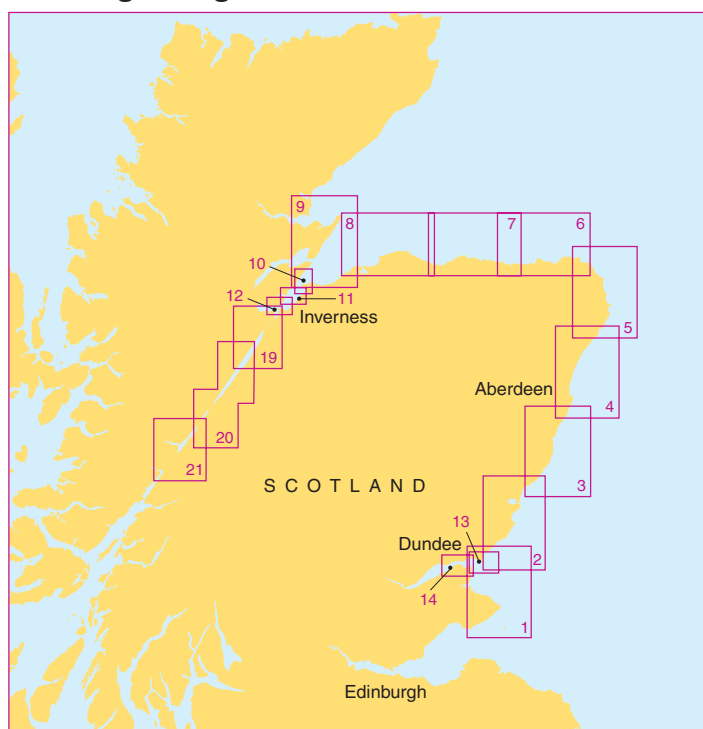




Scotland - East Coast

Coverage Diagram



5617	Chart Title	Natural Scale 1:
1	Isle of May to River Tay Entrance	75,000
2	River Tay Entrance to Montrose	75,000
3	Gourdon to Stonehaven	75,000
4	Aberdeen to Bay of Cruden	75,000
5	Peterhead to Fraserburgh	75,000
6	Fraserburgh to Banff	75,000
7A	Banff to Buckie	75,000
7B	Whitehills Marina	
8	Lossiemouth to Tarbat Ness	75,000
9	Approaches to Inverness Firth	75,000
10	Entrance to Inverness Firth	20,000
11	Inverness Firth - Northern Part	20,000
12A	Inverness Firth - Southern Part	20,000
12B	Entrance to River Ness	5,000
13	Approaches to River Tay	25,000
14	River Tay - Tayport to Dundee	25,000

5617	Chart Title	Natural Scale 1:
15A	Montrose Harbour	7,500
15B	Arbroath Harbour	12,500
15C	Stonehaven Harbour	12,500
16	Aberdeen Harbour	7,500
17A	Peterhead Bay and Harbours	6,250
17B	Banff and Macduff	20,000
17C	Fraserburgh	6,250
18	Harbours on the East Coast of Scotland	
18A	Buckie	10,000
18B	Lossiemouth	6,250
18C	Hopeman	6,250
18D	Burghead	6,250
18E	Nairn	6,250
19	Caledonian Canal - Northern Part and Inverness	
19A	Inverness	5,000
19B	Inverness to Urquhart Bay	75,000
19C	Loch Dochfour	12,500
19D	Loch Ness - Urquhart Bay	12,500
20	Caledonian Canal - Central Part	
20A	Urquhart Bay to Fort Augustus	75,000
20B	Fort Augustus to Laggan Locks	75,000
20C	Fort Augustus	12,500
20D	Loch Oich	15,000
21	Caledonian Canal - Southern Part	
21A	Laggan Locks to Corpach	75,000
21B	Loch Lochy - Laggan Locks	12,500
21C	Loch Lochy - Gairloch Locks	25,000
21D	Fort William	25,000
21E	Entrance to Caledonian Canal	6,250

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 in this folio 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 in this folio.

MARINE FARMS

Marine farms exist within the area of this folio. 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.

