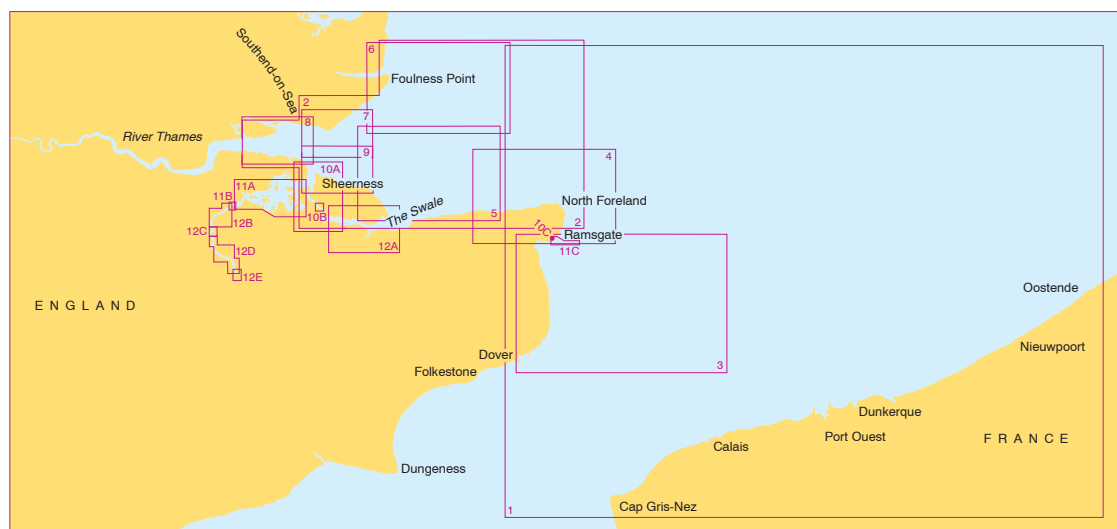




# Thames Estuary - Ramsgate to Canvey Island

## Coverage Diagram



| 5606 | Chart Title                                | Natural Scale 1: |
|------|--|------------------|
| 1    | Southern North Sea and Dover Strait        | 250,000          |
| 2    | Southern Thames Estuary                    | 100,000          |
| 3    | Dover to Ramsgate including Sandettié Bank | 75,000           |
| 4    | Gull Stream to Princes Channel             | 50,000           |
| 5    | Princes Channel to Medway Approach Channel | 50,000           |
| 6    | Whitaker Channel to West Swin              | 50,000           |
| 7    | Havengore Bridge to Southend-on-Sea        | 25,000           |
| 8    | Southend-on-Sea to Canvey Island           | 25,000           |
| 9    | Medway Approach Channel                    | 25,000           |
| 10A  | Mouth of River Medway and West Swale       | 25,000           |
| 10B  | Ferry Reach                                | 12,500           |
| 10C  | Ramsgate                                   | 5,000            |
| 11A  | Saltpan Reach to Chatham Reach             | 25,000           |
| 11B  | Rochester                                  | 12,500           |
| 11C  | Approaches to Ramsgate                     | 12,500           |

| 5606 | Chart Title                   | Natural Scale 1: |
|------|-------------------------------|------------------|
| 12A  | Shell Ness to Conyer Creek    | 25,000           |
| 12B  | Rochester Bridge to Wouldham  | 25,000           |
| 12C  | Wouldham to Lower Cut         | 25,000           |
| 12D  | Lower Cut to Allington Marina | 25,000           |
| 12E  | Continuation to Maidstone     | 25,000           |

## Notes

**Positions** are referred to the WGS84 compatible datum, European Terrestrial Reference System 1989 Datum.

**Depths** are in metres and are reduced to Chart Datum, which is approximately the level of Lowest Astronomical Tide.

**Heights** are in metres. Underlined figures are drying heights above Chart Datum. Overhead clearance heights are above Highest Astronomical Tide. All other heights are above Mean High Water Springs.

**Navigational marks:** IALA Maritime Buoyage System-Region A (Red to port)

### DATUM

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

### DEPTHS AND AIDS TO NAVIGATION

The channels and depths on these charts are subject to frequent change. The buoyage and other aids to navigation are adjusted accordingly. Buoyed channels and anchorages are surveyed regularly but this activity can be less frequent over adjoining sandbanks which are subject to continual change. Passages over sandbanks should only be used with extreme caution as depths less than charted may exist. For the latest information, consult Ramsgate Port Authority, London VTS and the Medway Port Authority within the Medway Approach Area.

### FOULNESS AND MAPLIN SANDS OBSTRUCTION (51°37'·0N 1°00'·0E)

Numerous posts and stakes, sometimes submerged, may be encountered on Foulness/Maplin Sands. Beacons of no navigational significance, some with lights at night, may be erected in this area.

### THE CANT – WRECKAGE (51°27'N 0°53'E)

There are numerous pieces of wreckage, some of which dry at low water springs, on The Cant.

### SANDWAVES

Sandwaves exist in the areas indicated; depths may be less than charted.

### 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.


### OVERHEAD CABLES

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

### LIGHTS

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

### 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. Outside of this limit and in areas covered by larger scale charts and ADMIRALTY charts, depiction of detail (including platforms, wellheads, pipelines, cables, wrecks and aids to navigation) has been simplified to enhance clarity.

### CHECK SURVEY

Depths within the area indicated are taken from a single beam check line survey with lines 250 to 1000 metres apart. Less water than charted will exist over the sandbanks.

### MARKER BUOYS

Yellow and orange buoys placed 300m offshore between Seasalter (51°20'·9N 1°00'·0E) and The Reculvers (51°22'·8N 1°12'·1E) mark an 8 knot speed limit.

### YANTLET SECONDARY CHANNELS

The minimum depth within the Yantlet Secondary Channel is 6m. Vessels which can safely navigate outside of the main Yantlet Channel should do so.

### VESSEL REPORTING

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

- Channel Navigation Information Service (CNIS)
- Dover Strait Reporting System (CALDOVREP)
- Dover VTS
- Dunkerque VTS
- London VTS
- Medway VTS
- Ramsgate Local Port Service
- Sunk VTS

### REPORTING POINT-MEDWAY APPROACH CHANNEL (51°27'·8N 0°47'·2E)

Outward bound vessels should report to London VTS on the appropriate frequency when they reach this position, but then continue to monitor the appropriate Medway frequency until they reach the Medway buoy (51°28'·8N 0°52'·8E). See ADMIRALTY List of Radio Signals for further details.

### ROUTEING

For information about IMO mandatory and recommended routes for certain tankers and other vessels, see ADMIRALTY Sailing Directions.

### SANDETTIÉ DEEP WATER ROUTE

A deep water route forming part of the north-east bound traffic lane is established to the north-west of the Sandettié Bank. It is recommended that the DW route is only to be used by vessels with a draught of 16 metres or more. Mariners considering the use of this route should take into account the proximity of the traffic using the south-west bound lane and are recommended to avoid overtaking where traffic and navigation do not allow sufficient sea room and passing distance. If overtaking then a safe distance must be maintained and Rule 13 of the Collision Regulations observed. The main lane for north-east bound traffic lies to the south-east of the Sandettié Bank and should be followed by all vessels whose draught is less than 16 metres and allows them to use it safely.

**SMALL VESSELS CROSSING**

Mariners are warned of small unlit vessels crossing the traffic lanes within the Dover Strait. Some vessels may be abandoned and adrift. Sightings should be reported to HM Coastguard.

**PRECAUTIONARY AREAS****1. FISHERMAN'S GAT (51°37'N 1°20'E)**

Mariners are warned that within this Precautionary Area, manoeuvring traffic may be encountered entering or leaving Fisherman's Gat. Extra care should be exercised when approaching the confluence of Black Deep and Fisherman's Gat and also when approaching Knock John Channel.

**2. OAZE (51°29'N 0°59'E)**

Vessels entering the area indicated between Shivering Sand (51°29'·8N 1°04'·8E) and Sea Reach No 1 buoys (51°29'·4N 0°52'·6E) should navigate with extreme caution as deep-draught vessels with limited manoeuvrability, as well as crossing traffic, may be encountered. Anchoring in this area is prohibited.

**3. THORNTON AND BLYTH BANKS**

(51°39'N 2°52'E)

Vessels in the vicinity of Thornton and Blyth Banks Precautionary Areas, should navigate with extreme caution as vessels on route to and from 'TSS off Texel', Ijmuiden, the Westerschelde and Europoort may be merging and crossing.

4. Mariners are reminded that advice on shipping movements in these areas is available from London VTS on VHF. See ADMIRALTY List of Radio Signals.

**DRAUGHT RESTRICTIONS**

To reduce the risk to deep-draught vessels resulting from traffic congestion, passage through Black Deep and Knock John Channel is normally restricted to vessels with a draught of over 6 metres. Inward and outward bound vessels with a draught of less than 6 metres should normally navigate by the Princes Channel (southern traffic) or the King's Channel (51°45'·0N 1°24'·2E) (northern traffic).

**DOVER STRAIT:****WARNING TO THROUGH TRAFFIC**

Vessels using the traffic lanes must comply with Rule 10 of the Collision Regulations, but they are not thereby given any right of way over crossing vessels. When risk of collision is deemed to exist, the Rules fully apply, particularly Rules 15 and 19(d), which are of specific relevance in the crossing situation.

