

# The Solent and Approaches

## Coverage Diagram



5600	Chart Title	Natural Scale 1:
1	Outer Approaches to the Solent	150,000
2	Western Solent and Approaches	75,000
3	Eastern Solent and Approaches	75,000
4A	Lymington River	5,000
4B	Continuation of Lymington River	5,000
4C	Isle of Wight Yarmouth Harbour	3,000
4D	Isle of Wight River Yar	12,500
5	Needles Channel	25,000
6A	Beaulieu River	10,000
6B	Continuation of Beaulieu River	10,000
6C	Isle of Wight Newtown River	12,500
6D	Isle of Wight Continuation of Newtown River	12,500
7	Yarmouth to Beaulieu River	25,000
8A	Entrance to River Hamble	5,000
8B	Warsash to Satchell Marsh	5,000
8C	Mercury Yacht Harbour to Bursledon Bridge	5,000
8D	Bursledon Bridge	5,000

5600	Chart Title	Natural Scale 1:
9A	River Hamble to Cowes	25,000
9B	Continuation to Hythe	25,000
10A	River Itchen	10,000
10B	Ashlett Creek	10,000
11	River Test	10,000
12A	Entrance to Portsmouth Harbour	7,500
12B	Continuation of Forton Lake	7,500
12C	Continuation of Stoke Lake	7,500
13	Spithead	25,000
14A	Portsmouth Harbour Approaches to Fareham Lake	7,500
14B	Continuation of Fareham Lake	7,500
15	Portsmouth Harbour Approaches to Port Solent	7,500
16A	Langstone Harbour	20,000
16B	Upper Reaches of Langstone Harbour	20,000
16C	Chichester Harbour Bosham and Fishbourne Channels	20,000
17	Approaches to Langstone and Chichester Harbours	25,000
18A	Isle of Wight Alum Bay	12,500
18B	River Hamble Bursledon to Botley	25,000
18C	Isle of Wight Wootton Creek	10,000
18D	Hillhead Harbour	3,000
18E	Keyhaven	7,500
18F	Isle of Wight Bembridge Harbour	5,000
19	Eastern Approaches to the Solent	25,000
20	Chichester Harbour	20,000
21	Cowes Harbour	3,500
22A	River Medina	3,500
22B	Continuation of River Medina	3,500
22C	River Medina Folly Point to Newport	10,000
	1	

## Notes

## DATUM

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

## OVERHEAD CABLES

Overhead cables may conduct high voltages; contact with 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 upriver.

## MILITARY BEACONS

(PORTSMOUTH) These beacons are positioned for specific military use. They are not intended for general port users.

#### 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.

#### RACING BUOYS

Numerous lit and unlit racing buoys are laid during the period March to December. These buoys are not shown on this chart. Larger scale charts should be consulted for positions and details.

#### 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.

## 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.

### RADIO REPORTING

Vessels 20 metres and over in length are required to contact Hamble Harbour Radio on VHF Channel 68 before entering the river or getting underway and to maintain watch on this frequency while within the harbour limits. For procedures and working details of River Hamble Radio Reporting, see ADMIRALTY List of Radio Signals. **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)

### 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.

### CAUTION

Mariners navigating in the area of these charts should do so with extreme caution as vessels with limited manoeuvrability (large and deep-draught) and other crossing traffic may be encountered.

#### VESSEL REPORTING

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

- Southampton VTS (including Portsmouth)

- Cowes Harbour Radio
- River Hamble Radio Reporting

## PRECAUTIONARY AREA (50°46'.7N 1°18'.8W)

All vessels over 150 metres in length navigating in the Precautionary Area will be given a Moving Prohibited Zone of 1000 metres ahead and 100 metres to either size. Vessels under 20 metres in length will be prohibited from entering this zone. See ADMIRALTY Sailing Directions for details.

GENERAL DIRECTION OF BUOYAGE In the Solent the buoyage direction changes off Egypt Point (50°46'N 1°19'W).

### CABLE AND PIPELINE AREA (56°46'·2N 1°20'·9W)

Mariners are warned not to anchor, dredge, trawl or engage in any other activity which may damage the telephone and high-voltage cables and gas pipelines which exist within the area from Egypt Point to Stansore Point and from Thorness Bay to Inchmery House. Some of these cables and pipelines lie close to the eastern and western limits of the area.

