0·7	344	0·7	0·4	301	1·5	0·8	276	2·1	1·3	336	1·0	0·5
After High Water 1				304	1·8	1·0	320	1·3	0·8	298	2·5	1·3	273	3·0	1·9	335	1·5	0·8
After High Water 2				295	2·2	1·3	313	1·8	1·1	300	2·7	1·4	270	3·3	2·0	333	1·8	0·9
After High Water 3				287	2·5	1·5	323	1·7	1·0	303	2·4	1·2	268	2·4	1·5	333	1·4	0·7
After High Water 4				270	1·7	1·0	335	1·2	0·7	302	1·5	0·7	262	1·3	0·8	332	0·9	0·4
After High Water 5				226	0·9	0·5	320	0·5	0·3	290	0·5	0·3	118	0·5	0·3	255	0·1	0·1
After High Water 6				157	0·9	0·5	172	0·4	0·2	130	0·7	0·4	097	1·8	1·1	157	0·8	0·4

5612_4

Tidal Streams referred to HW at BELFAST

Hours	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	A 54°32′·21 N 5 25·47W		B 54°24′·41 N 5 21·37W		C 54°18′·51 N 5 27·37W	
Before High Water 6				160	0·5 0·2	172	0·2 0·1	238	0·3 0·2
Before High Water 5				160	1·6 0·8	174	0·8 0·4	201	0·8 0·5
Before High Water 4				160	2·3 1·2	174	1·2 0·6	206	0·9 0·6
Before High Water 3				160	2·3 1·2	178	1·4 0·7	214	0·6 0·4
Before High Water 2				160	1·8 0·9	182	1·2 0·6	232	0·4 0·2
Before High Water 1				160	0·7 0·3	183	0·6 0·3	278	0·2 0·1
High Water				340	0·4 0·2	352	0·1 0·1	353	0·2 0·1
After High Water 1				340	1·4 0·7	356	0·8 0·4	024	0·4 0·2
After High Water 2				340	2·2 1·1	357	1·2 0·6	039	0·6 0·3
After High Water 3				340	2·3 1·2	358	1·4 0·7	055	0·7 0·4
After High Water 4				340	1·9 0·9	359	1·2 0·6	070	0·8 0·5
After High Water 5				340	0·9 0·4	002	0·7 0·4	023	0·7 0·4
After High Water 6				160	0·1 0·1	020	0·1 0·1	265	0·4 0·3

5612_5

Tidal Streams referred to HW at BELFAST

Hours	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	A 54°18′·5N 5 27·3W		B 54°19′·8N 5 31·3W	C 54°21′·7N 5 32·6W
Before High Water 6				238	0·3 0·2		
Before High Water 5				201	0·8 0·5		
Before High Water 4				206	0·9 0·6	North-going stream begins 3½ hours before HW Belfast. Maximum Spring rate 4·9 knots.	Maximum Spring rate of north-going stream 7·8 knots.
Before High Water 3				214	0·6 0·4		
Before High Water 2				232	0·4 0·2		
Before High Water 1				278	0·2 0·1		
High Water				353	0·2 0·1		
After High Water 1				024	0·4 0·2		
After High Water 2				039	0·6 0·3	South-going stream begins 2½ hours after HW Belfast. Maximum Spring rate 7·6 knots.	Maximum Spring rate of south-going stream 7·2 knots.
After High Water 3				055	0·7 0·4		
After High Water 4				070	0·8 0·5		
After High Water 5				023	0·7 0·4		
After High Water 6				265	0·4 0·3		

5612_6

Tidal Streams referred to HW at BELFAST

Hours	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	A 54°19′·8N 5 31·3W
Before High Water 6				
Before High Water 5				
Before High Water 4				North-going stream begins 3½ hours before HW Belfast. Maximum Spring rate 4·9 knots.
Before High Water 3				
Before High Water 2				
Before High Water 1				
High Water				
After High Water 1				
After High Water 2				
After High Water 3				South-going stream begins 2½ hours after HW Belfast. Maximum Spring rate 7·6 knots.
After High Water 4				
After High Water 5				
After High Water 6				

5612_7A

Tidal Streams referred to HW at BELFAST

Hours	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	A 54°21′·7N 5 32·6W
Before High Water 6				
Before High Water 5				
Before High Water 4				Maximum Spring rate of north-going stream 7·8 knots.
Before High Water 3				
Before High Water 2				
Before High Water 1				
High Water				
After High Water 1				
After High Water 2				
After High Water 3				Maximum Spring rate of south-going stream 7·2 knots.
After High Water 4				
After High Water 5				
After High Water 6				

5612_9A

Tidal Streams referred to HW at BELFAST

Hours	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	A 54°24′·4N 5 21·4W		B 54°32′·2N 5 25·5W	
Before High Water 6				172	0·2 0·1	160	0·5 0·2
Before High Water 5				174	0·8 0·4	160	1·6 0·8
Before High Water 4				174	1·2 0·6	160	2·3 1·2
Before High Water 3				178	1·4 0·7	160	2·3 1·2
Before High Water 2				182	1·2 0·6	160	1·8 0·9
Before High Water 1				183	0·6 0·3	160	0·7 0·3
High Water				352	0·1 0·1	340	0·4 0·2
After High Water 1				356	0·8 0·4	340	1·4 0·7
After High Water 2				357	1·2 0·6	340	2·2 1·1
After High Water 3				358	1·4 0·7	340	2·3 1·2
After High Water 4				359	1·2 0·6	340	1·9 0·9
After High Water 5				002	0·7 0·4	340	0·9 0·4
After High Water 6				020	0·1 0·1	160	0·1 0·1