**DESIGNATED ANCHORAGE AREAS**

Vessels requiring to wait at anchor must do so only in the designated anchorage areas. Within these areas, mariners are requested to use the anchor berths. Vessels may not anchor in a fairway except in an emergency or for the purpose of manoeuvring. Anchor berths K3 (51°30'·4N 1°04'·0E), W1 (51°30'·9N 0°55'·9E) and W2 (51°31'·2N 0° 57'·1E) are reserved for vessels nominated by London VTS. For further details see ADMIRALTY Sailing Directions and ADMIRALTY List of Radio Signals.

**BUNKERING ANCHORAGES**

(51°27'·2N 1°17'·9E)

The Queens Channel Bunkering Anchorages are only for vessels engaged in bunkering operations, with the permission of London VTS. For further details see ADMIRALTY Sailing Directions.

**OAZE RESTRICTED ZONE**

Vessels, other than fishing and pleasure craft, are to avoid this zone (51°29'·7N 0°58'·0E).

**CROSS – CHANNEL FERRIES**

Ferries enter and leave Dover and other ports at frequent intervals. Vessels passing Dover should keep at least 1 mile off the breakwaters. Information concerning shipping movements can be obtained from Dover and Ramsgate Port Controls. See ADMIRALTY List of Radio Signals

**SHOEBURYNES FIRING DANGER AREAS**

Experimental firing is frequently carried out in the area between Shoeburyness and Foulness Point. Apart from certain exceptions, no vessel may enter or remain in the Inner Danger Area at any time. Entry to the Outer Danger Area is prohibited when the area is in use, as indicated by red flags. For further information contact Shoeburyness Range Control on Tel: +44(0)1702 383211 or see the Range Byelaws. VHF Channel 16 should also be monitored.

**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.

**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.

**PASSAGE PLANNING CHART 5500**

See Chart 5500 'Mariners Routing Guide, English Channel and Dover Strait' for routing regulations, information services and other navigational advice.

**FRENCH REGULATIONS**

Vessels over 1600 GT laden with hydrocarbons or other dangerous cargoes must keep at least 7 nautical miles off the French coast, except when entering certain ports. For detail, see ADMIRALTY Sailing Direction and Chart 5500.

**SHELLFISH BEDS**

Shellfish beds exist between the entrance to The Swale (51°22'N 0°59'E) and Reculver (51°23'N 1°12'E). Vessels grounding are liable to pay damages.

**MILEAGE MARKS**

The approximate distances in sea miles from Sea Reach No 1 buoy (51°29'·4N 0°52'·8E) and the Medway buoy (51°28'·8N 0°52'·8E) are shown throughout the channels thus: 18M. Distances in sea miles below London Bridge are shown thus: 43M.

## 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

#### DOVER COASTGUARD (MRCC)

Tel. +44 (0) 1304 210008

MMSI: 002320010

e-mail: zone14@hmcg.gov.uk (FAO Dover Coastguard)

#### GRIS-NEZ (CROSS) (MRCC)

Tel. +33 (0) 321 872187

MMSI: 002275100

e-mail: gris-nez@mrccfr.eu

## 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 INFORMATION

Full details of the tidal information in the area covered by this folio are given in the following ADMIRALTY publications:

#### TIDAL STREAM ATLASES

- NP 233 - Dover Strait
- NP 249 - Thames Estuary
- NP 251 - North Sea, Southern Portion

### 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)

To view all ADMIRALTY Products and services, visit [admiralty.co.uk](http://admiralty.co.uk)



## Tidal Stream Information

5606\_1

Tidal Streams referred to HW at DOVER

| Hours                | Geographical Position           | A 50°57'4 N<br>1 23.5 E   | B 50°59'9 N<br>1 33.9 E   | C 51°26'0 N<br>1 38.9 E   | D 51°09'5 N<br>1 44.0 E   | E 51°30'5 N<br>1 51.8 E   | F 51°07'7 N<br>2 04.3 E   | G 51°32'0 N<br>2 13.0 E  | H 51°23'0 N<br>2 26.7 E  | J 51°36'0 N<br>2 36.0 E   | K 51°28'0 N<br>2 54.5 E   |                                       |
|----------------------|---------------------------------|---|---|---|---|---|---|--|--|---|---|---------------------------------------|
| Before<br>High Water | Directions of streams (degrees) | 226 2-1 1.2<br>227 2-7 1.6<br>228 2-9 1.4<br>229 2-1 1.0<br>259 0-8 0.3<br>044 1-4 0.7                | 260 1-8 1.2<br>260 2-6 1.8<br>260 2-9 2.0<br>260 2-7 1.9<br>270 1-2 0.8<br>035 0-8 0.5                | 137 0-5 0.3<br>164 1-1 0.6<br>173 1-6 0.9<br>189 1-9 1.1<br>201 1-5 0.8<br>240 0-7 0.4                | 231 1-0 0.6<br>218 2-2 1.2<br>213 2-8 1.6<br>206 2-8 1.5<br>207 1-5 0.8<br>053 0-4 0.2                | 219 0-7 0.4<br>215 1-4 0.7<br>209 2-2 1.2<br>212 1-8 0.9<br>206 0-9 0.5                               | 245 1-3 0.8<br>237 1-5 1.0<br>229 1-6 1.1<br>223 1-5 1.0<br>187 0-9 0.5<br>089 0-5 0.4                | 307 0-5 0.3<br>233 0-9 0.5<br>218 1-6 0.8<br>245 1-8 1.0<br>213 1-6 0.9<br>199 0-9 0.5                               | 270 1-1 0.6<br>255 1-6 1.0<br>248 1-8 1.2<br>245 1-7 1.2<br>232 1-0 0.8<br>153 0-8 0.5                               | 293 0-7 0.4<br>241 1-0 0.6<br>221 1-5 0.8<br>217 1-6 1.0<br>213 1-5 0.9<br>196 1-0 0.6                | 265 1-0 0.7<br>244 1-4 0.8<br>232 1-5 0.9<br>228 1-5 0.9<br>223 1-2 0.7<br>191 0-7 0.4                | -6<br>-5<br>-4<br>-3<br>-2<br>-1      |
| After<br>High Water  | Rates at spring tides (knots)   | 045 2-7 1.3<br>046 2-9 1.6<br>048 2-2 1.4<br>053 1-2 1.0<br>090 0-4 0.4<br>218 0-9 0.2<br>225 1-9 0.9 | 036 1-7 1.1<br>060 2-5 1.7<br>060 2-6 1.8<br>060 1-9 1.3<br>053 0-8 0.5<br>277 0-5 0.6<br>260 1-9 1.3 | 328 1-0 0.5<br>353 1-5 0.8<br>004 1-6 0.9<br>016 1-3 0.7<br>026 1-0 0.5<br>044 0-6 0.3<br>107 0-3 0.2 | 040 1-8 1.0<br>035 2-3 1.3<br>040 2-3 1.3<br>030 1-9 1.0<br>023 1-2 0.7<br>345 0-4 0.2<br>246 0-7 0.4 | 006 0-2 0.1<br>029 1-0 0.5<br>032 1-8 0.9<br>033 1-7 0.9<br>036 1-4 0.7<br>032 0-8 0.4<br>034 0-2 0.1 | 056 1-2 0.8<br>052 1-7 1.0<br>053 1-8 1.1<br>049 1-4 0.8<br>028 0-8 0.4<br>321 0-5 0.3<br>250 1-0 0.7 | 102 0-5 0.3<br>057 1-0 0.6<br>064 1-8 1.0<br>060 1-9 1.1<br>037 1-7 0.9<br>052 0-9 0.6<br>018 1-0 0.4<br>338 0-5 0.2 | 153 0-8 0.5<br>075 1-5 0.8<br>064 1-8 1.0<br>060 1-9 1.1<br>057 1-6 1.0<br>026 1-3 0.8<br>007 0-5 0.3<br>297 0-8 0.4 | 114 0-7 0.4<br>067 1-1 0.7<br>048 1-5 0.9<br>037 1-6 0.9<br>026 1-3 0.8<br>005 1-0 0.5<br>318 0-6 0.4 | 098 1-1 0.7<br>069 1-6 1.0<br>058 1-7 1.0<br>048 1-4 0.9<br>033 1-0 0.6<br>340 0-4 0.5<br>280 0-8 0.6 | 0<br>+1<br>+2<br>+3<br>+4<br>+5<br>+6 |