## ANCHORING RESTRICTED

1. Mariners are advised that prior to anchoring in depths greater than 10 metres within the Port of Southampton, permission must be obtained from Southampton Vessel Traffic Service.

 Vessels should not anchor or obstruct navigation in fairways within the Port of Southampton. For further details, see the Southampton Harbour Byelaws, 2003.
 Vessels should not anchor in Navigation Channels within the Dockyard Port of Portsmouth. For further details, see the Dockyard Port of Portsmouth Order 2005.

## CONTROL OF NAVIGATION

Navigation within the Dockyard Port of Portsmouth is subject to provisions made in the Dockyard Port of Portsmouth Order 2005, directions given by the King's Harbour Master (either written or verbal), local notice to mariners and guidance published on the KHM website. For further information, see www.royalnavy.mod.uk/khm/portsmouth

## NAVAL BASE EXCLUSION ZONE

There are mandatory exclusion zones of a minimum 50m and up to 250m around all warships and berths in HM Naval Base and around warships at anchor. Vessels are prohibited from entering these zones without the permission of the King's Harbour Master.

## ANCHORING RESTRICTED

(DOCKYARD OF PORTSMOUTH) Vessels should not anchor in Navigation Channels. For further details, see the Dockyard Port of Portsmouth Order 2005.

#### PERSONAL WATERCRAFT

Any person intending to use Personal Water Craft within the Dockyard Port of Portsmouth is to consult the King's Harbour Master website (www. royalnavy.mod.uk/khm/portsmouth) for current rules and regulations.

### RIVER HAMBLE – REGULATIONS

Anchoring is not permitted between No 1 light beacon ( $50^{\circ}50' \cdot 34N 1^{\circ}18' \cdot 64W$ ) and the M27 bridge ( $50^{\circ}53' \cdot 33N 1^{\circ}17' \cdot 70W$ ). Net fishing and shellfish dredging are permitted only with the written authority of the Harbour Master. Water skiing is prohibited within the harbour limits. A maximum speed limit of 6 knots is in force within the harbour limits; for further details see ADMIRALTY Sailing Directions.

# $\begin{array}{l} PORTSMOUTH-ANCHOR \; BERTHS\\ Anchor \; berths \; for \; large \; vessels \; are \; shown \; lettered\\ thus: \; (A) \\ (A) \end{array}$

## HM Coastguard Services and Safety Information

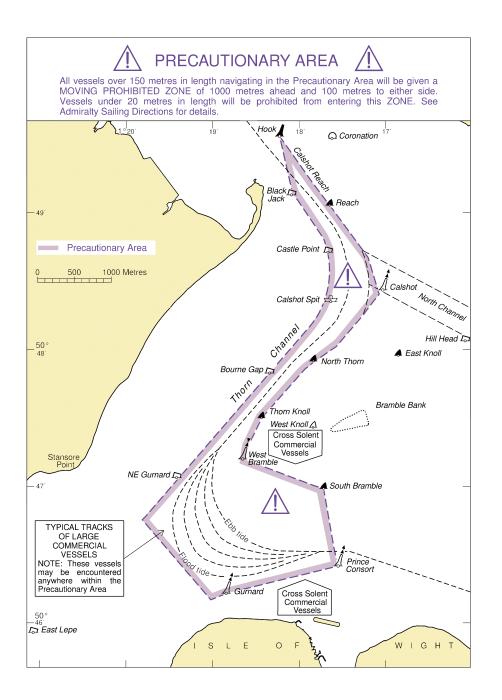
## VHF MARITIME RADIO

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 JRCC (UK) Tel: +44 (0) 2392 552100 MMSI: 002320011 e-mail: Zone17@hmcg.gov.uk (FAO Solent Coastguard)

## MARITIME SAFETY INFORMATION

Maritime Safety Information (MSI) for Selsey Bill to Lyme Regis is broadcast by the Coastguard at 0130, 0430, 0730, 1030, 1330, 1630, 1930 and 2230 (local times). This will include gale warnings, local inshore forecasts and navigational warnings. Mariners should listen to the MSI announcement on VHF Ch 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 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.