OVERHEAD CABLES

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

THE CALEDONIAN CANAL

The canal is maintained, operated and controlled by Scottish Canals (Caledonian Canal Office), Seaport Marina, Muirtown Wharf, Inverness, IV3 5LE. There are Canal Offices at Clachnaharry and at Corpach. Website: www.scottishcanals.co.uk. E-mail: enquiries@scottishcanals.co.uk.

A useful summary of the Bye-laws and transit safety information, known as the Skipper's Guide, is supplied to all vessels and craft transiting the canal: the summary is also obtainable from the canal website. For further details, see ADMIRALTY Sailing Directions. (taken from 5611)

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.

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.

VESSELS REPORTING

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

- Aberdeen VTS
- Cromarty Firth Port Radio
- Dundee VTS
- Forth Navigation Service
- Peterhead VTS
- Tay Navigation Service

OIL DRILLING RIGS

Oil drilling rigs are liable to be encountered anywhere in the Cromarty Firth Port area. Anchors, buoys, small craft and ancillary plant are liable to be encountered anywhere up to 500 meters from moored rigs. Where possible, mariners are instructed to give rigs a wide berth, and at all times proceed with utmost caution.

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.

ABERDEEN COASTGUARD (MRCC)

Tel. +44 (0) 1224 592334

MMSI: 002320004

e-mail: zone3@hmcg.gov.uk (FAO Aberdeen Coastguard)

MARITIME SAFETY INFORMATION

Maritime Safety Information (MSI) is broadcast by the Coastguard at 0130, 0430, 0730, 1030, 1330, 1630, 1930 & 2230 (local time). This will include gale warnings, local inshore forecasts and navigational warnings. Mariners should listen to the MSI announcement on VHF Channel 16 for details of the working channel to be used for the broadcast.

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 this folio are given in the following ADMIRALTY Tidal Stream Atlas: NP252 North Sea, North-Western Part.

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

5617_1

Tidal Streams referred to HW at LEITH

Hours	Geographical Position	A 56°27'49N 2 41-59W	B 56°27'49N 2 45-49W	C 56°25'89N 2 36-99W	D 56°18'50N 2 32-09W	E 56°16'90N 2 23-49W	F 56°11'20N 2 40-09W	G 56°09'60N 2 38-89W	
Before High Water	6 5 4 3 2 1	101 0.5 0.3 287 1.4 0.7 283 1.7 0.9 269 1.7 0.9 266 1.5 0.8 267 1.2 0.6	114 0.4 0.2 294 0.8 0.4 279 2.0 0.9 286 2.3 1.1 290 1.8 0.9 293 1.6 0.7	067 0.5 0.2 158 0.2 0.1 209 0.9 0.4 216 1.2 0.6 167 0.8 0.4 234 0.8 0.4	347 0.5 0.3 325 0.2 0.1 188 0.3 0.1 173 0.6 0.2 167 0.8 0.4 157 0.9 0.5	344 0.6 0.3 315 0.3 0.2 221 0.3 0.2 236 0.4 0.2 201 0.5 0.2 192 0.5 0.2	061 0.2 0.1 241 0.2 0.1 232 0.7 0.4 236 0.9 0.4 250 0.8 0.4 255 0.5 0.3	085 0.3 0.2 263 0.2 0.1 262 0.7 0.4 260 0.9 0.5 259 0.9 0.5 259 0.8 0.4	-6 -5 -4 -3 -2 -1
High Water	1	277 0.7 0.3	302 0.5 0.2	243 0.4 0.2	148 0.8 0.5	162 0.4 0.2	231 0.3 0.2	265 0.4 0.2	0
After High Water	1 2 3 4 5 6	063 0.3 0.2 098 1.5 0.8 100 2.1 1.1 097 2.0 1.0 096 1.8 0.9 100 1.2 0.6	101 0.7 0.3 109 1.7 0.8 111 1.9 0.9 105 1.9 0.9 102 1.5 0.7 113 0.8 0.4	282 0.2 0.1 008 0.6 0.3 034 1.0 0.5 013 1.2 0.6 059 1.2 0.6 063 0.6 0.3	134 0.6 0.4 062 0.3 0.2 016 0.7 0.3 003 1.2 0.5 359 1.1 0.5 353 0.7 0.4	149 0.4 0.2 103 0.3 0.1 032 0.5 0.2 021 0.5 0.3 010 0.6 0.3 348 0.6 0.3	066 0.1 0.1 050 0.5 0.3 055 0.8 0.4 058 0.8 0.4 067 0.6 0.3 066 0.4 0.2	001 0.1 0.1 073 0.5 0.3 079 0.9 0.5 083 1.0 0.5 085 0.9 0.5 085 0.5 0.3	+1 +2 +3 +4 +5 +6