5606\_2

Tidal Streams referred to HW at SHEERNESS (See also ADMIRALTY Tidal Stream Atlas NP249)

| Hours                | Geographical Position           | A 51°29'0 N<br>0 51.2 E   | B 51°28'8 N<br>0 58.6 E   | C 51°33'0 N<br>1 00.4 E   | D 51°24'5 N<br>1 09.9 E   | E 51°35'2 N<br>1 10.0 E   | F 51°34'7 N<br>1 15.1 E   | G 51°31'6 N<br>1 21.2 E   | H 51°40'4 N<br>1 26.7 E   | J 51°36'5 N<br>1 29.9 E   | K 51°25'2 N<br>1 30.1 E   |                                       |
|----------------------|---------------------------------|---|---|---|---|---|---|---|---|---|---|---------------------------------------|
| Before<br>High Water | Directions of streams (degrees) | 342 0-1 0.1<br>283 0-6 0.4<br>273 1-4 0.9<br>276 1-7 1.1<br>281 1-6 1.0<br>285 1-0 0.7<br>298 0-3 0.2 | 128 0-2 0.1<br>249 1-0 0.7<br>260 1-7 1.1<br>265 1-7 1.1<br>263 1-6 1.1<br>261 1-3 0.9<br>261 0-5 0.3 | 223 0-6 0.4<br>252 1-8 1.2<br>230 2-3 1.5<br>234 1-8 1.2<br>235 1-5 1.0<br>246 1-1 0.7<br>250 0-2 0.1 | 251 0-3 0.2<br>256 1-2 0.7<br>258 1-4 0.9<br>260 1-4 0.9<br>262 1-4 0.9<br>257 1-0 0.6<br>071 0-2 0.1 | 227 0-5 0.3<br>232 1-5 1.0<br>238 2-0 1.3<br>241 1-9 1.2<br>247 1-5 1.0<br>253 0-8 0.5<br>043 0-2 0.1 | 201 0-5 0.3<br>185 1-9 1.2<br>218 2-1 1.3<br>189 1-9 1.2<br>214 1-2 0.8<br>300 0-4 0.3<br>057 1-0 0.6 | 164 1-6 1.0<br>212 0-2 0.1<br>283 0-8 0.5<br>271 1-0 0.6<br>277 1-6 1.0<br>293 1-7 1.1<br>307 1-4 0.9 | 204 1-6 1.0<br>198 2-4 1.5<br>199 2-6 1.6<br>204 2-2 1.4<br>230 0-8 0.5<br>348 0-7 0.5<br>016 1-2 0.8 | 213 1-6 1.0<br>217 2-1 1.4<br>214 1-8 1.1<br>221 1-3 0.8<br>261 0-6 0.4<br>354 0-6 0.4<br>035 1-5 1.0 | 178 1-2 0.7<br>198 1-3 0.8<br>215 1-3 0.7<br>259 1-2 0.7<br>306 1-7 1.0<br>327 1-9 1.1<br>349 1-6 0.9 | -6<br>-5<br>-4<br>-3<br>-2<br>-1<br>0 |
| After<br>High Water  | Rates at spring tides (knots)   | 085 0-4 0.3<br>101 1-6 1.0<br>104 1-8 1.2<br>103 1-4 0.9<br>102 0-8 0.6<br>083 0-2 0.1                | 072 0-6 0.4<br>080 2-1 1.4<br>079 2-4 1.6<br>083 1-9 1.2<br>081 1-0 0.7<br>083 0-2 0.2                | 062 1-1 0.7<br>055 2-7 1.8<br>059 2-6 1.7<br>062 1-7 1.1<br>046 1-2 0.8<br>180 0-2 0.1                | 084 1-3 0.9<br>082 1-8 1.1<br>081 1-5 1.0<br>081 1-1 0.7<br>084 0-6 0.4<br>220 0-1 0.1                | 056 1-2 0.8<br>059 1-9 1.3<br>061 1-9 1.3<br>062 1-5 1.0<br>062 0-9 0.6<br>068 0-1 0.1                | 069 1-8 1.2<br>069 2-3 1.5<br>061 2-3 1.5<br>062 1-8 1.1<br>074 1-0 0.7<br>173 0-2 0.1                | 350 0-8 0.5<br>067 1-4 0.9<br>090 1-9 1.2<br>118 1-6 1.0<br>133 1-6 1.0<br>148 1-6 1.0                | 030 1-9 1.2<br>032 2-1 1.4<br>025 1-6 1.0<br>024 1-3 0.8<br>022 0-5 0.3<br>205 1-1 0.7                | 040 1-9 1.3<br>043 1-8 1.2<br>047 1-3 0.9<br>055 0-6 0.4<br>199 0-1 0.1<br>211 1-1 0.7                | 029 1-3 0.8<br>071 1-4 0.8<br>100 1-5 0.8<br>120 1-3 0.7<br>145 1-1 0.6<br>166 1-2 0.7                | +1<br>+2<br>+3<br>+4<br>+5<br>+6      |

5606\_3

Tidal Streams referred to HW at DOVER (See also ADMIRALTY Tidal Stream Atlas NP233)

| Hours                | Geographical Position           | A 51°16'3 N<br>1 27.3 E   | B 51°09'0 N<br>1 27.7 E   | C 51°15'2 N<br>1 33.4 E  | D 51°20'3 N<br>1 34.2 E  | E 51°13'0 N<br>1 36.3 E  | F 51°09'5 N<br>1 44.0 E   | G 51°13'0 N<br>1 52.9 E   |                                       |
|----------------------|---------------------------------|---|---|--|--|--|---|---|---------------------------------------|
| Before<br>High Water | Directions of streams (degrees) | 195 2-0 1.1<br>197 2-6 1.5<br>197 2-8 1.5<br>202 2-4 1.3<br>215 1-0 0.6<br>012 1-3 0.7                | 212 2-2 1.2<br>213 2-2 1.2<br>216 1-9 1.1<br>228 1-3 0.8<br>000 0.0<br>032 1-2 0.7                | 226 2-5 1.4<br>230 3-1 1.7<br>231 3-4 1.9<br>234 3-3 1.8<br>233 1-6 0.9<br>049 0-8 0.4 | 199 2-0 1.2<br>204 2-6 1.5<br>208 3-1 1.7<br>213 2-8 1.5<br>222 1-5 0.8<br>357 0-8 0.5 | 190 0-9 0.5<br>191 2-3 1.3<br>195 3-1 1.7<br>196 3-2 1.8<br>195 2-0 1.1<br>000 0.0     | 231 1-0 0.6<br>218 2-2 1.2<br>213 2-8 1.6<br>206 2-8 1.5<br>207 1-5 0.8<br>053 0-4 0.2                | 225 0-9 0.6<br>224 1-6 0.8<br>219 1-9 0.9<br>215 1-7 0.7<br>207 1-3 0.4<br>174 0-6 0.2                | -6<br>-5<br>-4<br>-3<br>-2<br>-1      |
| After<br>High Water  | Rates at spring tides (knots)   | 017 2-7 1.5<br>027 3-2 1.7<br>018 2-6 1.4<br>022 1-7 0.9<br>037 0-6 0.3<br>205 0-4 0.2<br>197 1-6 0.9 | 038 2-0 1.2<br>039 2-3 1.3<br>034 2-2 1.2<br>031 1-5 0.8<br>000 0.0<br>203 1-0 0.6<br>210 1-8 1.0 | 046 3-7 2.1<br>049 3-4 1.9<br>057 2-4 1.3<br>065 0-9 0.5<br>224 0-5 0.3<br>225 2-1 1.2 | 023 3-2 1.8<br>029 2-9 1.6<br>044 2-2 1.3<br>059 1-2 0.7<br>000 0.0<br>197 1-4 0.8     | 015 2-4 1.4<br>014 3-1 1.7<br>017 2-6 1.5<br>018 1-7 1.0<br>018 0-6 0.3<br>189 0-5 0.3 | 040 1-8 1.0<br>035 2-3 1.3<br>040 2-3 1.3<br>030 1-9 1.0<br>023 1-2 0.7<br>345 0-4 0.2<br>246 0-7 0.4 | 048 1-2 0.7<br>045 1-6 0.9<br>042 1-9 0.9<br>036 1-8 0.8<br>028 1-0 0.4<br>025 0-4 0.1<br>235 0-6 0.3 | 0<br>+1<br>+2<br>+3<br>+4<br>+5<br>+6 |

5606\_4

Tidal Streams referred to HW at SHEERNESS  
(See also ADMIRALTY Tidal Stream Atlas NP249)

| Hours                | Geographical Position           | A 51°27'7 N<br>1 18.9 E   | B 51°29'1 N<br>1 19.4 E   | C 51°23'9 N<br>1 20.4 E   | D 51°25'2 N<br>1 30.1 E   |                                       |
|----------------------|---------------------------------|---|---|---|---|---------------------------------------|
| Before<br>High Water | Directions of streams (degrees) | 216 0-3 0.2<br>241 0-9 0.6<br>250 1-4 0.9<br>257 1-8 1.2<br>260 2-0 1.3<br>260 1-3 0.8                | 232 0-2 0.1<br>245 1-1 0.7<br>257 1-3 0.8<br>270 1-5 1.0<br>275 1-6 1.0<br>283 1-3 0.8                | 226 0-1 0.1<br>249 1-0 0.7<br>249 1-3 0.8<br>248 1-5 1.0<br>251 1-7 1.1<br>248 1-1 0.7                | 178 1-2 0.7<br>198 1-3 0.8<br>215 1-3 0.7<br>259 1-2 0.7<br>306 1-7 1.0<br>327 1-9 1.1                | -6<br>-5<br>-4<br>-3<br>-2<br>-1      |
| After<br>High Water  | Rates at spring tides (knots)   | 243 0-3 0.2<br>068 1-0 0.6<br>073 1-8 1.2<br>076 2-1 1.4<br>073 1-6 1.1<br>074 0-9 0.6<br>136 0-1 0.1 | 324 0-5 0.3<br>058 0-6 0.4<br>084 1-7 1.1<br>092 2-1 1.4<br>098 1-6 1.0<br>103 1-1 0.7<br>130 0-2 0.1 | 039 0-1 0.1<br>073 1-4 0.9<br>070 1-8 1.2<br>068 1-6 1.0<br>066 1-1 0.7<br>066 0-7 0.5<br>081 0-2 0.1 | 349 1-6 0.9<br>029 1-3 0.8<br>071 1-4 0.8<br>100 1-5 0.8<br>120 1-3 0.7<br>145 1-1 0.6<br>166 1-2 0.7 | 0<br>+1<br>+2<br>+3<br>+4<br>+5<br>+6 |