## 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**

560	0_	1		т	idal	Stre	eams	s ref	erre	d to I	нw	at P	ORT	SMC	DUT	н		
Hours	$\diamond$	Geograp Positi		♦ <sup>5</sup>		03 N 08W			53 N 08W	<>⁵		54 N 59W		0°30' 1 16	44 N 69W		0°36' 0 58	53 N 09W
After High Water Migh Water 9 G P & C L 1 C C P G	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	053 049 057 053 046 103 242 238 231 232 229 225 053	$\begin{array}{c} 1 \cdot 3 \\ 2 \cdot 0 \\ 2 \cdot 1 \\ 1 \cdot 9 \\ 1 \cdot 3 \\ 0 \cdot 3 \\ 1 \cdot 2 \\ 2 \cdot 3 \\ 2 \cdot 3 \\ 2 \cdot 0 \\ 1 \cdot 2 \\ 0 \cdot 1 \\ 1 \cdot 0 \end{array}$	$ \begin{array}{c} 1 \cdot 0 \\ 1 \cdot 0 \\ 1 \cdot 0 \\ 0 \cdot 6 \\ 0 \cdot 1 \\ 0 \cdot 6 \\ 1 \cdot 1 \\ 1 \cdot 2 \\ 1 \cdot 0 \\ 0 \cdot 6 \\ 0 \cdot 1 \end{array} $	072 088 085 085 066 259 268 261 262 269 283 062	1.2 2.3 2.8 2.6 1.8 0.7 1.3 2.4 3.1 2.6 1.9 0.8 0.9	$\begin{array}{c} 0 \cdot 6 \\ 1 \cdot 2 \\ 1 \cdot 4 \\ 1 \cdot 3 \\ 0 \cdot 9 \\ 0 \cdot 3 \\ 0 \cdot 6 \\ 1 \cdot 2 \\ 1 \cdot 5 \\ 1 \cdot 3 \\ 0 \cdot 9 \\ 0 \cdot 4 \\ 0 \cdot 4 \\ 0 \cdot 4 \end{array}$	075 083 086 098 091 097 255 265 265 265 266 272 063		$\begin{array}{c} 0.3 \\ 0.8 \\ 1.0 \\ 1.0 \\ 0.8 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.9 \\ 1.1 \\ 1.0 \\ 0.7 \\ 0.2 \\ 0.3 \end{array}$	084 100 100 100 290 276 276 276 276 276 294 068	1·2 3·9 4·3 4·1 3·1	$\begin{array}{c} 0.6\\ 1.8\\ 2.2\\ 2.2\\ 1.7\\ 0.6\\ 0.6\\ 1.9\\ 2.1\\ 2.0\\ 1.5\\ 0.6\\ 0.4\\ \end{array}$	083 076 070 066 065 046 268 260 253 245 241 234 083	1.9 1.9 1.8 1.2 0.3 0.9 1.7 2.1 1.8 1.3 0.7	$\begin{array}{c} 0.5 \\ 0.9 \\ 1.0 \\ 0.9 \\ 0.6 \\ 0.1 \\ 0.4 \\ 0.9 \\ 1.0 \\ 0.9 \\ 0.6 \\ 0.3 \\ 0.3 \\ 0.3 \end{array}$