5612_10A

Tidal Streams referred to HW at BELFAST *Current included

Hours	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	A 54°42′·80 N 5 37·36W		B *54°42′·00 N 5 35·46W		C *54°41′·40 N 5 33·96W		D 54°39′·90 N 5 32·76W		E 54°41′·30 N 5 31·76W		F *54°38′·90 N 5 31·16W		
Before High Water 6				125	0·3 0·2	060	0·7 0·4	116	1·1 0·6	123	1·4 0·8	114	1·7 1·1	152	1·1 0·7	-6
Before High Water 5				133	0·6 0·4	072	1·1 0·7	115	1·3 0·8	125	3·0 1·9	116	2·3 1·4	175	1·1 0·7	-5
Before High Water 4				139	0·8 0·6	084	1·1 0·7	115	1·4 0·8	124	2·5 1·5	119	2·4 1·4	286	0·6 0·4	-4
Before High Water 3				144	0·9 0·6	095	1·1 0·7	114	1·3 0·8	122	2·0 1·2	122	2·3 1·3	334	0·7 0·4	-3
Before High Water 2				138	0·6 0·4	098	1·0 0·6	110	1·1 0·6	115	1·1 0·7	126	0·8 0·5	348	0·8 0·5	-2
Before High Water 1				156	0·2 0·2	083	0·7 0·4	071	0·5 0·3	082	0·3 0·2	296	1·0 0·6	355	0·9 0·6	-1
High Water				289	0·4 0·3	350	0·1 0·1	022	0·5 0·3	316	0·8 0·5	295	1·4 0·8	002	0·9 0·5	0
After High Water 1				317	0·8 0·5	326	0·8 0·5	325	0·5 0·3	299	2·7 1·7	293	2·2 1·3	357	0·7 0·4	+1
After High Water 2				321	0·9 0·6	313	1·3 0·8	264	0·5 0·3	296	3·0 1·9	293	2·5 1·5	340	0·8 0·5	+2
After High Water 3				322	0·8 0·5	311	1·2 0·7	158	0·6 0·3	298	2·2 1·4	295	2·0 1·2	337	1·4 0·8	+3
After High Water 4				320	0·5 0·3	349	0·7 0·5	131	0·8 0·5	302	1·3 0·8	301	0·8 0·5	354	1·3 0·8	+4
After High Water 5				342	0·1 0·1	030	0·7 0·4	124	0·9 0·6	312	0·2 0·1	097	0·7 0·4	028	0·5 0·3	+5
After High Water 6				115	0·2 0·1	053	0·7 0·4	118	1·0 0·6	123	0·9 0·6	109	1·4 0·8	141	0·8 0·5	+6

5612_10B

Tidal Streams referred to HW at BELFAST

Hours	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	D 54°39′·90 N 5 32·76W	
Before High Water 6				123	1·4 0·8
Before High Water 5				125	3·0 1·9
Before High Water 4				124	2·5 1·5
Before High Water 3				122	2·0 1·2
Before High Water 2				115	1·1 0·7
Before High Water 1				082	0·3 0·2
High Water				316	0·8 0·5
After High Water 1				299	2·7 1·7
After High Water 2				296	3·0 1·9
After High Water 3				298	2·2 1·4
After High Water 4				302	1·3 0·8
After High Water 5				312	0·2 0·1
After High Water 6				123	0·9 0·6

5612_11A

Tidal Streams referred to HW at BELFAST

Hours	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	A 54°48′·0 N 5 17·1W	
Before High Water 6				021	0·3 0·2
Before High Water 5				134	0·8 0·5
Before High Water 4				146	1·6 1·0
Before High Water 3				141	2·2 1·3
Before High Water 2				139	1·7 1·1
Before High Water 1				141	1·5 1·0
High Water				162	0·5 0·3
After High Water 1				298	0·8 0·5
After High Water 2				309	1·7 1·1
After High Water 3				317	2·3 1·4
After High Water 4				326	1·8 1·1
After High Water 5				338	1·4 0·9
After High Water 6				345	0·7 0·4

5612_12A

Tidal Streams referred to HW at BELFAST

Hours	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	A 54°44′·10 N 5 42·26W		B 54°42′·50 N 5 41·76W		C 54°42′·80 N 5 37·36W	
Before High Water 6				202	0·4 0·2	152	0·2 0·1	125	0·3 0·2
Before High Water 5				212	0·8 0·5	170	0·3 0·2	133	0·6 0·4
Before High Water 4				214	0·9 0·6	178	0·4 0·2	139	0·8 0·6
Before High Water 3				221	0·6 0·4	180	0·2 0·1	144	0·9 0·6
Before High Water 2				226	0·3 0·2	218	0·1 0·1	138	0·6 0·4
Before High Water 1					0·0 0·0	272	0·1 0·1	156	0·2 0·2
High Water				031	0·5 0·3	308	0·1 0·1	289	0·4 0·3
After High Water 1				032	0·8 0·5	332	0·2 0·1	317	0·8 0·5
After High Water 2				033	0·8 0·5	353	0·3 0·2	321	0·9 0·6
After High Water 3				035	0·6 0·4	000	0·3 0·2	322	0·8 0·5
After High Water 4				046	0·3 0·2	020	0·2 0·1	320	0·5 0·3
After High Water 5				107	0·1 0·1	058	0·2 0·1	342	0·1 0·1
After High Water 6				193	0·3 0·2	128	0·1 0·1	115	0·2 0·1