5617_2

Tidal Streams referred to HW at LEITH

Hours	Geographical Position	A 56°27'49N 2 41-59W	B 56°25'89N 2 36-99W	
Before High Water	6 5 4 3 2 1	101 0.5 0.3 287 1.4 0.7 283 1.7 0.9 269 1.7 0.9 266 1.5 0.8 267 1.2 0.6	067 0.5 0.2 158 0.2 0.1 209 0.9 0.4 216 1.2 0.6 167 0.8 0.4 234 0.8 0.4	-6 -5 -4 -3 -2 -1
High Water	1	277 0.7 0.3	243 0.4 0.2	0
After High Water	1 2 3 4 5 6	063 0.3 0.2 098 1.5 0.8 100 2.1 1.1 097 2.0 1.0 096 1.8 0.9 100 1.2 0.6	282 0.2 0.1 008 0.6 0.3 034 1.0 0.5 013 1.2 0.6 059 1.2 0.6 063 0.6 0.3	+1 +2 +3 +4 +5 +6

5617_3

Tidal Streams referred to HW at ABERDEEN

Hours	Geographical Position	A 56°58'99N 02 00-10W	
Before High Water	6 5 4 3 2 1	011 1.2 0.6 019 0.8 0.4 046 0.3 0.2 160 0.4 0.2 174 1.0 0.5 181 1.4 0.7	-6 -5 -4 -3 -2 -1
High Water	1	189 1.2 0.6	0
After High Water	1 2 3 4 5 6	203 0.9 0.4 226 0.6 0.3 314 0.4 0.2 358 0.9 0.4 008 1.3 0.7 010 1.3 0.7	+1 +2 +3 +4 +5 +6

5617_4

Tidal Streams referred to HW at ABERDEEN

Hours	Geographical Position	A 57°19'99N 1 45-10W	
Before High Water	6 5 4 3 2 1	032 1.2 0.6 044 0.4 0.2 191 0.4 0.2 204 1.1 0.5 207 1.7 0.8 208 1.7 0.9	-6 -5 -4 -3 -2 -1
High Water	1	210 1.2 0.6	0
After High Water	1 2 3 4 5 6	211 0.6 0.3 000 0.3 0.1 017 1.0 0.5 024 1.5 0.8 028 1.8 0.9 032 1.4 0.7	+1 +2 +3 +4 +5 +6

5617_5

Tidal Streams referred to HW at ABERDEEN

Hours	Geographical Position	A 57°40'39N 1 42-70W	B 57°29'19N 1 42-40W	
Before High Water	6 5 4 3 2 1	341 0.9 0.4 018 0.2 0.1 133 0.4 0.2 147 0.9 0.4 150 1.3 0.6 149 1.7 0.8	013 1.5 0.7 021 0.5 0.2 144 0.6 0.3 171 1.4 0.7 188 1.7 0.8 186 1.7 0.8	-6 -5 -4 -3 -2 -1
High Water	1	147 1.1 0.5	187 1.3 0.6	0
After High Water	1 2 3 4 5 6	157 0.4 0.2 305 0.4 0.2 315 1.0 0.5 318 1.5 0.7 331 1.4 0.7 338 1.1 0.5	196 0.8 0.4 339 0.3 0.2 347 1.1 0.5 356 1.9 0.9 005 2.1 1.0 012 1.7 0.8	+1 +2 +3 +4 +5 +6