5600\_2

## Tidal Streams referred to HW at PORTSMOUTH

5600\_3

## Tidal Streams referred to HW at PORTSMOUTH

Hours	¢G	eographical Position	$\diamond$	50°30'4 N 1 16·7W	够	50°33'5 N 1 16·7W	$\diamond$	50°38′0 N 1 06∙6W	$\diamond$	50°34'4 N 1 04·5W		50°28'0 N 1 00·1W		50°42'3 N 0 59·5W	Ø	50°36'5 N 0 58·1W		50°40'1 N 0 56·4W		50°38'0N 0 54·6W	
High Water Before P 2 8 7 1 1 2 8 9 2 9 4 9 9 4 9 4 9 4 9 4 9 4 9 4 9 4 9	Directions of streams (degrees)	Rates at spring tides (knots) Rates at neap tides (knots)	084 100 100 100 092 290 276 276 276 276 276 276 276 294 068	$\begin{array}{c} 1 \cdot 2 & 0 \cdot 6 \\ 3 \cdot 6 & 1 \cdot 8 \\ 4 \cdot 5 & 2 \cdot 2 \\ 3 \cdot 5 & 1 \cdot 7 \\ 1 \cdot 3 & 0 \cdot 6 \\ 1 \cdot 2 & 0 \cdot 6 \\ 3 \cdot 9 & 1 \cdot 9 \\ 4 \cdot 3 & 2 \cdot 1 \\ 4 \cdot 1 & 2 \cdot 0 \\ 3 \cdot 1 & 1 \cdot 5 \\ 1 \cdot 2 & 0 \cdot 6 \\ 1 \cdot 2 & 0 \cdot 6 \\ 3 \cdot 9 & 1 \cdot 9 \\ 4 \cdot 3 & 2 \cdot 1 \\ 4 \cdot 1 & 2 \cdot 0 \\ 5 \cdot 1 & 2 \cdot 0 \cdot 6 \\ 0 \cdot 7 & 0 \cdot 4 \end{array}$	072 070 080 079 077 066 262 257 252 260 255 247 075	2·3 1·2 3·7 1·8 3·3 1·6 2·9 1·5 2·4 1·2 0·3 0·1	058 059 053 048 046 051 245 238 238 237 238 057	$\begin{array}{c} 1.4 & 0.7 \\ 1.7 & 0.8 \\ 1.6 & 0.8 \\ 1.5 & 0.8 \\ 1.0 & 0.5 \\ 0.1 & 0.0 \\ 1.1 & 0.6 \\ 1.9 & 0.9 \\ 1.9 & 0.9 \\ 1.5 & 0.7 \\ 0.9 & 0.5 \\ 0.0 & 0.0 \\ 1.1 & 0.5 \end{array}$		$\begin{array}{cccccccccccccccccccccccccccccccccccc$	078 086 083 082 084 259 267 265 263 265 263 265 271 071	0.9 0.5 2.7 1.3 2.8 1.4 2.7 1.4 1.8 0.9 0.5 0.2 0.8 0.4 2.4 1.2	094 085 072 042 353 310 287 275 247 196 170 128 100	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	083	$\begin{array}{ccccc} 0.9 & 0.5 \\ 1.9 & 0.9 \\ 1.9 & 1.0 \\ 1.8 & 0.9 \\ 1.2 & 0.6 \\ 0.3 & 0.1 \\ 0.9 & 0.4 \\ 1.7 & 0.9 \\ 2.1 & 1.0 \end{array}$	085 078 078 065 048 345 282 265 252 236 218 193 095	$\begin{array}{c} 0.7 & 0.3 \\ 1.6 & 0.8 \\ 1.8 & 0.9 \\ 1.5 & 0.8 \\ 0.9 & 0.4 \\ 0.2 & 0.1 \\ 1.3 & 0.7 \\ 1.5 & 0.7 \\ 1.5 & 0.7 \\ 1.6 & 0.8 \\ 1.2 & 0.6 \\ 0.9 & 0.4 \\ 0.4 & 0.2 \\ 0.4 & 0.2 \\ 0.4 & 0.2 \end{array}$	081 082 084 072 060 030 271 266 257 246 241 239 078	$\begin{array}{c} 1 \cdot 1 & 0 \cdot 6 \\ 1 \cdot 9 & 1 \cdot 0 \\ 2 \cdot 2 & 1 \cdot 1 \\ 1 \cdot 9 & 1 \cdot 0 \\ 1 \cdot 3 & 0 \cdot 6 \\ 0 \cdot 3 & 0 \cdot 1 \\ 1 \cdot 0 & 0 \cdot 5 \\ 2 \cdot 1 & 1 \cdot 1 \\ 2 \cdot 0 & 1 \cdot 0 \\ 1 \cdot 7 & 0 \cdot 8 \\ 1 \cdot 3 & 0 \cdot 6 \\ 0 \cdot 5 & 0 \cdot 3 \\ 0 \cdot 7 & 0 \cdot 3 \end{array}$	-6 -5 -4 -3 -2 -1 0 +1 +2 +3