## 5606\_5

Tidal Streams referred to HW at SHEERNESS (See also ADMIRALTY Tidal Stream Atlas NP249)

| Hours             | Geographical Position           | A 51°24'5N<br>1 09·9E | B 51°30'5N<br>1 09·5E | C 51°29'5N<br>1 05·9E | D 51°31'6N<br>1 04·0E | E 51°25'3N<br>1 03·9E | F 51°28'8N<br>0 58·6E | G 51°26'2N<br>0 57·2E | H 51°29'3N<br>0 53·8E |
|-------------------|---------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Before High Water | Directions of streams (degrees) | -6 251 0·3 0·2        | 216 0·7 0·5           | 169 0·3 0·1           | 166 0·3 0·2           | 269 0·3 0·2           | 128 0·2 0·1           | 274 0·3 0·2           | 085 0·4 0·2           |
| High Water        | Rates at spring tides (knots)   | -5 256 1·2 0·7        | 246 1·1 0·7           | 241 1·2 0·5           | 227 1·2 0·8           | 245 0·7 0·5           | 249 1·0 0·7           | 254 0·8 0·5           | 252 0·8 0·5           |
| After High Water  | Rates at neap tides (knots)     | -4 258 1·4 0·9        | 269 1·2 0·8           | 254 1·5 0·9           | 238 1·9 1·3           | 254 0·9 0·6           | 260 1·7 1·1           | 242 0·9 0·6           | 256 1·7 1·1           |
|                   |                                 | -3 260 1·4 0·9        | 284 1·4 0·9           | 263 1·5 0·9           | 240 1·8 1·2           | 259 0·9 0·6           | 265 1·7 1·1           | 244 0·7 0·4           | 257 1·7 1·1           |
|                   |                                 | -2 262 1·4 0·9        | 304 1·8 1·2           | 269 1·6 1·0           | 252 1·4 0·9           | 256 0·9 0·6           | 263 1·6 1·1           | 246 0·6 0·4           | 257 1·4 0·8           |
|                   |                                 | -1 271 1·0 0·6        | 311 1·4 0·9           | 286 0·9 0·6           | 255 1·0 0·7           | 264 0·6 0·3           | 261 1·3 0·9           | 249 0·4 0·3           | 257 1·2 0·7           |
|                   |                                 | 0 050 0·2 0·1         | 027 0·5 0·3           | 028 0·5 0·3           | 270 0·1 0·1           | 090 0·1 0·1           | 261 0·5 0·3           | 113 0·3 0·2           | 250 0·3 0·1           |
|                   |                                 | +1 084 1·3 0·9        | 097 1·3 0·8           | 070 1·7 1·0           | 060 1·1 0·7           | 082 0·9 0·6           | 072 0·6 0·4           | 088 1·3 0·8           | 074 1·2 0·7           |
|                   |                                 | +2 082 1·8 1·1        | 096 1·7 1·1           | 075 2·2 1·4           | 059 2·0 1·3           | 079 1·2 0·8           | 080 2·1 1·4           | 075 1·4 0·9           | 076 2·3 1·4           |
|                   |                                 | +3 081 1·5 1·0        | 101 1·7 1·1           | 077 2·0 1·2           | 060 1·9 1·2           | 075 1·0 0·6           | 079 2·4 1·6           | 069 0·9 0·6           | 077 2·4 1·5           |
|                   |                                 | +4 081 1·1 0·7        | 110 1·2 0·8           | 077 1·3 1·0           | 059 1·4 0·9           | 074 0·7 0·4           | 083 1·9 1·2           | 037 0·5 0·3           | 075 1·8 1·1           |
|                   |                                 | +5 084 0·6 0·4        | 123 0·8 0·5           | 083 0·8 0·6           | 062 0·9 0·6           | 070 0·3 0·2           | 081 1·0 0·7           | 326 0·3 0·2           | 071 1·2 0·7           |
|                   |                                 | +6 220 0·1 0·1        | 194 0·6 0·4           | 103 0·4 0·4           | 095 0·3 0·2           | 321 0·1 0·1           | 083 0·2 0·2           | 287 0·3 0·2           | 074 0·8 0·5           |

## 5606\_6

Tidal Streams referred to HW at SHEERNESS (See also ADMIRALTY Tidal Stream Atlas NP249)

| Hours             | Geographical Position           | A 51°33'0N<br>1 00·4E | B 51°32'8N<br>1 03·8E | C 51°31'6N<br>1 04·0E | D 51°40'3N<br>1 04·9E | E 51°35'8N<br>1 07·5E | F 51°32'4N<br>1 08·9E | G 51°35'2N<br>1 10·0E | H 51°34'7N<br>1 15·1E | J 51°33'4N<br>1 15·6E |
|-------------------|---------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Before High Water | Directions of streams (degrees) | 223 0·6 0·4           | 171 0·1 0·1           | 166 0·3 0·2           | 231 0·3 0·2           | 213 0·3 0·2           | 220 0·2 0·1           | 227 0·5 0·3           | 201 0·5 0·3           | 201 0·4 0·3           |
| High Water        | Rates at spring tides (knots)   | 252 1·8 1·2           | 244 1·6 1·0           | 227 1·2 0·8           | 252 1·6 1·0           | 228 1·2 0·8           | 249 1·5 1·0           | 232 1·5 1·0           | 185 1·9 1·2           | 237 1·2 0·8           |
| After High Water  | Rates at neap tides (knots)     | 230 2·3 1·5           | 245 2·3 1·5           | 238 1·9 1·3           | 250 1·9 1·2           | 231 1·5 1·0           | 251 1·9 1·2           | 238 2·0 1·3           | 185 2·1 1·3           | 245 1·5 0·9           |
|                   |                                 | 234 1·8 1·2           | 247 2·3 1·5           | 240 1·8 1·2           | 250 1·8 1·1           | 241 1·5 1·0           | 255 1·8 1·1           | 241 1·9 1·2           | 189 1·9 1·2           | 256 1·5 1·0           |
|                   |                                 | 235 1·5 1·0           | 254 2·2 1·4           | 252 1·4 0·9           | 253 1·4 0·9           | 258 1·6 1·1           | 261 1·5 1·0           | 247 1·5 1·0           | 214 1·2 0·8           | 270 1·3 0·8           |
|                   |                                 | 246 1·1 0·7           | 261 1·3 0·8           | 255 1·0 0·7           | 255 0·8 0·5           | 269 0·6 0·4           | 259 1·0 0·7           | 253 0·8 0·5           | 300 0·4 0·3           | 280 1·0 0·7           |
|                   |                                 | 265 0·2 0·2           | 0·0 0·0               | 270 0·1 0·1           | 039 0·4 0·3           | 075 0·2 0·1           | 0·0 0·0               | 043 0·2 0·1           | 057 1·0 0·6           | 339 0·4 0·2           |
|                   |                                 | 062 1·1 0·7           | 070 1·4 0·9           | 060 1·1 0·7           | 070 1·5 1·0           | 066 1·3 0·9           | 069 0·9 0·6           | 056 1·2 0·8           | 069 1·8 1·2           | 049 1·0 0·6           |
|                   |                                 | 055 2·7 1·8           | 071 2·4 1·5           | 059 2·0 1·3           | 074 2·0 1·3           | 065 1·5 1·0           | 072 1·9 1·2           | 059 1·9 1·3           | 069 2·3 1·5           | 077 1·8 1·2           |
|                   |                                 | 059 2·6 1·7           | 067 2·4 1·5           | 060 1·9 1·2           | 074 1·8 1·1           | 060 1·6 1·1           | 074 2·0 1·3           | 061 1·9 1·3           | 061 2·3 1·5           | 076 1·7 1·1           |
|                   |                                 | 062 1·7 1·1           | 073 2·1 1·4           | 059 1·4 0·9           | 075 1·4 0·9           | 061 1·3 0·9           | 077 1·7 1·1           | 062 1·5 1·0           | 062 1·8 1·1           | 084 1·4 0·9           |
|                   |                                 | 046 1·2 0·8           | 073 1·2 0·8           | 062 0·9 0·6           | 079 0·8 0·5           | 066 0·6 0·4           | 081 1·0 0·7           | 062 0·9 0·6           | 074 1·0 0·7           | 101 0·8 0·5           |
|                   |                                 | 180 0·2 0·1           | 078 0·5 0·3           | 095 0·3 0·2           | 158 0·1 0·1           | 187 0·2 0·1           | 092 0·3 0·2           | 068 0·1 0·1           | 173 0·2 0·1           | 155 0·3 0·2           |

## 5606\_8

Tidal Streams referred to HW at SHEERNESS

## 5606\_7

Tidal Streams referred to HW at SHEERNESS

| Hours             | Geographical Position           | A 51°28'7N<br>0 48·9E | B 51°29'0N<br>0 51·2E |
|-------------------|---------------------------------|-----------------------|-----------------------|
| Before High Water | Directions of streams (degrees) | 264 0·0 0·0           | 342 0·1 0·1           |
| High Water        | Rates at spring tides (knots)   | 276 1·5 1·0           | 273 1·4 0·9           |
| After High Water  | Rates at neap tides (knots)     | 276 2·5 1·5           | 276 1·7 1·1           |
|                   |                                 | 276 2·5 1·5           | 281 1·6 1·0           |
|                   |                                 | 276 1·4 0·9           | 285 1·0 0·7           |
|                   |                                 | 0·0 0·0               | 298 0·3 0·2           |
|                   |                                 | 084 2·0 1·2           | 085 0·4 0·3           |
|                   |                                 | 096 2·8 1·7           | 101 1·6 1·0           |
|                   |                                 | 096 2·9 1·8           | 104 1·8 1·2           |
|                   |                                 | 096 2·6 1·6           | 103 1·4 0·9           |
|                   |                                 | 096 1·7 1·0           | 102 0·8 0·6           |
|                   |                                 | 096 0·9 0·6           | 083 0·2 0·1           |

| Hours             | Geographical Position           | A 51°30'5N<br>0 41·1E |
|-------------------|---------------------------------|-----------------------|
| Before High Water | Directions of streams (degrees) | 256 0·0 0·0           |
| High Water        | Rates at spring tides (knots)   | 277 1·6 1·1           |
| After High Water  | Rates at neap tides (knots)     | 277 1·8 1·2           |
|                   |                                 | 277 1·6 1·1           |
|                   |                                 | 277 1·2 0·8           |
|                   |                                 | 300 0·8 0·6           |
|                   |                                 | 092 0·6 0·4           |
|                   |                                 | 092 1·9 1·3           |
|                   |                                 | 098 2·5 1·7           |
|                   |                                 | 098 1·8 1·2           |
|                   |                                 | 098 0·8 0·6           |
|                   |                                 | 092 0·2 0·2           |

At Diamond A, stream rates may be greater than those shown.