5617_6

Tidal Streams referred to HW at ABERDEEN

Hours	Geographical Position	A 57°45'98N 2 36-10W	B 57°49'98N 2 14-10W	
Before High Water	6 5 4 3 2 1	292 0.4 0.2 322 0.3 0.2 007 0.2 0.1 046 0.3 0.1 072 0.3 0.2 088 0.4 0.2	277 0.5 0.2 281 0.3 0.1 024 0.1 0.0 102 0.2 0.1 121 0.4 0.2 111 0.6 0.3	-6 -5 -4 -3 -2 -1
High Water	1	101 0.4 0.2	106 0.6 0.3	0
After High Water	1 2 3 4 5 6	117 0.4 0.2 143 0.3 0.2 203 0.4 0.2 254 0.6 0.3 267 0.5 0.3 282 0.5 0.2	096 0.4 0.2 050 0.3 0.1 316 0.2 0.1 290 0.4 0.2 276 0.7 0.3 276 0.5 0.3	+1 +2 +3 +4 +5 +6

5617_7

Tidal Streams referred to HW at ABERDEEN

Hours	Geographical Position	A 57°45'98N 2 36-10W	
Before High Water	6 5 4 3 2 1	292 0.4 0.2 322 0.3 0.2 007 0.2 0.1 046 0.3 0.1 072 0.3 0.2 088 0.4 0.2	-6 -5 -4 -3 -2 -1
High Water	1	101 0.4 0.2	0
After High Water	1 2 3 4 5 6	117 0.4 0.2 143 0.3 0.2 203 0.4 0.2 254 0.6 0.3 267 0.5 0.3 282 0.5 0.2	+1 +2 +3 +4 +5 +6

5617_8

Tidal Streams referred to HW at ABERDEEN

Hours	Geographical Position	A 57°46'98N 3 38-08W	
Before High Water	6 5 4 3 2 1	205 0.0 0.0 204 0.2 0.1 215 0.4 0.2 225 0.5 0.3 249 0.3 0.2	-6 -5 -4 -3 -2 -1
High Water	1	270 0.2 0.1	0
After High Water	1 2 3 4 5 6	011 0.2 0.1 040 0.5 0.3 050 0.7 0.3 052 0.5 0.2 056 0.3 0.1 074 0.1 0.0	+1 +2 +3 +4 +5 +6

5617_9

Tidal Streams referred to HW at ABERDEEN

Hours	Geographical Position	A 57°54'08N 3 46'18W	B 57°52'08N 3 49'18W	C 57°51'88N 3 52'88W	D 57°40'58N 3 54'59W	E 57°40'18N 3 58'78W	F 57°36'99N 4 03'10W	
Before High Water	Directions of streams (degrees)	240 0.2 0.1 300 0.2 0.1 328 0.3 0.2 022 0.3 0.2 064 0.5 0.3 085 0.5 0.3	213 0.3 0.2 232 0.3 0.2 242 0.3 0.2 247 0.2 0.1 253 0.1 0.1 025 0.1 0.0	213 0.3 0.2 222 0.4 0.2 230 0.4 0.2 239 0.4 0.2 254 0.2 0.1 343 0.1 0.1	246 0.9 0.4 253 0.8 0.4 257 0.7 0.3 266 0.5 0.2 295 0.3 0.1 012 0.3 0.1	235 0.4 0.2 245 0.4 0.2 261 0.3 0.1 280 0.2 0.1 232 0.1 0.0 076 0.2 0.1	220 1.2 0.6 221 1.7 0.8 226 1.3 0.6 224 0.9 0.4 233 0.7 0.3 248 0.3 0.1	-6 -5 -4 -3 -2 -1
After High Water	Directions of streams (degrees)	102 0.5 0.3 113 0.4 0.2 184 0.2 0.1 258 0.4 0.2 264 0.6 0.4 246 0.5 0.3 237 0.3 0.2	040 0.3 0.1 040 0.4 0.2 048 0.4 0.2 058 0.3 0.2 078 0.2 0.1 138 0.1 0.1 204 0.3 0.2	023 0.3 0.2 036 0.5 0.3 055 0.5 0.3 074 0.4 0.2 086 0.1 0.1 155 0.1 0.0 210 0.3 0.2	041 0.7 0.3 050 0.9 0.4 062 1.3 0.6 086 1.0 0.5 172 0.3 0.1 228 0.7 0.3 239 0.9 0.4	099 0.4 0.2 066 0.2 0.1 036 0.4 0.2 044 0.2 0.1 150 0.1 0.0 226 0.1 0.0 242 0.3 0.2	046 0.5 0.2 051 1.7 0.8 046 1.8 0.9 040 0.8 0.4 043 0.4 0.2 244 0.2 0.1 222 0.7 0.3	0 +1 +2 +3 +4 +5 +6