5612_14 Tidal Streams referred to HW at BELFAST

Hours	Geographical Position	A 55°08′8 N 6 00·6W		B 54°52′1 N 5 47·4W		C 54°49′1 N 5 38·1W	
	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)				
Before High Water 6		175	0·9 0·6	100	0·2 0·1	255	0·1 0·1
Before High Water 5		171	3·1 2·1	126	0·8 0·6	157	0·8 0·4
Before High Water 4		167	3·1 2·2	131	1·3 0·9	152	1·4 0·7
Before High Water 3		170	1·2 0·9	135	1·1 0·8	152	1·8 0·9
Before High Water 2		004	1·1 0·8	132	0·8 0·6	148	1·6 0·8
Before High Water 1		356	2·3 1·6	124	0·3 0·2	149	1·1 0·6
High Water		356	2·8 2·0	304	0·3 0·2	120	0·2 0·1
After High Water 1		358	3·4 2·4	304	0·7 0·5	340	0·7 0·4
After High Water 2		359	3·7 2·6	302	1·3 0·9	335	1·4 0·7
After High Water 3		359	4·0 2·8	306	0·9 0·7	336	1·8 0·9
After High Water 4		352	3·3 2·3	312	0·7 0·5	333	1·6 0·8
After High Water 5		359	1·8 1·3	332	0·4 0·3	334	1·2 0·6
After High Water 6		132	0·2 0·1	000	0·2 0·2	325	0·4 0·2

5612_15 Tidal Streams referred to HW at BELFAST

Hours	Geographical Position	A 54°51′35 N 5 47·53W		B 54°50′77 N 5 47·61W		C 54°50′55 N 5 47·73W		D 54°50′55 N 5 47·54W		E 54°50′47 N 5 47·27W		
	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)									
Before High Water 6			0·0 0·0	166	0·2 0·1		0·0 0·0	288	0·1 0·1	318	0·1 0·0	-6
Before High Water 5		200	0·4 0·3	172	0·8 0·6	162	0·4 0·3	147	0·3 0·2	127	0·7 0·5	-5
Before High Water 4		202	0·5 0·4	174	1·2 0·9	164	0·7 0·5	145	0·7 0·5	120	0·7 0·5	-4
Before High Water 3		203	0·7 0·5	173	1·3 0·9	167	0·8 0·6	149	1·0 0·8	115	0·6 0·4	-3
Before High Water 2		198	0·7 0·5	171	1·5 1·1	169	0·7 0·5	148	0·9 0·6	357	0·1 0·1	-2
Before High Water 1		206	0·4 0·3	186	1·0 0·7	169	0·4 0·3	156	0·4 0·3	359	0·1 0·1	-1
High Water		246	0·1 0·1	196	0·1 0·1	160	0·1 0·1	169	0·1 0·1	339	0·2 0·1	0
After High Water 1		350	0·2 0·1	001	0·4 0·3	012	0·2 0·1	009	0·1 0·1	331	0·6 0·4	+1
After High Water 2		006	0·7 0·5	009	1·0 0·7	004	0·6 0·4	001	0·4 0·3	329	0·8 0·6	+2
After High Water 3		013	1·4 1·0	011	1·2 0·9	357	0·7 0·5	000	0·6 0·4	327	0·8 0·6	+3
After High Water 4		008	1·8 1·3	001	1·4 1·0	000	0·7 0·5	346	0·6 0·5	318	1·1 0·8	+4
After High Water 5		012	1·7 1·2	353	1·0 0·8	336	0·5 0·3	343	0·6 0·4	297	1·2 0·9	+5
After High Water 6		008	0·7 0·5		0·0 0·0	333	0·2 0·2	314	0·1 0·1	313	0·4 0·3	+6

5612_17 Tidal Streams referred to HW at BELFAST

Hours	Geographical Position	A 55°12′3 N 6 02·3W		B 55°08′8 N 6 00·6W		C 55°15′1 N 5 37·3W	
	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)				
Before High Water 6		148	1·2 0·8	175	0·9 0·6	243	0·5 0·3
Before High Water 5		150	3·6 2·5	171	3·1 2·1	100	1·5 0·9
Before High Water 4		148	4·4 3·1	167	3·1 2·2	095	2·9 1·8
Before High Water 3		148	4·3 3·0	170	1·2 0·9	092	3·4 2·1
Before High Water 2		148	3·4 2·3	004	1·1 0·8	090	3·1 1·9
Before High Water 1		151	1·6 1·1	356	2·3 1·6	087	1·6 1·0
High Water		323	0·7 0·5	356	2·8 2·0	065	0·3 0·2
After High Water 1		327	2·8 1·9	358	3·4 2·4	283	1·0 0·6
After High Water 2		328	4·2 2·9	359	3·7 2·6	277	2·1 1·3
After High Water 3		329	4·6 3·1	359	4·0 2·8	274	2·9 1·8
After High Water 4		331	4·0 2·7	352	3·3 2·3	270	3·1 1·9
After High Water 5		328	2·5 1·7	359	1·8 1·3	268	2·3 1·4
After High Water 6			0·0 0·0	132	0·2 0·1	262	1·1 0·7

5612_18 Tidal Streams referred to HW at OBAN

Hours	Geographical Position	A 55°24′·4N 6 28·3W	
	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)
Before High Water 6		**341**	1·0 0·5
Before High Water 5		**312**	1·6 0·9
Before High Water 4		**296**	2·0 1·2
Before High Water 3		**294**	2·4 1·5
Before High Water 2		**277**	2·0 1·2
Before High Water 1		**255**	1·1 0·6
High Water		**183**	0·8 0·4
After High Water 1		**134**	1·3 0·7
After High Water 2		**121**	2·1 1·2
After High Water 3		**111**	2·6 1·5
After High Water 4		**099**	2·0 1·2
After High Water 5		**088**	1·1 0·6
After High Water 6		**010**	0·6 0·4