## 5606\_9

Tidal Streams referred to HW at SHEERNESS

| Hours             | Geographical Position           | A 51°25'7N<br>0 42·7E | B 51°26'7N<br>0 44·0E | C 51°26'3N<br>0 44·2E | D 51°27'3N<br>0 45·7E | E 51°28'0N<br>0 48·2E | F 51°28'7N<br>0 48·9E | G 51°29'0N<br>0 51·2E |
|-------------------|---------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Before High Water | Directions of streams (degrees) | 090 0·7 0·2           | 026 0·1 0·0           | 073 0·2 0·1           | 205 0·1 0·1           | 050 0·1 0·0           | 0·0 0·0               | 342 0·1 0·1           |
| High Water        | Rates at spring tides (knots)   | 258 1·1 0·1           | 204 0·6 0·4           | 207 0·4 0·3           | 217 0·6 0·4           | 252 0·3 0·2           | 264 0·8 0·5           | 283 0·6 0·4           |
| After High Water  | Rates at neap tides (knots)     | 260 1·6 0·5           | 200 1·3 0·8           | 209 0·7 0·5           | 242 1·0 0·7           | 261 1·1 0·6           | 276 1·5 1·0           | 273 1·4 0·9           |
|                   |                                 | 251 2·1 0·9           | 199 1·6 1·0           | 193 0·5 0·3           | 246 1·2 0·8           | 264 1·3 0·9           | 276 2·5 1·5           | 276 1·7 1·1           |
|                   |                                 | 248 2·8 1·2           | 202 1·9 1·2           | 216 0·5 0·3           | 250 1·4 0·9           | 261 1·2 0·8           | 276 2·5 1·5           | 281 1·6 1·0           |
|                   |                                 | 249 2·6 1·0           | 202 2·1 1·3           | 235 0·3 0·2           | 241 1·1 0·7           | 255 0·9 0·6           | 276 1·4 0·9           | 285 1·0 0·7           |
|                   |                                 | 243 0·6 0·1           | 201 0·7 0·4           | 019 0·4 0·3           | 263 0·2 0·1           | 250 0·2 0·1           | 0·0 0·0               | 298 0·3 0·2           |
|                   |                                 | 077 2·4 0·9           | 029 1·5 0·9           | 036 1·1 0·7           | 068 1·1 0·7           | 074 0·8 0·5           | 084 2·0 1·2           | 085 0·4 0·3           |
|                   |                                 | 077 3·5 1·5           | 022 1·7 1·1           | 044 1·8 1·2           | 065 1·6 1·1           | 073 1·2 0·8           | 096 2·8 1·7           | 101 1·6 1·0           |
|                   |                                 | 078 2·5 1·3           | 018 1·3 0·9           | 039 1·8 1·2           | 071 1·3 0·9           | 060 1·2 0·8           | 096 2·9 1·8           | 104 1·8 1·2           |
|                   |                                 | 080 1·6 0·7           | 010 0·6 0·4           | 041 1·5 1·0           | 060 0·8 0·5           | 058 0·9 0·6           | 096 2·6 1·6           | 103 1·4 0·9           |
|                   |                                 | 089 1·2 0·4           | 011 0·3 0·2           | 045 0·9 0·6           | 040 0·4 0·3           | 058 0·5 0·3           | 096 1·7 1·0           | 102 0·8 0·6           |
|                   |                                 | 096 0·9 0·3           | 010 0·1 0·1           | 055 0·4 0·3           | 0·0 0·0               | 055 0·2 0·1           | 096 0·9 0·6           | 083 0·2 0·1           |

At Diamonds B, C, D, E and F, stream rates may be greater than those shown.

## 5606\_10(A)

## Tidal Streams referred to HW at SHEERNESS

| Hours             | Geographical Position           | 51°25'7"N<br>0 42·7 E  | 51°26'7"N<br>0 44·0 E  | 51°26'3"N<br>0 44·2 E  | 51°27'3"N<br>0 45·7 E  | 51°28'0"N<br>0 48·2 E  |                                  |
|-------------------|---------------------------------|--|--|--|--|--|----------------------------------|
| Before High Water | Directions of streams (degrees) | 090 0·7 0·2<br>258 1·1 0·1<br>260 1·6 0·5<br>251 2·1 0·9<br>248 2·8 1·2<br>249 2·6 1·0 | 026 0·1 0·0<br>204 0·6 0·4<br>200 1·3 0·8<br>199 1·6 1·0<br>202 1·9 1·2<br>202 2·1 1·3 | 073 0·2 0·1<br>207 0·4 0·3<br>209 0·7 0·5<br>193 0·5 0·3<br>216 0·5 0·3<br>235 0·3 0·2 | 205 0·1 0·1<br>217 0·6 0·4<br>242 1·0 0·7<br>246 1·2 0·8<br>250 1·4 0·9<br>241 1·1 0·7 | 050 0·1 0·0<br>252 0·3 0·2<br>261 1·1 0·6<br>264 1·3 0·9<br>261 1·2 0·8<br>255 0·9 0·6 | -6<br>-5<br>-4<br>-3<br>-2<br>-1 |
| High Water        | Rates at spring tides (knots)   | 243 0·6 0·1  | 201 0·7 0·4  | 019 0·4 0·3  | 263 0·2 0·1  | 250 0·2 0·1  | 0                                |
| After High Water  | Rates at neap tides (knots)     | 077 2·4 0·9<br>077 3·5 1·5<br>078 2·5 1·3<br>080 1·6 0·7<br>089 1·2 0·4<br>096 0·9 0·3 | 029 1·5 0·9<br>022 1·7 1·1<br>018 1·3 0·9<br>010 0·6 0·4<br>011 0·3 0·2<br>010 0·1 0·1 | 036 1·1 0·7<br>044 1·8 1·2<br>039 1·8 1·2<br>041 1·5 1·0<br>045 0·9 0·6<br>055 0·4 0·3 | 068 1·1 0·7<br>065 1·6 1·1<br>071 1·3 0·9<br>060 0·8 0·5<br>040 0·4 0·3<br>000 0·0 0·0 | 074 0·8 0·5<br>073 1·2 0·8<br>060 1·2 0·8<br>058 0·9 0·6<br>058 0·5 0·3<br>055 0·2 0·1 | +1<br>+2<br>+3<br>+4<br>+5<br>+6 |

At Diamonds B, C, D, and E, stream rates may be greater than those shown.

## 5606\_11(C)

Tidal Streams referred to  
HW at DOVER

## 5606\_11(A)

## Tidal Streams referred to HW at SHEERNESS

| Hours             | Geographical Position           | 51°23'3"N<br>0 31·4 E  | 51°24'6"N<br>0 36·1 E  | 51°24'9"N<br>0 38·8 E  | 51°25'2"N<br>0 38·9 E  | 51°25'8"N<br>0 40·7 E  | 51°25'7"N<br>0 42·7 E  |                                  |
|-------------------|---------------------------------|--|--|--|--|--|--|----------------------------------|
| Before High Water | Directions of streams (degrees) | 201 0·3 0·2<br>213 0·7 0·4<br>211 0·7 0·4<br>213 0·5 0·3<br>211 0·7 0·4                | 089 0·5 0·3<br>000 0·0 0·0<br>251 0·9 0·6<br>243 0·8 0·5<br>260 0·7 0·4<br>248 0·8 0·5 | 203 0·4 0·2<br>220 0·9 0·6<br>225 1·2 0·8<br>222 1·4 0·9<br>221 1·3 0·8<br>215 0·9 0·6 | 220 0·3 0·2<br>216 0·8 0·5<br>216 1·4 0·9<br>214 1·3 0·8<br>213 1·7 1·1<br>212 1·5 1·0 | 092 0·6 0·1<br>271 0·7 0·1<br>277 1·4 0·3<br>278 1·6 0·6<br>275 1·7 0·7<br>271 1·3 0·5 | 090 0·7 0·2<br>258 1·1 0·1<br>260 1·6 0·5<br>251 2·1 0·9<br>248 2·8 1·2<br>249 2·6 1·0 | -6<br>-5<br>-4<br>-3<br>-2<br>-1 |
| High Water        | Rates at spring tides (knots)   | 214 0·3 0·2  | 150 0·2 0·2  | 140 0·2 0·1  | 205 0·7 0·5  | 106 0·3 0·1  | 243 0·6 0·1  | 0                                |
| After High Water  | Rates at neap tides (knots)     | 024 0·6 0·4<br>024 1·1 0·7<br>021 0·9 0·6<br>020 0·8 0·5<br>023 0·3 0·2<br>023 0·0 0·0 | 085 1·0 0·7<br>072 1·4 0·9<br>069 1·4 0·9<br>070 1·2 0·8<br>060 0·6 0·4<br>075 0·4 0·3 | 056 1·3 0·8<br>055 1·6 1·1<br>053 1·7 1·1<br>052 1·0 0·6<br>010 0·2 0·1<br>185 0·3 0·2 | 029 1·0 0·7<br>027 0·7 0·5<br>023 0·6 0·4<br>019 0·4 0·3<br>014 0·2 0·1<br>227 0·2 0·1 | 093 2·0 0·7<br>089 2·9 1·2<br>083 2·2 1·2<br>075 1·3 0·8<br>076 0·9 0·4<br>088 0·7 0·2 | 077 2·4 0·9<br>077 3·5 1·5<br>078 2·5 1·3<br>080 1·6 0·7<br>089 1·2 0·4<br>096 0·9 0·3 | +1<br>+2<br>+3<br>+4<br>+5<br>+6 |