## 5600\_4

Tidal Streams referred to HW at PORTSMOUTH

Hours	G	eograp Positi			<u>م</u> 5	50°42 1 30	′.7N .2W
High Water After High Water After 9 5 7 5 1 apti High Water 1 5 5 7 5 9 5 9	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	-6 -5 -4 -3 -2 -1 0 1 -2 -3 -4 -5 -4 -5 -4 -5 -4 -5 -4 -5 -4 -5 -5 -4 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5		2·4 2·2 1·9 1·0 0·3 1·7 2·7 2·8 2·5 2·0 0·3 2·0	$\begin{array}{c} 1 \cdot 2 \\ 1 \cdot 2 \\ 1 \cdot 1 \\ 0 \cdot 9 \\ 0 \cdot 5 \\ 0 \cdot 1 \\ 0 \cdot 8 \\ 1 \cdot 4 \\ 1 \cdot 2 \\ 1 \cdot 0 \\ 0 \cdot 2 \\ 1 \cdot 0 \end{array}$

5600\_5 Tidal Streams referred to HW at PORTSMOUTH

Hours	$\diamond$	eogra Posit		$\langle \! \diamond \! \rangle$	50°42′9 N 1 38∙6W	₿	50°42'2 N 1 33·9W	$\Diamond$	50°42'1 N 1 32·8W	$\diamond$	50°39'4 N 1 37·4W	€	50°39'0N 1 37·5W	
After High Water 9 5 7 8 2 1 2 8 9 5 9 1 7 8 9 5 9	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	093 100 090 089 260 277 281 270 262 263 074 090	$\begin{array}{c} 0.9 & 0.4 \\ 1.0 & 0.5 \\ 0.8 & 0.4 \\ 0.7 & 0.4 \\ 0.5 & 0.2 \\ 0.4 & 0.2 \\ 0.8 & 0.4 \\ 1.0 & 0.5 \\ 0.9 & 0.5 \\ 0.9 & 0.5 \\ 0.9 & 0.5 \\ 0.8 & 0.4 \\ 0.4 & 0.2 \\ 0.3 & 0.1 \\ 0.8 & 0.4 \end{array}$	121 114 109 108 106 282 291 295 294 292 289 102 119	$\begin{array}{c} 3 \cdot 2 & 1 \cdot 6 \\ 3 \cdot 2 & 1 \cdot 6 \\ 3 \cdot 2 & 1 \cdot 6 \\ 3 \cdot 0 & 1 \cdot 5 \\ 2 \cdot 3 & 1 \cdot 1 \\ 0 \cdot 9 & 0 \cdot 4 \\ 3 \cdot 2 & 1 \cdot 6 \\ 3 \cdot 3 & 1 \cdot 6 \\ 3 \cdot 3 & 1 \cdot 6 \\ 3 \cdot 3 & 1 \cdot 6 \\ 3 \cdot 5 & 1 \cdot 7 \\ 2 \cdot 2 & 1 \cdot 1 \\ 0 \cdot 7 & 0 \cdot 3 \\ 2 \cdot 8 & 1 \cdot 4 \end{array}$	049 053 055 057 064 263 235 233 232 234 238 052 047	$\begin{array}{c} 3.7 & 1.9 \\ 3.9 & 1.9 \\ 3.5 & 1.8 \\ 3.5 & 1.7 \\ 2.5 & 1.2 \\ 0.2 & 0.1 \\ 2.8 & 1.4 \\ 4.0 & 2.0 \\ 4.4 & 2.2 \\ 4.4 & 2.2 \\ 4.4 & 2.2 \\ 2.2 & 1.1 \\ 0.8 & 0.4 \\ 3.3 & 1.6 \end{array}$	070 086 083 081 080 082 278 270 267 250 251 257 062	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	064 076 082 083 074 074 268 268 264 258 245 241 258 048	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	-6 -5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5 +6