5612_20 Tidal Streams referred to HW at OBAN

Hours	Geographical Position	A 55°11′9 N 6 58·6W		B 55°14′·0N 6 54·0W	
	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)		
Before High Water 6		057	2·6 1·3	**013**	1·9 0·9
Before High Water 5		053	1·7 0·8	**344**	1·4 0·7
Before High Water 4		045	0·2 0·1	**325**	1·4 0·7
Before High Water 3		240	1·4 0·6	**317**	1·3 0·6
Before High Water 2		247	2·6 1·3	**302**	0·7 0·3
Before High Water 1		249	3·2 1·6	**225**	0·5 0·2
High Water		244	3·5 1·7	**173**	0·8 0·4
After High Water 1		240	2·4 1·2	**155**	1·3 0·7
After High Water 2		180	0·2 0·1	**137**	1·4 0·7
After High Water 3		070	2·0 0·9	**101**	1·4 0·7
After High Water 4		068	3·0 1·5	**061**	1·3 0·7
After High Water 5		067	3·3 1·6	**040**	1·7 0·8
After High Water 6		062	2·8 1·4	**026**	2·0 1·0

5612_22A Tidal Streams referred to HW at RIVER FOYLE (LISAHALLY)

Hours	Geographical Position	A 55°14′00 N 6 53·95W		B 55°11′90 N 6 58·65W	
	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)		
Before High Water 6		325	1·4 0·7	253	0·1 0·0
Before High Water 5		317	1·3 0·6	242	1·7 0·8
Before High Water 4		298	0·7 0·4	247	2·9 1·4
Before High Water 3		238	0·5 0·2	249	3·2 1·6
Before High Water 2		177	0·8 0·4	245	3·4 1·7
Before High Water 1		154	1·2 0·6	240	2·3 1·2
High Water		135	1·4 0·7	155	1·3 0·7
After High Water 1		100	1·4 0·7	072	1·9 0·9
After High Water 2		061	1·4 0·6	069	2·9 1·4
After High Water 3		040	1·7 0·8	067	3·2 1·6
After High Water 4		024	1·9 1·0	061	2·8 1·4
After High Water 5		355	1·6 0·8	055	2·1 1·1
After High Water 6		332	1·3 0·6	153	0·8 0·4

5612_22B Tidal Streams referred to HW at RIVER FOYLE (LISAHALLY)

Hours	Geographical Position	G 55°10'·70N 7 02·45W		D 55°10'·10N 7 03·15W	
	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)		
Before High Water 6			0·0 0·0	055	0·8 0·4
Before High Water 5		247	0·9 0·4	145	0·4 0·2
Before High Water 4		246	1·7 0·8	235	0·8 0·4
Before High Water 3		244	2·1 1·0	235	1·5 0·7
Before High Water 2		246	2·3 1·1	233	1·7 0·9
Before High Water 1		245	1·7 0·9	231	1·6 0·8
High Water		155	0·8 0·4	231	1·1 0·5
After High Water 1		067	0·8 0·4	147	0·6 0·3
After High Water 2		064	1·5 0·7	057	0·9 0·5
After High Water 3		063	2·0 1·0	052	1·7 0·8
After High Water 4		065	2·3 1·1	052	1·8 0·9
After High Water 5		068	2·0 1·0	054	1·5 0·8
After High Water 6		069	0·8 0·4	055	1·1 0·6

5612_23A Tidal Streams referred to HW at RIVER FOYLE (LISAHALLY)

Hours	Geographical Position	A 55°11'·90N 6 58·65W		B 55°10'·70N 7 02·45W		C 55°10'·10N 7 03·15W		D 55°09'·20N 7 06·25W	
	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)						
Before High Water 6		253	0·1 0·0		0·0 0·0	055	0·8 0·4		0·0 0·0
Before High Water 5		242	1·7 0·8	247	0·9 0·4	145	0·4 0·2	213	0·6 0·3
Before High Water 4		247	2·9 1·4	246	1·7 0·8	235	0·8 0·4	217	1·2 0·6
Before High Water 3		249	3·2 1·6	244	2·1 1·0	235	1·5 0·7	218	1·3 0·6
Before High Water 2		245	3·4 1·7	246	2·3 1·1	233	1·7 0·9	216	1·3 0·6
Before High Water 1		240	2·3 1·2	245	1·7 0·9	231	1·6 0·8	225	1·0 0·5
High Water		155	1·3 0·7	155	0·8 0·4	231	1·1 0·5	123	0·5 0·2
After High Water 1		072	1·9 0·9	067	0·8 0·4	147	0·6 0·3	023	0·5 0·2
After High Water 2		069	2·9 1·4	064	1·5 0·7	057	0·9 0·5	037	1·0 0·5
After High Water 3		067	3·2 1·6	063	2·0 1·0	052	1·7 0·8	038	1·4 0·7
After High Water 4		061	2·8 1·4	065	2·3 1·1	052	1·8 0·9	041	1·5 0·7
After High Water 5		055	2·1 1·1	068	2·0 1·0	054	1·5 0·8	040	1·2 0·6
After High Water 6		153	0·8 0·4	069	0·8 0·4	055	1·1 0·6	038	0·5 0·3

5612_23B Tidal Streams referred to HW at RIVER FOYLE (LISAHALLY)

Hours	Geographical Position	E 55°02'·70N 7 15·25W		F 55°02'·60N 7 15·75W	
	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)		
Before High Water 6		089	0·9 0·4	047	1·0 0·5
Before High Water 5		180	0·6 0·3	137	0·5 0·2
Before High Water 4		240	1·1 0·5	229	1·0 0·5
Before High Water 3		239	1·6 0·7	225	1·4 0·7
Before High Water 2		231	1·7 0·8	229	1·3 0·7
Before High Water 1		238	1·3 0·6	234	1·3 0·6
High Water		290	0·7 0·3	230	0·8 0·4
After High Water 1		200	0·8 0·4	142	0·6 0·3
After High Water 2		072	1·3 0·6	053	1·7 0·8
After High Water 3		075	1·7 0·8	052	2·1 1·1
After High Water 4		072	1·7 0·8	051	1·8 0·9
After High Water 5		075	1·4 0·7	045	1·7 0·9
After High Water 6		085	1·1 0·5	045	1·3 0·7

5612_23C Tidal Streams referred to HW at RIVER FOYLE (LISAHALLY)