5617_10 Tidal Streams referred to HW at ABERDEEN

Hours	Geographical Position	A 57°37'0N 4 03'1W	
Before High Water	Directions of streams (degrees)	222 1.2 0.6 221 1.7 0.8 226 1.3 0.6 224 0.9 0.4 233 0.7 0.3 248 0.3 0.1	-6 -5 -4 -3 -2 -1
After High Water	Directions of streams (degrees)	046 0.5 0.2 051 1.7 0.8 046 1.8 0.9 040 0.8 0.4 043 0.4 0.2 244 0.2 0.1 222 0.7 0.3	0 +1 +2 +3 +4 +5 +6

5617_13

Tidal Streams referred to HW at ABERDEEN

Hours	Geographical Position	A 56°25'89N 2 36'99W	B 56°27'49N 2 41'59W	C 56°27'49N 2 45'49W
Before High Water	Directions of streams (degrees)	-6 059 1.2 0.6 -5 063 0.6 0.3 -4 112 0.3 0.1 -3 195 0.6 0.3 -2 213 1.1 0.5 -1 223 1.1 0.5	096 1.8 0.9 100 1.2 0.6 295 0.5 0.3 285 1.6 0.8 275 1.8 0.9 267 1.6 0.8	102 1.5 0.7 113 0.8 0.4 290 0.2 0.1 285 1.4 0.7 283 2.2 1.1 288 2.0 1.0
After High Water	Directions of streams (degrees)	0 231 0.9 0.4 +1 240 0.6 0.3 +2 268 0.3 0.1 +3 334 0.4 0.2 +4 023 0.8 0.4 +5 034 1.1 0.5 +6 052 1.2 0.6	266 1.3 0.6 273 0.8 0.4 343 0.2 0.1 095 1.1 0.6 099 1.9 1.0 099 2.1 1.1 097 1.9 1.0	292 1.6 0.8 298 1.0 0.5 010 0.3 0.2 106 1.2 0.6 111 1.8 0.9 108 1.9 1.0 102 1.6 0.8

Note: At position B, an east-going current of about 0.75 knot may be expected.

5617_21 D Tidal Streams referred to HW at OBAN

Hours	Geographical Position	A 56°50'5N 5 07'8W	
Before High Water	Directions of streams (degrees)	072 0.1 0.0 310 0.0 0.0 285 0.2 0.1 278 0.3 0.1 269 0.4 0.1	-6 -5 -4 -3 -2 -1
After High Water	Directions of streams (degrees)	260 0.2 0.1 220 0.1 0.0 110 0.1 0.0 097 0.3 0.1 093 0.3 0.1 080 0.2 0.1 076 0.1 0.0	0 +1 +2 +3 +4 +5 +6

5617_21 E Tidal Streams referred to HW at OBAN

Hours	Geographical Position	A 56°50'46N 5 07'85W	
Before High Water	Directions of streams (degrees)	072 0.1 0.0 310 0.1 0.0 285 0.2 0.1 278 0.3 0.1 269 0.4 0.1	-6 -5 -4 -3 -2 -1
After High Water	Directions of streams (degrees)	260 0.2 0.1 220 0.1 0.0 110 0.1 0.0 097 0.3 0.1 093 0.3 0.1 080 0.2 0.1 076 0.1 0.0	0 +1 +2 +3 +4 +5 +6