Hours	$\diamond$	eographica Position	*	50°42'7 N 1 30·2W	₿	50°44'0N 1 29·2W	$\diamond$	50°44'5 N 1 24·8W	$\diamond$	50°45'4 N 1 22·0W
High Water P High Water 9 5 4 8 5 1 J 7 8 4 5 9	Directions of streams (degrees)	Rates at spring tides (knots) Rates at neap tides (knots)	082 082 082 084 087 235 261 264 265 265 265 266 090 082	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	053 054 055 057 240 235 235 234 232 224 055 052	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	070 070 069 068 066 248 251 255 254 247 066 071	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	065 064 066 062 060 255 245 245 244 244 246 226 084 066	$\begin{array}{cccccccccccccccccccccccccccccccccccc$

## 5600\_7 Tidal Streams referred to HW at PORTSMOUTH

## 5600\_9A

## Tidal Streams referred to HW at PORTSMOUTH

Hours	$\diamond$	eographical Position	$\Diamond$	50°48'4 N 1 17·6W	I Z R N	50°48'3 N 1 15∙4W	$\diamond$	50°47'2N 1 19·3W		50°47'0N 1 16·8W		50°46'9 N 1 19∙3W	¢	50°46'8 N 1 13·9W		50°46'5 N 1 17·6W	$\langle \! \! \! \! \! \rangle$	50°46'3N 1 14·3W	$\Diamond$	50°45'8 N 1 14·5W
After High Water 9 5 8 5 1 1 7 8 9 5 9 1 1 8 6 9 9 1 1 8 7 8 7 1 1 8 7 8 7 8 7 1 1 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8	Directions of streams (degrees)	Rates at spring tides (knots) Rates at neap tides (knots)	022 038 070 058 019 008 232 230 226 205 180 070 025	$\begin{array}{c} 1 \cdot 8 & 0 \cdot 9 \\ 1 \cdot 0 & 0 \cdot 5 \\ 0 \cdot 4 & 0 \cdot 2 \\ 0 \cdot 4 & 0 \cdot 2 \\ 1 \cdot 4 & 0 \cdot 7 \\ 0 \cdot 5 & 0 \cdot 2 \end{array}$	110 101 100 093 303 296 293 290 283 191 139 107 105	$\begin{array}{c} 0.7 & 0.4 \\ 1.1 & 0.5 \\ 1.1 & 0.5 \\ 0.4 & 0.2 \\ 0.3 & 0.1 \\ 1.0 & 0.5 \\ 1.3 & 0.6 \\ 1.2 & 0.6 \\ 0.8 & 0.4 \\ 0.4 & 0.2 \end{array}$	058 056 055 050 043 223 231 236 231 230 226 057	$\begin{array}{c} 1 \cdot 1 & 0 \cdot 5 \\ 1 \cdot 0 & 0 \cdot 5 \\ 1 \cdot 1 & 0 \cdot 5 \\ 1 \cdot 3 & 0 \cdot 6 \\ 0 \cdot 7 & 0 \cdot 3 \\ 0 \cdot 8 & 0 \cdot 4 \\ 2 \cdot 1 & 1 \cdot 0 \\ 1 \cdot 8 & 0 \cdot 9 \\ 1 \cdot 7 & 0 \cdot 8 \\ 1 \cdot 4 & 0 \cdot 6 \\ 0 \cdot 9 & 0 \cdot 4 \\ 0 \cdot 0 & 0 \cdot 0 \end{array}$	<ul> <li>076</li> <li>085</li> <li>085</li> <li>088</li> <li>082</li> <li>093</li> <li>255</li> <li>268</li> <li>268</li> <li>263</li> <li>230</li> <li>167</li> <li>096</li> </ul>	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	052 054 055 051 043 253 234 234 234 234 230 223 072 053	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	112 106 100 096 286 283 285 287 286 270 120 113	$\begin{array}{c} 1 \cdot 7 & 0 \cdot 8 \\ 2 \cdot 0 & 1 \cdot 0 \\ 1 \cdot 9 & 1 \cdot 0 \\ 1 \cdot 4 & 0 \cdot 7 \\ 0 \cdot 4 & 0 \cdot 2 \\ 0 \cdot 6 & 0 \cdot 3 \\ 1 \cdot 6 & 0 \cdot 8 \end{array}$	084 090 091 090 259 267 268 269 269 269 275 083 084	2.5 1.2 2.7 1.3 2.7 1.4 2.2 1.1 0.9 0.4 0.7 0.3 2.8 1.4	107 118 123 121 071 300 295 288 290 296 099 099 101	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	119 116 115 116 124 285 294 293 295 317 115 120	$\begin{array}{c} 1\cdot 3 & 0\cdot 6 \\ 1\cdot 9 & 1\cdot 0 \\ 2\cdot 0 & 1\cdot 0 \\ 1\cdot 2 & 0\cdot 6 \\ 0\cdot 3 & 0\cdot 2 \\ 0\cdot 7 & 0\cdot 3 \end{array}$