Hours	Geographical Position	G 55°00'·80N 7 17·55W		H 55°00'·70N 7 17·95W	
	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)		
Before High Water 6		042	1·1 0·6	085	1·6 0·8
Before High Water 5		134	0·6 0·3	097	1·0 0·5
Before High Water 4		216	0·7 0·3	187	0·6 0·3
Before High Water 3		208	1·3 0·6	262	1·1 0·5
Before High Water 2		210	1·4 0·7	256	1·2 0·6
Before High Water 1		208	1·4 0·7	253	0·9 0·5
High Water		213	1·1 0·6	233	0·6 0·3
After High Water 1		163	0·7 0·3	163	0·4 0·2
After High Water 2		079	0·9 0·4	105	0·9 0·4
After High Water 3		052	1·4 0·7	096	1·5 0·7
After High Water 4		053	1·4 0·7	091	1·6 0·8
After High Water 5		049	1·3 0·6	088	1·7 0·8
After High Water 6		043	1·2 0·6	086	1·7 0·9

5612_24 Tidal Streams referred to HW at DOVER

Hours	Geographical Position	A 55°34'·2N 7 07·2W		B 55°24'·4N 6 28·2W		C 55°22'·9N 6 05·9W		D 55°15'·1N 5 37·2W		E 54°49'·1N 5 38·0W		F 54°48'·0N 5 17·0W		G 54°31'·6N 4 36·8W		H 54°24'·4N 5 21·3W		J 53°40'·2N 5 09·3W	
	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)																
Before High Water 6		**018**	0·5 0·3	**218**	0·8 0·4	**284**	0·2 0·1	**201**	0·3 0·2	**214**	0·1 0·1	**077**	0·2 0·1	**197**	0·4 0·2	**174**	0·4 0·2	**231**	1·0 0·5
Before High Water 5		**112**	0·9 0·5	**153**	1·0 0·5	**128**	1·2 0·6	**096**	2·0 1·2	**157**	0·9 0·5	**138**	1·0 0·6	**100**	1·3 0·8	**175**	0·9 0·5	**275**	0·5 0·3
Before High Water 4		**133**	1·8 1·1	**124**	1·7 1·0	**129**	2·4 1·2	**093**	3·3 2·0	**152**	1·5 0·8	**146**	1·9 1·1	**093**	2·8 1·6	**176**	1·3 0·7	**350**	0·6 0·3
Before High Water 3		**141**	2·6 1·6	**119**	2·5 1·5	**124**	2·7 1·3	**091**	3·4 2·1	**152**	1·8 0·9	**140**	2·2 1·2	**091**	3·4 1·9	**180**	1·4 0·8	**025**	1·3 0·7
Before High Water 2		**155**	2·2 1·4	**104**	2·4 1·4	**117**	2·4 1·2	**089**	3·0 1·8	**148**	1·5 0·8	**140**	1·8 1·0	**091**	2·9 1·7	**182**	1·1 0·6	**033**	1·9 1·0
Before High Water 1		**163**	1·6 1·0	**094**	1·7 1·0	**109**	1·6 0·8	**085**	1·3 0·8	**149**	1·0 0·5	**143**	1·4 0·8	**092**	1·6 0·9	**185**	0·4 0·2	**039**	1·7 0·9
High Water		**190**	0·8 0·5	**074**	0·6 0·4	**085**	0·4 0·2	**000**	0·2 0·1	**099**	0·1 0·1	**182**	0·4 0·2	**177**	0·4 0·2	**354**	0·3 0·2	**043**	1·1 0·6
After High Water 1		**306**	0·9 0·5	**337**	1·1 0·5	**305**	1·1 0·6	**278**	1·4 0·8	**339**	0·8 0·4	**301**	1·0 0·6	**243**	1·7 1·0	**356**	0·9 0·5	**130**	0·1 0·1
After High Water 2		**325**	1·8 1·1	**310**	1·6 0·9	**298**	2·4 1·2	**275**	2·4 1·5	**335**	1·4 0·7	**311**	2·0 1·1	**247**	3·0 1·7	**357**	1·3 0·7	**207**	0·6 0·3
After High Water 3		**322**	2·3 1·4	**295**	2·1 1·3	**298**	2·8 1·4	**272**	3·3 2·0	**336**	1·8 0·9	**320**	2·3 1·3	**251**	3·4 1·9	**358**	1·4 0·8	**213**	1·2 0·6
After High Water 4		**325**	2·2 1·3	**294**	2·4 1·5	**301**	2·6 1·3	**270**	3·1 1·9	**333**	1·6 0·8	**330**	1·8 1·0	**252**	3·0 1·7	**358**	1·1 0·6	**215**	1·5 0·8
After High Water 5		**335**	1·5 0·9	**276**	2·0 1·2	**303**	1·9 0·9	**267**	2·2 1·3	**334**	1·2 0·6	**341**	1·3 0·7	**251**	2·0 1·1	**002**	0·6 0·3	**218**	1·7 0·9
After High Water 6		**353**	0·9 0·5	**251**	1·1 0·6	**300**	0·8 0·4	**255**	0·8 0·5	**320**	0·3 0·2	**356**	0·5 0·3	**232**	0·7 0·4	**171**	0·1 0·0	**223**	1·4 0·7

5612_24 continued

K 53°28'·5N 4 45·1W		L 53°26'·0N 5 33·0W		
205	0·3 0·2	**211**	0·2 0·1	-6
055	1·5 0·8	**345**	1·0 0·4	-5
050	3·2 1·6	**351**	1·9 0·8	-4
046	3·8 1·9	**350**	2·3 1·0	-3
049	3·0 1·5	**349**	1·9 0·9	-2
053	1·6 0·8	**353**	1·3 0·6	-1
125	0·1 0·1	**011**	0·3 0·1	0
226	1·5 0·8	**160**	0·7 0·3	+1
231	2·9 1·5	**169**	1·6 0·7	+2
231	3·7 1·8	**170**	2·2 1·0	+3
230	2·9 1·5	**170**	2·3 1·0	+4
228	1·9 0·9	**174**	1·6 0·7	+5
223	0·8 0·4	**183**	0·5 0·2	+6