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	Zone UT(GMT)		MHWS	MHWN	MLWN	MLWS
LEITH	55 59	3 11	0300 and 1500	0900 and 2100	0300 and 1500	0900 and 2100	5.6	4.4	2.0	0.8
Anstruther Easter	56 13	2 42	-0018	-0012	-0006	-0008	-0.3	-0.2	0.0	0.0
ABERDEEN	57 09	2 04	0000 and 1200	0600 and 1800	0100 and 1300	0700 and 1900	4.3	3.4	1.6	0.6
<i>River Tay</i>										
Bar	56 28	2 38	+0100	+0100	+0050	+0110	+0.9	+0.8	+0.3	+0.1
Dundee	56 27	2 58		STANDARD PORT			See Table of NON-REFERENCE STANDARD PORTS			
Arbroath	56 33	2 35	+0056	+0037	+0034	+0055	+1.0	+0.8	+0.4	+0.2
Montrose	56 42	2 27		STANDARD PORT			See Table of NON-REFERENCE STANDARD PORTS			
Stonehaven	56 58	2 12	+0013	+0008	+0013	+0009	+0.2	+0.2	+0.1	0.0
Peterhead	57 42	1 46		STANDARD PORT			See Table of NON-REFERENCE STANDARD PORTS			
Fraserburgh	57 41	2 00		STANDARD PORT			See Table of NON-REFERENCE STANDARD PORTS			
ABERDEEN	57 09	2 04	0200 and 1400	0900 and 2100	0400 and 1600	0900 and 2100	4.3	3.4	1.6	0.6
Banff	57 40	2 31	-0100	-0150	-0150	-0050	-0.4	-0.2	-0.1	+0.2
Whitehills	57 41	2 35	-0122	-0137	-0117	-0127	-0.4	-0.3	+0.1	+0.1
Buckie	57 41	2 57	-0130	-0145	-0125	-0140	-0.2	-0.2	0.0	+0.1
Lossiemouth	57 43	3 18	-0125	-0200	-0130	-0130	-0.2	-0.2	0.0	0.0
Burghead	57 42	3 30	-0120	-0150	-0135	-0120	-0.2	-0.2	0.0	0.0
ABERDEEN	57 09	2 04	0300 and 1500	0800 and 2000	0200 and 1400	0800 and 2000	4.3	3.4	1.6	0.6
<i>Dornoch Firth</i>										
Portmahomack	57 50	3 50	-0120	-0120	-0140	-0110	-0.2	-0.1	+0.1	+0.1
Meikle Ferry	57 51	4 08	-0100	-0140	-0120	-0055	+0.1	0.0	-0.1	0.0
INVERGORDON	57 41	4 10	0100 and 1300	0700 and 1900	0000 and 1200	0700 and 1900	4.3	3.3	1.6	0.7
Nairn	57 36	3 52	+0005	-0015	0000	-0015	0.0	0.0	0.0	0.0
Whiteness Head				STANDARD PORT			See Table of NON-REFERENCE STANDARD PORTS			
<i>Inverness Firth</i>										
Fortrose	57 35	4 08	0000	+0010	+0010	-0010	0.0	+0.1	⊙	⊙
Inverness	57 30	4 14	+0010	+0015	+0015	+0010	+0.3	+0.2	+0.1	+0.1
<i>Cromarty Firth</i>										
Cromarty	57 42	4 03	-0005	0000	0000	-0005	0.0	0.0	0.0	0.0
OBAN	56 25	5 29	0100 and 1300	0700 and 1900	0100 and 1300	0800 and 2000	4.0	2.9	1.8	0.7
<i>Loch Linnhe</i>										
Corpach	56 51	5 07	0000	+0020	+0040	0000	0.0	0.0	-0.2	-0.2