## 5600\_10A

Tidal Streams referred to HW at SOUTHAMPTON

Hours	G	eograp Posit			$A^{5}$	0°55′ 1°23′	-03N -39W		0°54′ 1°23′			0°52′ 1°23′	
Before High Water 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 7 8 7 7 8 7 7 8 7 7 8 9 7 7 7 8 9 7 7 7 7 8 9 7 7 7 7 7 7 7 7 7 7 7 7 7	s)	ots)	ts)	-6 -5.5 -4.5 -4.5 -3.5 -2.5	033 024 024 012 027 007 301 353	0.3 1.0 0.6 0.2 0.3 0.1 0.1 0.1	0-2 0-5 0-3 0-1 0-1 0-1 0-0 0-1	043 043 058 070 040 050 - 064	0.2 0.6 0.7 0.4 0.2 0.1 0.0 0.3	0.1 0.3 0.4 0.2 0.1 0.1 0.0 0.2	321 323 327 330 329 338 - 324 324	0.6 0.6 0.5 0.3 0.1 0.0 0.4	0.4 0.4 0.3 0.2 0.1 0.0 0.2
1½ 1 ½ High	streams (dec	ig tides (knots)	o tides (knots)	-2 -1.5 -1 -0.5	024 022 018 017	0.6 0.9 0.9 0.5 0.0	0-3 0-4 0-4 0-3 0-0	058 064 052 058	0.5 0.7 0.7 0.3 0.0	0-3 0-4 0-4 0-1 0-0	321 322 319 316 311	0-9 1-0 0-9 0-6 0-1	0.5 0.6 0.6 0.4
Water	of	spring	neap	+0.5	184	0.3	0.2	241	0.2	0.1	135	0-1	0.0
1 1½	ions	sat	es at	+1+1.5	202 199	0-3	0-2 0-1	-	0.0	0.0	-	0.0	0-0
2 21/2	Directions	Rates	Rates	+2 +2.5	198 189	0·3 0·4	0·2 0·2	-	0.0	0·0 0·0	121	0.0	0.0
High Water	-			+3 +3.5	205 192	0-5 0-7	0·2 0·3	250 244	0.4	0·2 0·3	133 140	0.5	0·3 0·6
Ê!H 4 4½	2			+4 +4.5	182 200	0.9	0.5 0.6	235 243	1.1	0.6 1.0	142 146	1.4	0.9
5 5½				+5 +5.5	196 202	1.6	0.8 0.7	244	1.3	0.6	147 147	1.2	0.8
6				+0.0	108	1.4	0.5	- 244	0.0	0.4	316	0.4	0.2

5600_	11A
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Tidal Streams referred to HW at SOUTHAMPTON