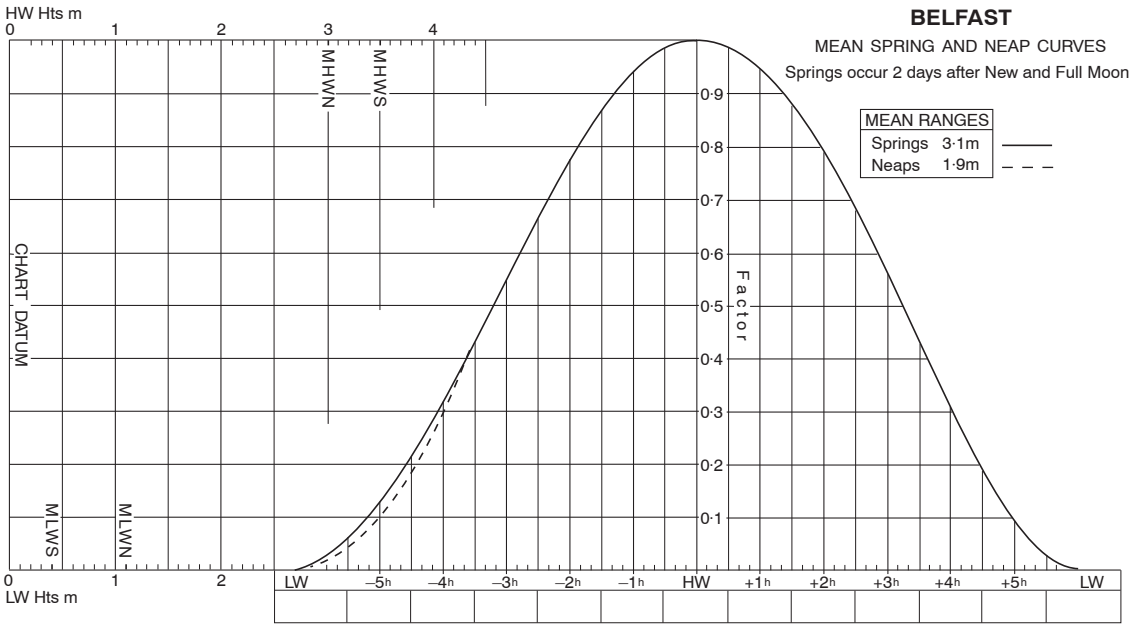
TIME & HEIGHT DIFFERENCES FOR PREDICTING THE TIDE AT SECONDARY PORTS

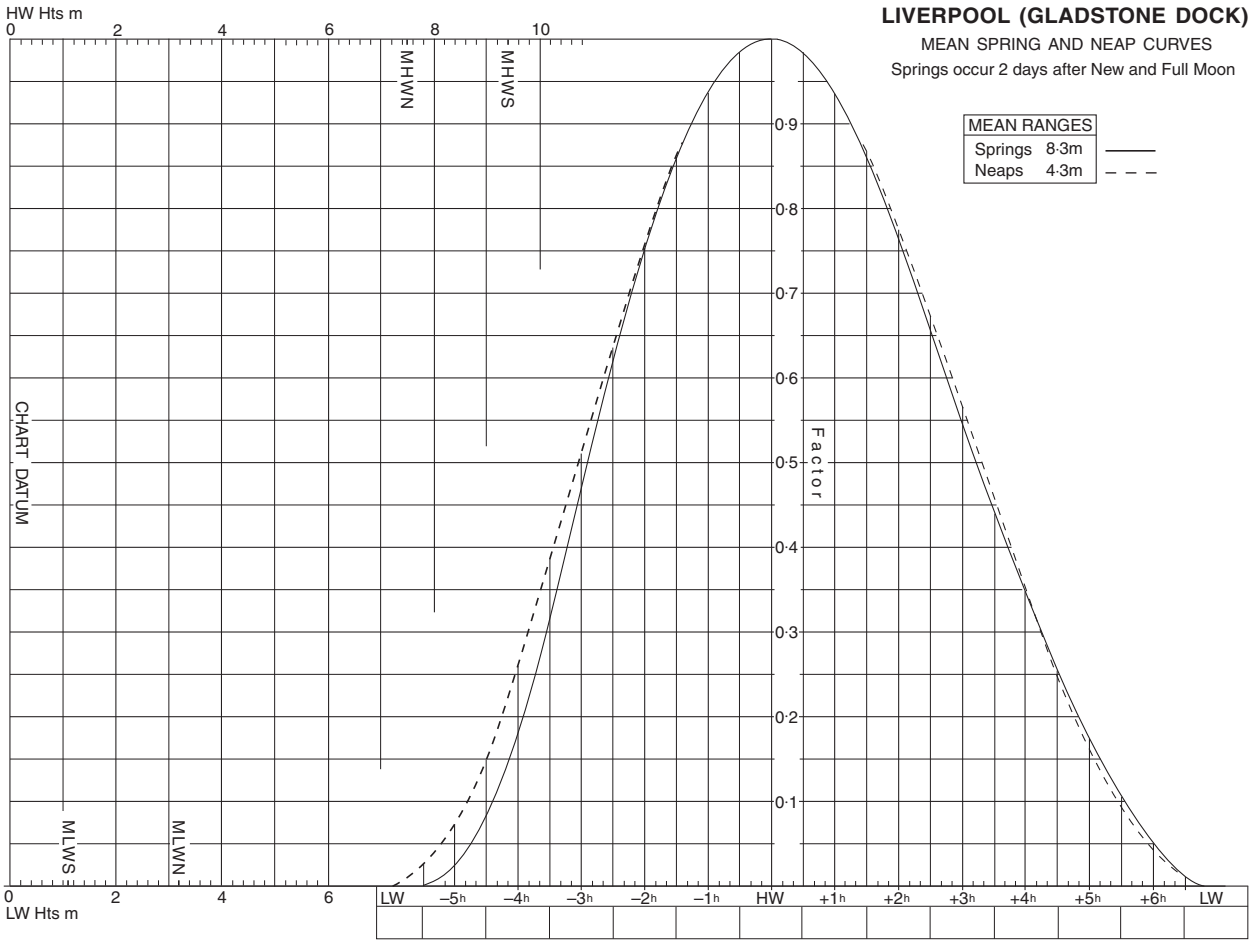
PLACE	Lat. N	Long. W	TIME DIFFERENCES High Water	TIME DIFFERENCES Low Water			HEIGHT DIFFERENCES (IN METRES) MHWS	MHWN	MLWN	MLWS
			Zone UT(GMT)							
BELFAST	**54 36**	**5 55**	**0100 and 1300**	**0700 and 1900**	**0000 and 1200**	**0600 and 1800**	**3.5**	**3.0**	**1.1**	**0.4**
NORTHERN IRELAND										
Kilkeel	54 03	5 59	+0040	+0030	+0010	+0010	+1.2	+1.1	+0.4	+0.4
Newcastle	54 12	5 53	+0025	+0035	+0020	+0040	+1.6	+1.1	+0.4	+0.1
Killough Harbour	54 15	5 38	0000	+0020	⊙	⊙	+1.8	+1.6	⊙	⊙
Ardglass	54 16	5 36	+0010	+0015	+0005	+0010	+1.7	+1.2	+0.6	+0.3
Strangford Lough										
Killard Point	54 19	5 31	+0011	+0021	+0005	+0025	+1.0	+0.8	+0.1	+0.1
Strangford	54 22	5 33	+0147	+0157	+0148	+0208	+0.1	+0.1	-0.2	0.0
Quoile Barrier	54 22	5 41	+0150	+0200	+0150	+0300	+0.2	+0.2	-0.3	-0.1
Killyleagh	54 24	5 39	+0157	+0207	+0211	+0231	+0.3	+0.3	⊙	⊙
South Rock	54 24	5 25	+0023	+0023	+0025	+0025	+1.0	+0.8	+0.1	+0.1
Portavogie	54 27	5 26	+0010	+0020	+0010	+0020	+1.2	+0.9	+0.3	+0.2
Donaghadee	54 39	5 32	+0020	+0020	+0023	+0023	+0.5	+0.4	0.0	+0.1
Bangor	54 40	5 40	+0001	+0001	-0001	+0001	0.0	-0.1	0.0	+0.1
BELFAST	54 36	5 55	STANDARD PORT							
Carrickfergus	54 43	5 48	+0005	+0005	+0005	+0005	-0.3	-0.3	-0.2	-0.1
LARNE	54 51	5 48	STANDARD PORT				See Table of NON-REFERENCE STANDARD PORTS			
Red Bay	55 04	6 03	+0022	-0010	+0007	-0017	-1.9	-1.5	-0.8	-0.2
Cushendun	55 08	6 02	+0010	-0030	0000	-0025	-1.7	-1.5	-0.6	-0.2