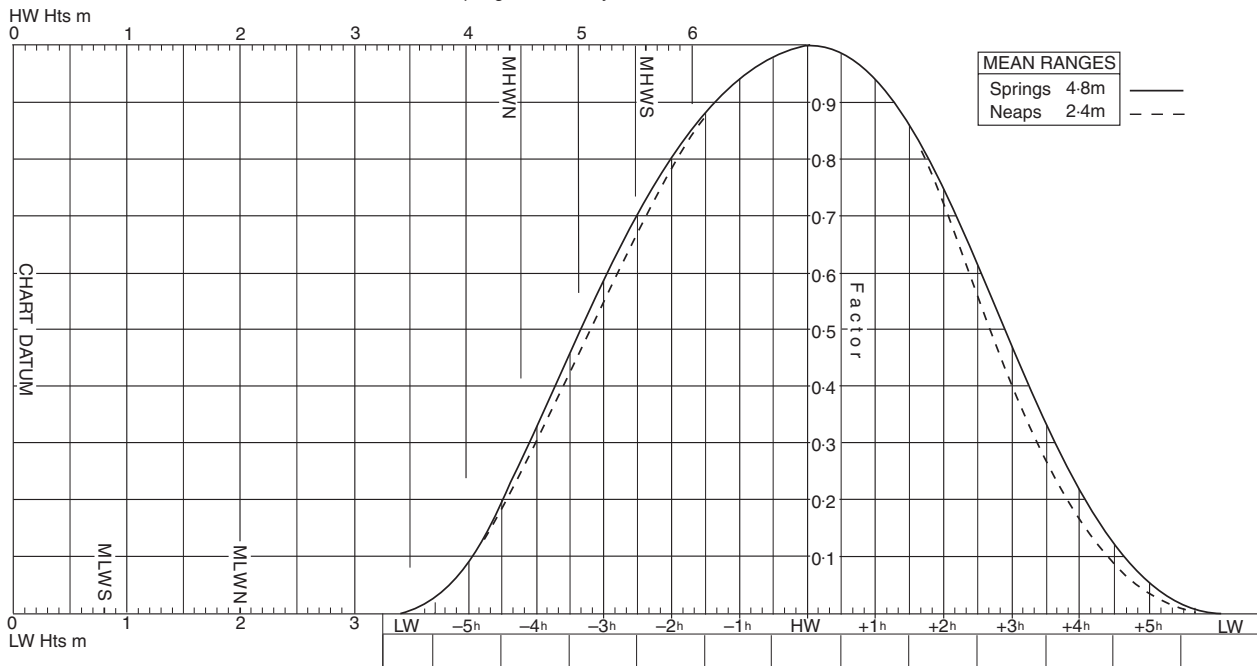
⊙ No data

Non-Reference Standard Ports				
STANDARD PORT	MHWS	MHWN	MLWN	MLWS
DUNDEE	+1.2	+1.0	+0.5	+0.4
MONTROSE	+0.6	+0.4	+0.3	+0.2
PETERHEAD	-0.3	-0.2	0.0	+0.1
FRASERBURGH	-0.5	-0.4	-0.1	0.2
WHITENESS HEAD	-0.1	0.0	+0.1	+0.2