| Hours             | Geographical Position           | 51°19'74"N<br>1 27·63 E  |                                  |
|-------------------|---------------------------------|--|----------------------------------|
| Before High Water | Directions of streams (degrees) | 203 1·2 0·7<br>203 1·3 0·7<br>210 1·7 1·0<br>208 1·9 1·1<br>215 1·4 0·8<br>005 0·6 0·4 | -6<br>-5<br>-4<br>-3<br>-2<br>-1 |
| High Water        | Rates at spring tides (knots)   | 021 2·2 1·2  | 0                                |
| After High Water  | Rates at neap tides (knots)     | 030 2·3 1·3<br>032 1·9 1·1<br>043 1·2 0·7<br>073 0·4 0·2<br>195 0·6 0·3<br>203 1·1 0·6 | +1<br>+2<br>+3<br>+4<br>+5<br>+6 |

## 5606\_12(A)

Tidal Streams referred to  
HW at SHEERNESS

| Hours             | Geographical Position           | 51°21'2"N<br>0 55·5 E  |                                  |
|-------------------|---------------------------------|--|----------------------------------|
| Before High Water | Directions of streams (degrees) | 229 0·8 0·5<br>238 1·2 0·8<br>237 0·9 0·6<br>230 1·1 0·7<br>236 1·0 0·6                | -6<br>-5<br>-4<br>-3<br>-2       |
| High Water        | Rates at spring tides (knots)   | 050 0·2 0·1  | -1                               |
| After High Water  | Rates at neap tides (knots)     | 046 1·1 0·7<br>041 1·5 1·0<br>033 1·3 0·8<br>027 0·8 0·5<br>024 0·4 0·3<br>020 0·1 0·1 | +1<br>+2<br>+3<br>+4<br>+5<br>+6 |

Stream rates may be greater than those shown.

## TIME &amp; HEIGHT DIFFERENCES FOR PREDICTING THE TIDE AT SECONDARY PORTS

| PLACE                                   | Lat.<br>N    | Long.<br>E  | TIME DIFFERENCES             |                              |                              |                              | HEIGHT DIFFERENCES (IN METRES)            |            |            |              |
|---|--------------|-------------|------------------------------|------------------------------|------------------------------|------------------------------|---|------------|------------|--------------|
|   |              |             | High Water                   | Low Water                    |                              | Zone UT(GMT)                 | MHWS                                      | MHWN       | MLWN       | MLWS         |
| <b>DOVER</b> .....                      | <b>51 07</b> | <b>1 19</b> | <b>0000<br/>and<br/>1200</b> | <b>0600<br/>and<br/>1800</b> | <b>0100<br/>and<br/>1300</b> | <b>0700<br/>and<br/>1900</b> | <b>6.8</b>                                | <b>5.3</b> | <b>2.1</b> | <b>0.8</b>   |
| Deal .....                              | 51 13        | 1 25        | +0012                        | +0010                        | +0004                        | +0002                        | -0.5                                      | -0.3       | 0.0        | +0.1         |
| Richborough .....                       | 51 18        | 1 21        | +0015                        | +0015                        | +0030                        | +0030                        | -3.4                                      | -2.6       | -1.7       | -0.7         |
| RAMSGATE .....                          | 51 20        | 1 25        | STANDARD PORT                |                              |                              |                              | See Table of NON-REFERENCE STANDARD PORTS |            |            |              |
| <b>MARGATE</b> .....                    | <b>51 23</b> | <b>1 23</b> | <b>0100<br/>and<br/>1300</b> | <b>0700<br/>and<br/>1900</b> | <b>0100<br/>and<br/>1300</b> | <b>0700<br/>and<br/>1900</b> | <b>4.8</b>                                | <b>3.9</b> | <b>1.4</b> | <b>0.5</b>   |
| Broadstairs .....                       | 51 22        | 1 27        | -0020                        | -0008                        | +0007                        | +0010                        | -0.2                                      | -0.2       | -0.1       | -0.1         |
| Herne Bay .....                         | 51 23        | 1 07        | +0022                        | +0020                        | +0019                        | +0017                        | +0.6                                      | +0.3       | +0.2       | +0.1         |
| Whitstable Approaches .....             | 51 22        | 1 02        | +0042                        | +0029                        | +0025                        | +0050                        | +0.6                                      | +0.6       | +0.1       | 0.0          |
| S.E. Long Sand .....                    | 51 32        | 1 21        | -0006                        | -0003                        | -0004                        | -0004                        | 0.0                                       | +0.1       | 0.0        | -0.1*        |
| <b>SHEERNESS</b> .....                  | <b>51 27</b> | <b>0 45</b> | <b>0200<br/>and<br/>1400</b> | <b>0700<br/>and<br/>1900</b> | <b>0100<br/>and<br/>1300</b> | <b>0700<br/>and<br/>1900</b> | <b>5.8</b>                                | <b>4.7</b> | <b>1.5</b> | <b>0.6</b>   |
| Thames Estuary<br>Shivering Sand .....  | 51 30        | 1 05        | -0025                        | -0019                        | -0008                        | -0026                        | -0.6                                      | -0.6       | -0.1       | -0.1*        |
| <b>SHEERNESS</b> .....                  | <b>51 27</b> | <b>0 45</b> | <b>0200<br/>and<br/>1400</b> | <b>0800<br/>and<br/>2000</b> | <b>0200<br/>and<br/>1400</b> | <b>0700<br/>and<br/>1900</b> | <b>5.8</b>                                | <b>4.7</b> | <b>1.5</b> | <b>0.6</b>   |
| River Swale<br>Grovehurst Jetty .....   | 51 22        | 0 46        | -0007                        | 0000                         | 0000                         | +0016                        | 0.0                                       | 0.0        | 0.0        | -0.1         |
| Faversham .....                         | 51 19        | 0 54        | ⊙                            | ⊙                            | ⊙                            | ⊙                            | -0.2                                      | -0.2       | ⊙          | ⊙            |
| River Medway<br>Bee Ness .....          | 51 25        | 0 39        | +0002                        | +0002                        | 0000                         | +0005                        | +0.2                                      | +0.1       | 0.0        | 0.0          |
| Bartlett Creek .....                    | 51 23        | 0 38        | +0016                        | +0008                        | ⊙                            | ⊙                            | +0.1                                      | 0.0        | ⊙          | ⊙            |
| DARNET NESS .....                       | 51 24        | 0 36        | STANDARD PORT                |                              |                              |                              | See Table of NON-REFERENCE STANDARD PORTS |            |            |              |
| Chatham (Lock Approaches) .....         | 51 24        | 0 33        | +0010                        | +0012                        | +0012                        | +0018                        | +0.3                                      | +0.1       | -0.1       | -0.2         |
| Upnor .....                             | 51 25        | 0 32        | +0015                        | +0015                        | +0015                        | +0025                        | +0.2                                      | +0.2       | -0.1       | -0.1         |
| Rochester (Strood Pier) .....           | 51 24        | 0 30        | +0018                        | +0018                        | +0018                        | +0028                        | +0.2                                      | +0.2       | -0.2       | -0.3         |
| Wouldham .....                          | 51 21        | 0 27        | +0030                        | +0025                        | +0035                        | +0120                        | -0.2                                      | -0.3       | -1.0       | -0.3         |
| New Hythe .....                         | 51 19        | 0 28        | +0035                        | +0035                        | +0220                        | +0240                        | -1.6                                      | -1.7       | -1.2       | -0.3         |
| Allington Lock .....                    | 51 18        | 0 30        | +0050                        | +0035                        | ⊙                            | ⊙                            | -2.1                                      | -2.2       | -1.3       | -0.4         |
| River Thames<br>Southend-on-Sea .....   | 51 31        | 0 43        | -0005                        | -0005                        | -0005                        | -0005                        | +0.1                                      | 0.0        | -0.1       | -0.1**       |
| CORYTON .....                           | 51 30        | 0 31        | STANDARD PORT                |                              |                              |                              | See Table of NON-REFERENCE STANDARD PORTS |            |            |              |
| <b>TILBURY</b> .....                    | <b>51 27</b> | <b>0 22</b> | STANDARD PORT                |                              |                              |                              | <b>6.4</b>                                | <b>5.4</b> | <b>1.4</b> | <b>0.5**</b> |
| <b>NORTH WOOLWICH</b> .....             | <b>51 30</b> | <b>0 05</b> | STANDARD PORT                |                              |                              |                              | See Table of NON-REFERENCE STANDARD PORTS |            |            |              |
| <b>LONDON BRIDGE (TOWER PIER)</b> ..... | <b>51 30</b> | <b>0 05</b> | STANDARD PORT                |                              |                              |                              | <b>7.1</b>                                | <b>5.9</b> | <b>1.3</b> | <b>0.5**</b> |
| <b>WALTON-ON-THE-NAZE</b> .....         | <b>51 51</b> | <b>1 17</b> | <b>0000<br/>and<br/>1200</b> | <b>0600<br/>and<br/>1800</b> | <b>0500<br/>and<br/>1700</b> | <b>1100<br/>and<br/>2300</b> | <b>4.2</b>                                | <b>3.4</b> | <b>1.1</b> | <b>0.4</b>   |
| Whitaker Beacon .....                   | 51 40        | 1 06        | +0022                        | +0024                        | +0033                        | +0027                        | +0.6                                      | +0.5       | +0.2       | +0.1*        |
| Holliwell Point .....                   | 51 38        | 0 56        | +0034                        | +0037                        | +0100                        | +0037                        | +1.1                                      | +0.9       | +0.3       | +0.1         |
| River Roach<br>Rochford .....           | 51 35        | 0 43        | +0050                        | +0040                        | §                            | §                            | -0.8                                      | -1.1       | §          | §            |
| River Crouch<br>BURNHAM-ON-CROUCH ..... | 51 37        | 0 48        | STANDARD PORT                |                              |                              |                              | See Table of NON-REFERENCE STANDARD PORTS |            |            |              |