RIVER FOYLE (LISAHALLY)	**55 03**	**7 16**	**0100 and 1300**	**0800 and 2000**	**0200 and 1400**	**0700 and 1900**	**2.6**	**1.9**	**0.9**	**0.4**
Ballycastle Bay	55 12	6 14	+0126	-0112	-0053	+0128	-1.3	-0.9	-0.2	0.0
Portrush	55 12	6 40	-0046	-0052	-0117	-0057	-0.5	-0.3	+0.1	+0.1
Coleraine	55 08	6 40	-0004	-0106	-0109	-0005	-0.4	-0.1	0.0	0.0
IRELAND										
Lough Foyle										
Warren Lighthouse	55 13	6 57	-0055	-0115	-0155	-0117	-0.3	0.0	⊙	⊙
Moville	55 11	7 03	-0042	-0057	-0127	-0058	-0.3	0.0	+0.1	0.0
Quigley's Point	55 08	7 11	-0020	-0027	-0040	-0027	-0.3	-0.1	0.0	-0.1
NORTHERN IRELAND										
Culmore Point	55 03	7 15	-0002	-0003	-0003	-0002	-0.1	-0.1	+0.1	0.0
River Foyle										
RIVER FOYLE (LISAHALLY)	55 03	7 16	STANDARD PORT							
Londonderry	55 00	7 19	+0033	+0035	+0032	+0032	+0.1	+0.2	+0.3	+0.2
IRELAND										
Culdaff Bay	55 18	7 09	-0103	-0121	-0134	-0114	+0.2	+0.4	⊙	⊙
GALWAY	**53 16**	**9 03**	**0200 and 1400**	**0900 and 2100**	**0200 and 1400**	**0800 and 2000**	**5.1**	**3.9**	**2.0**	**0.8**
Inishtrahull	55 26	7 14	+0100	+0100	+0115	+0200	-1.8	-1.4	-0.4	-0.4
SCOTLAND										
LIVERPOOL (GLADSTONE DOCK)	**53 27**	**3 01**	**0000 and 1200**	**0600 and 1800**	**0200 and 1400**	**0800 and 2000**	**9.4**	**7.5**	**3.2**	**1.1**
Portpatrick	54 51	5 07	+0038	+0032	+0009	-0008	-5.5	-4.4	-2.0	-0.6
GREENOCK	**55 57**	**4 46**	**0000 and 1200**	**0600 and 1800**	**0000 and 1200**	**0600 and 1800**	**3.4**	**2.8**	**1.0**	**0.3**
Firth of Clyde										
Southend, Kintyre	55 19	5 38	-0030	-0010	+0005	+0035	-1.3	-1.2	-0.5	-0.2