Tidal Curve Diagrams

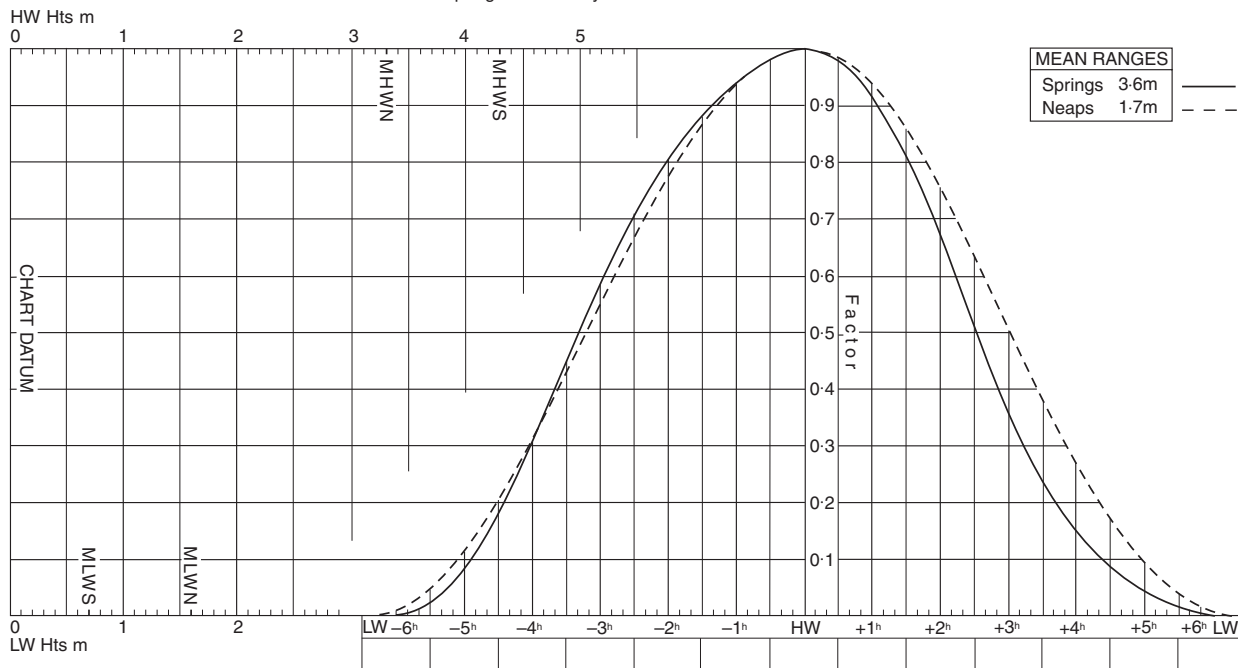
LEITH

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



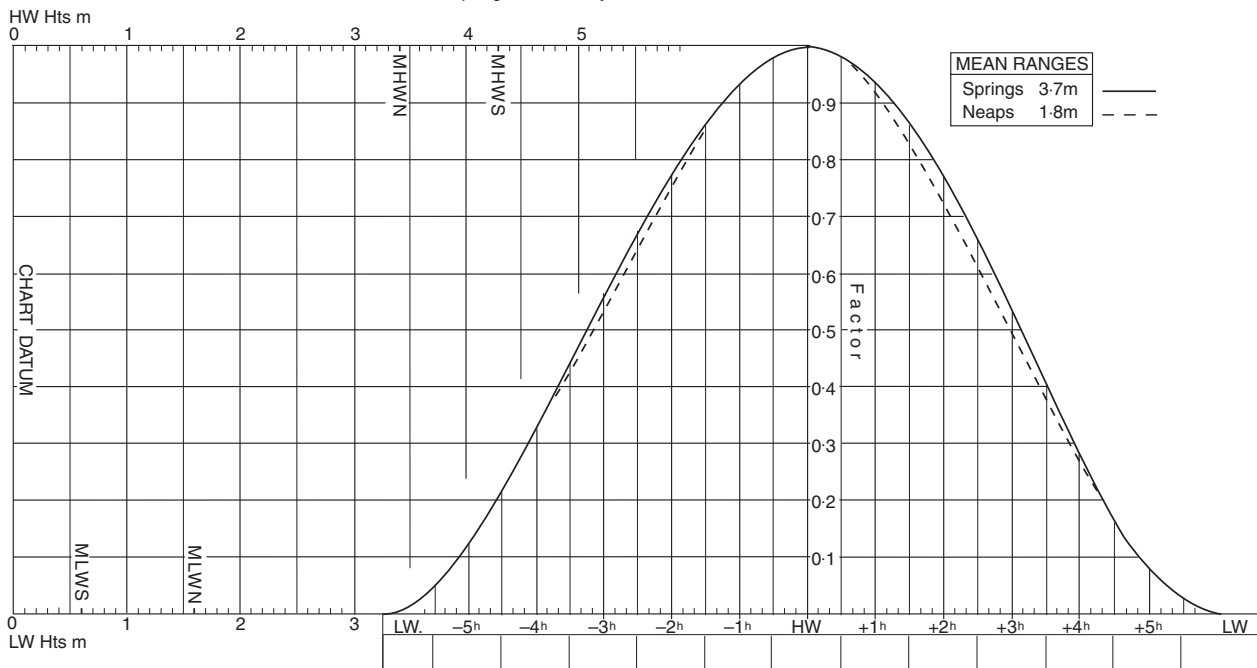
INVERGORDON

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



ABERDEEN

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

**OBAN**

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