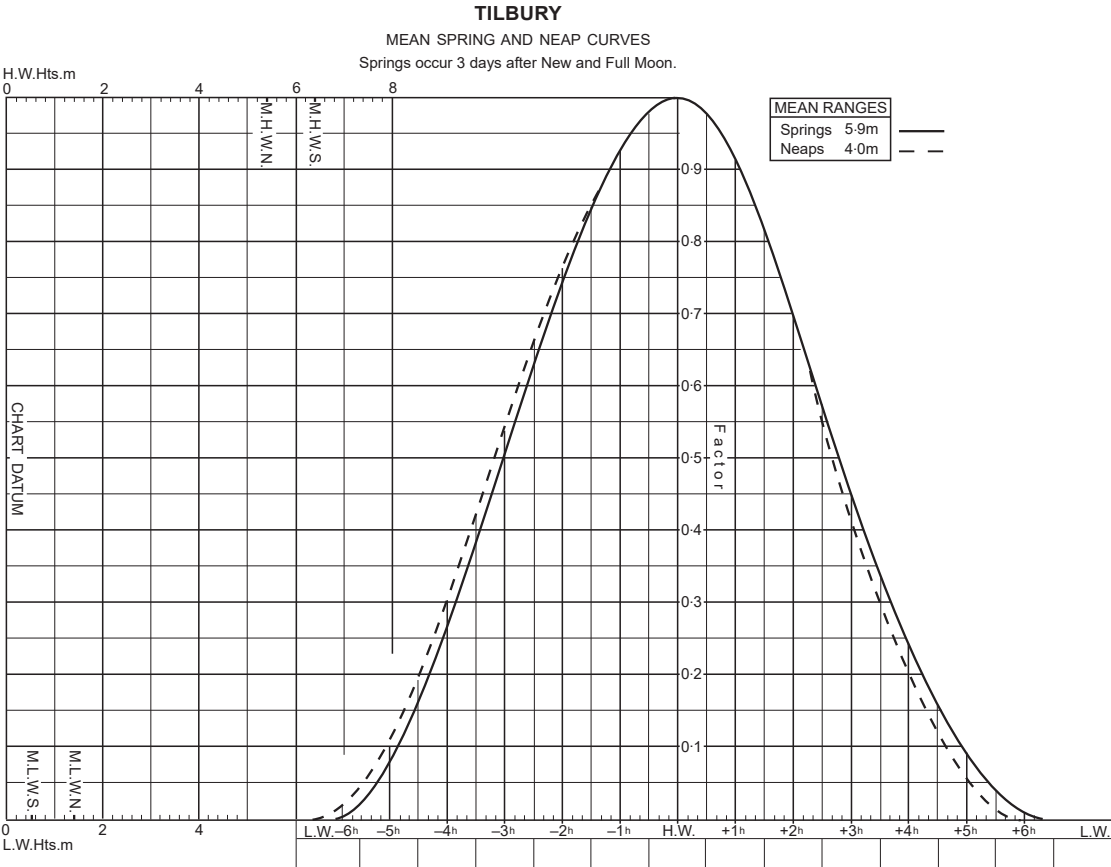
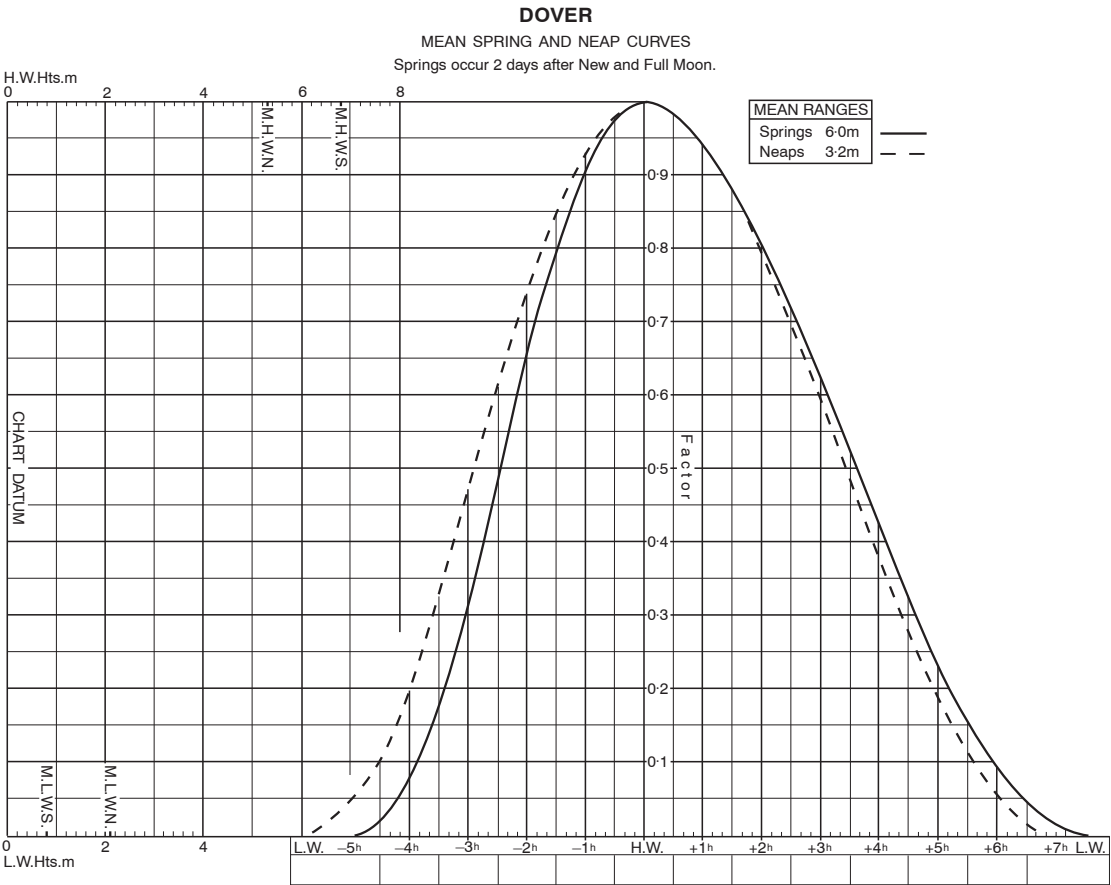
§ Dries out except for river water