⊙ No Data

Non-Reference Standard Ports				
STANDARD PORT	**MHWS**	**MHWN**	**MLWN**	**MLWS**
LARNE	2.8	2.5	0.8	0.4

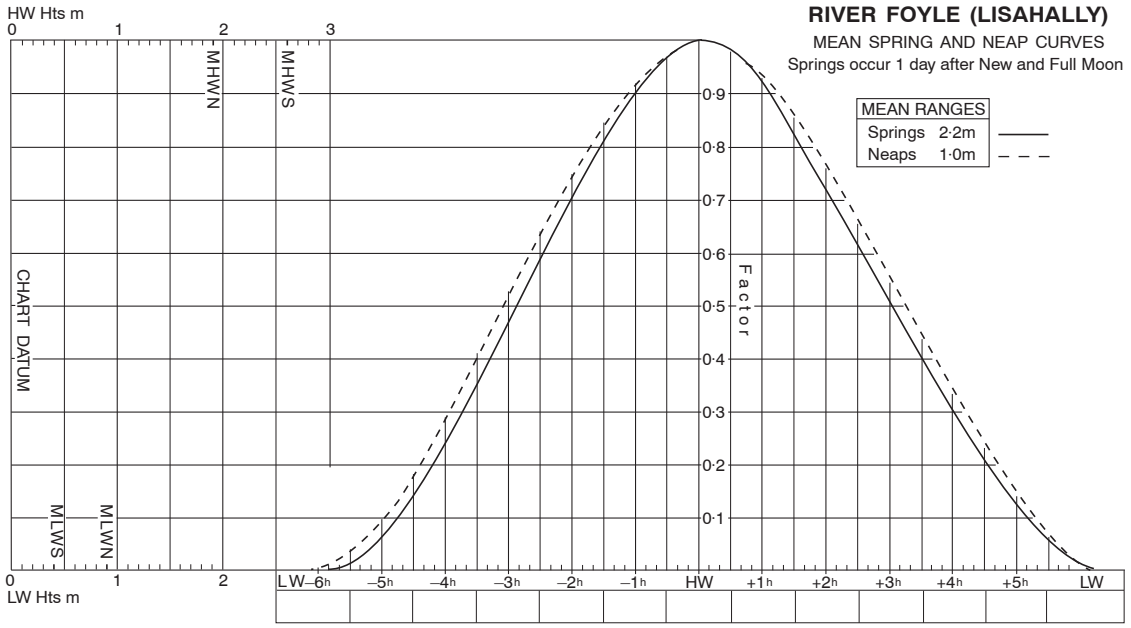
Tidal Curve Diagrams





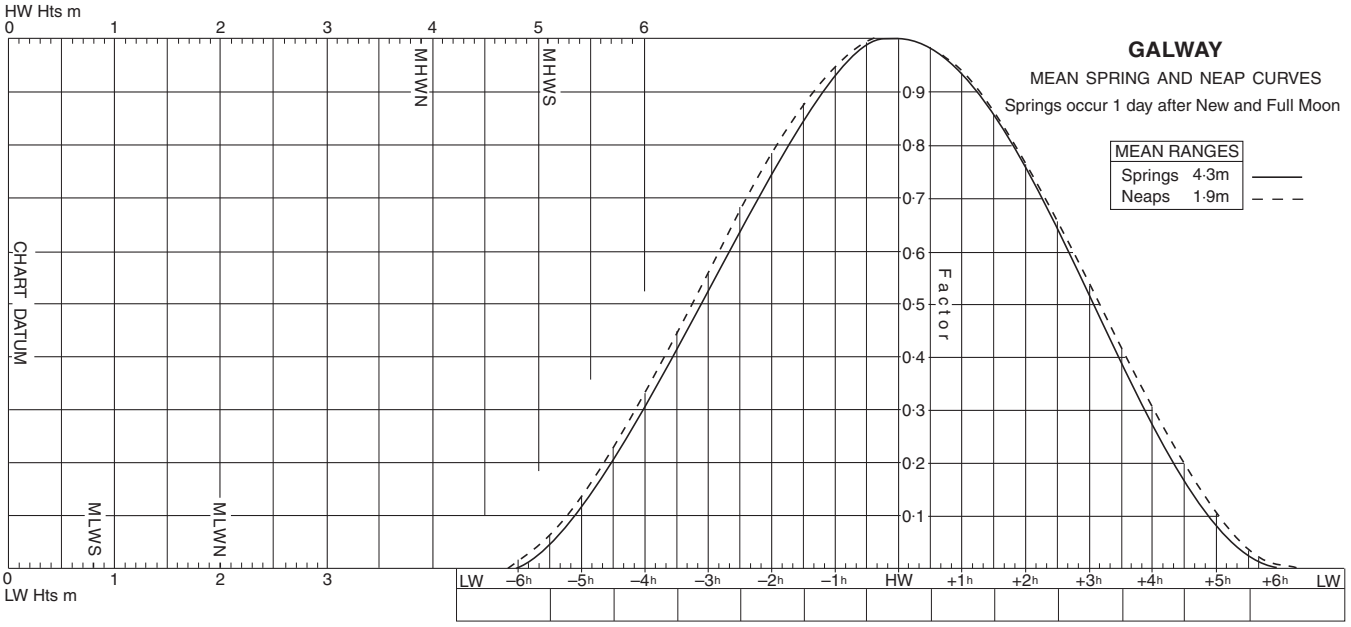
RIVER FOYLE (LISAHALLY)

MEAN SPRING AND NEAP CURVES
Springs occur 1 day after New and Full Moon



GALWAY

MEAN SPRING AND NEAP CURVES
Springs occur 1 day after New and Full Moon



GREENOCK

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