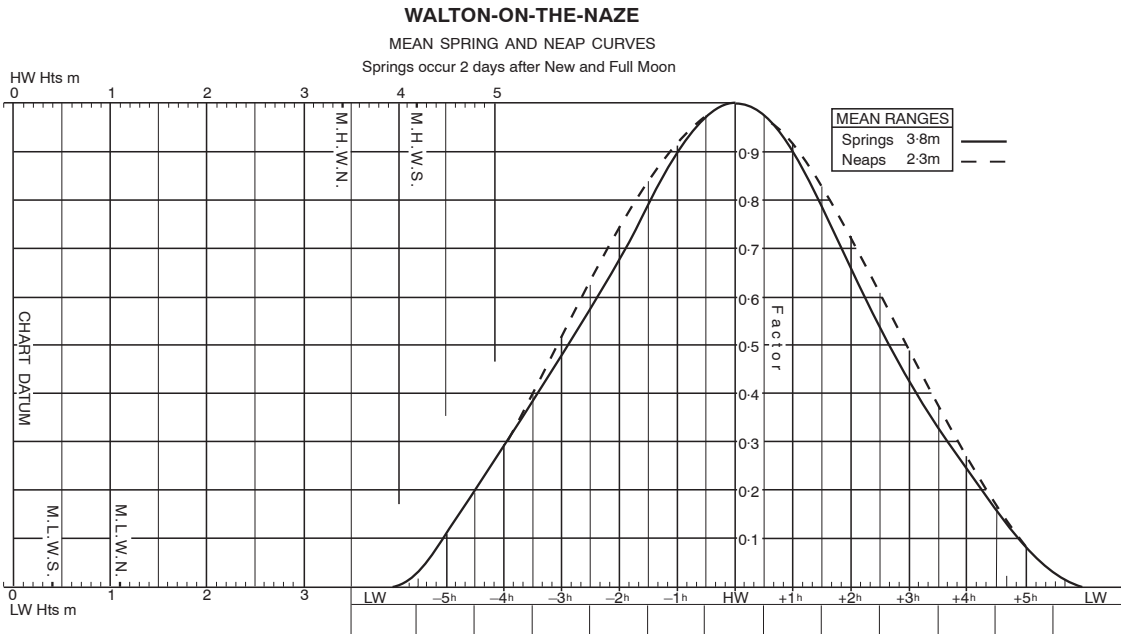
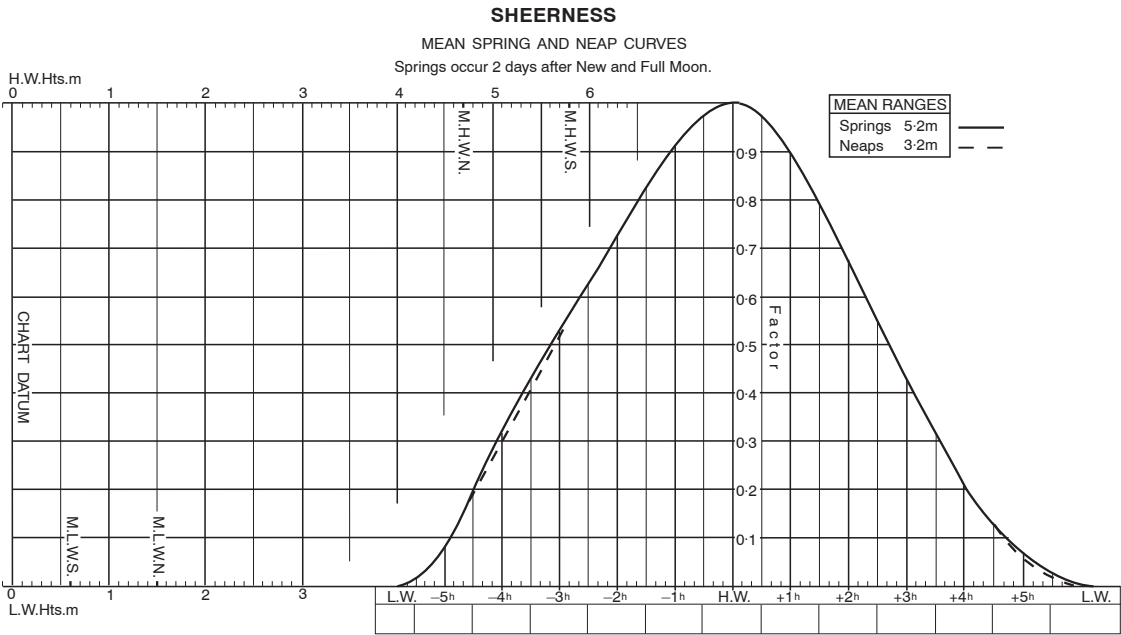
\* Tidal predictions for other places in the Thames Estuary should be obtained from the co-tidal charts contained in "Thames Estuary-Tidal Stream Atlas and Co-tidal Charts" (NP 249).

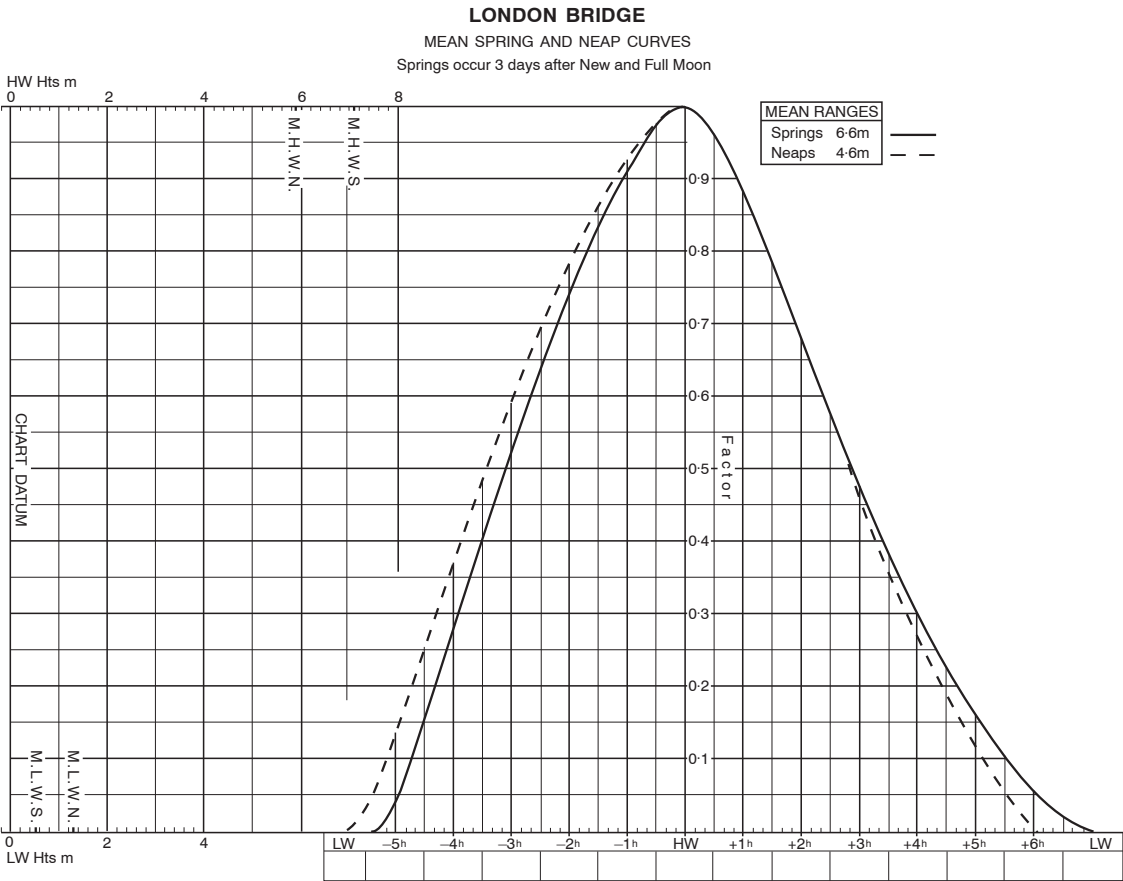
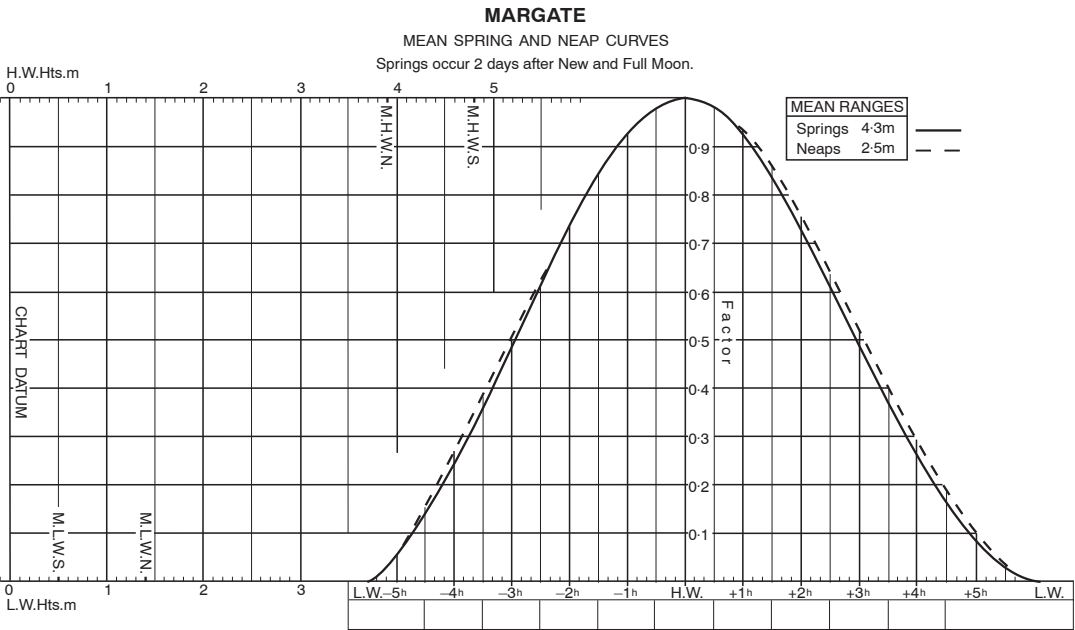
\*\* River water has a marked effect on tidal levels in the River Thames, especially in the upper reaches. The levels given are for a mean flow of 18 cumecs at Teddington Weir. Flows of 650 cumecs have been recorded and, for the latter figure, levels at London Bridge will be approximately 0.3m higher than predictions. The effect decreases down the river and is not noticeable at Southend. Similarly, abnormally low flows can be expected to reduce tidal levels. When the Thames Flood Barrier is closed, levels upstream of the Barrier will be markedly different from predictions.

| Non-Reference Standard Ports |      |      |      |       |
|------------------------------|------|------|------|-------|
| STANDARD PORT                | MHWS | MHWN | MLWN | MLWS  |
| RAMSGATE                     | 5.2  | 4.0  | 1.4  | 0.6   |
| DARNETT NESS                 | 6.0  | 4.8  | 1.5  | 0.5   |
| CORYTON                      | 6.2  | 5.0  | 1.5  | 0.6   |
| NORTH WOOLWICH               | 7.2  | 5.9  | 1.6  | 0.6** |
| BURNHAM-ON-CROUCH            | 5.2  | 4.2  | 1.0  | 0.2   |

Tidal Curve Diagrams







BURNHAM-ON-CROUCH

MEAN SPRING AND NEAP CURVES

Springs occur 2 days after New and Full Moon