See Not	e -	TIDAL	S	TRE	AM	STA	TIC	<b>NS</b>		
Hours	$\diamond^{\circ}$	eographi Positior				0°54′ 1°23′			0°54′ 1°26′	
After High Water 8 % % % % % % % % % % % % % % % % % % %	Directions of streams (degrees)	Rates at spring tides (knots) Rates at nean tides (knote)	200	$\begin{array}{c} -6\\ -5.5\\ -5\\ -4\\ -3.5\\ -2\\ -1.5\\ -2\\ -1.5\\ -2\\ -1.5\\ -1\\ -0.5\\ 0\\ +0.5\\ +1\\ +1.5\\ +2\\ +3.5\\ +4\\ +4.5\\ +5\\ +5\\ +6\end{array}$	305 205 190 255 225 145 255 265 275 255 225 225 225 225 225 225 225 22	$\begin{array}{c} 0.1 \\ 0.1 \\ 0.1 \\ 0.1 \\ 0.1 \\ 0.1 \\ 0.1 \\ 0.2 \\ 0.3 \\ 0.4 \\ 0.3 \\ 0.2 \\ 0.1 \\ 0.1 \\ 0.0 \\$	$\begin{array}{c} 0.1 \\ 0.1 \\ 0.1 \\ 0.0 \\ 0.1 \\ 0.1 \\ 0.1 \\ 0.1 \\ 0.2 \\ 0.2 \\ 0.2 \\ 0.1 \\ 0.0 \\$	- 2900 - - 2200 2455 - 2400 - 0255 - 288 1288 1288 1288 1288 1288 1288 128	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} 0.0\\ -\\ 0.2\\ -\\ 0.0\\ -\\ 0.0\\ -\\ 0.0\\ -\\ 0.0\\ -\\ 0.0\\ -\\ 0.3\\ -\\ 0.1\\ -\\ 0.0\\ -\\ 0.1\\ -\\ 0.2\\ 0.3\\ 0.3\\ 0.3\\ 0.2\\ 0.3\\ 0.2\\ 0.1\\ \end{array}$

## 5600\_12A

See No	te –	TIDAL S	TRE	EAM	STA	TIC	ONS									Tida	I Str	ream	ns re	ferre	d to	HW	at P	ORI	SMO	DUT	Н			
Hours	G	eographical Position			0°48′ 1°07′	·63N ·19W		0°48′ 1°06′			0°48′ 1°07′			0°48′ 1°06′			0°47′ 1°06′			0°47′ 1°06′	∙73N ∙84W		0°47′ 1°06′			0°47′ 1°06′	∙53N ∙84W		0°47′ 1°06′	
Mater 6	egrees)	(nots) nots)	-6 -5 -4	315 318	0·1 0·1 0·1	0·1 0·2 0·2	027 045 045	0·1 0·1 0·1	0·0 0·1 0·0	336 308 -	0·2 0·2 0·0	0·1 0·1 0·0	272 301 314	0-6 0-8 0-6	0·3 0·4 0·3	355 345 345	0·4 0·2 0·1	0·2 0·1 0·1	335 349 017	0·6 0·6 0·1	0·1 0·0 0·1	326 337 334	0·7 0·9 0·4	0·2 0·3 0·1	323 033 035	0·3 0·2 0·2	0·1 0·1 0·1	336 341 336	1·2 0·9 0·4	0·3 0·3 0·5
High	eams (d	l tides (k tides (k	-3 -2 -1		0.5 0.8 0.9	0·2 0·4 0·5	062 062 055	0·2 0·3 0·2	0·1 0·1 0·0	322 329 354	0.6 1.7 0.9	0·3 0·8 0·5	346 003 007	0.7 1.1 1.1	0·3 0·5 0·6	352 000 016	0·7 1·6 1·5	0∙4 0∙8 0∙8	350 347 337	0·9 2·4 1·8	0·5 1·1 1·1	318 318 332	1.0 2.4 1.9	0·4 1·1 0·9	342 335 344	0·5 0·8 1·2	0·2 0·4 0·5	338 343 342	1.5 2.8 2.8	1∙0 1∙3 1∙2
Water	ns of stre	at spring at neap	0 +1 +2	165	0·5 0·1 0·4	0·2 0·0 0·0	110 210 250	0·1 0·3 0·1	0·1 0·1 0·2	331 150 162	0·3 0·1 0·4	0·1 0·1 0·2	042 114 154	0-6 0-4 0-8	0·3 0·2 0·4	- 161 168	0·0 0·6 0·8	0∙0 0∙3 0∙4	077 152 170	0·4 0·8 0·8	0·3 0·4 0·7	313 187 171	0·2 0·3 0·2	0·1 0·2 0·2	052 129 126	0·4 0·7 0·7	0·2 0·3 0·5	329 165 164	0·4 0·9 1·6	0·2 0·5 1·5
High We	Direction	Rates Rates	+3 +4 +5 +6	148 146	1.6 1.0 0.1 0.1	0·9 0·3 0·2 0·1	243 250 027 027	0·5 0·3 0·1 0·1	0·2 0·0 0·0 0·0	161 142 205 -	1.1 0.9 0.5 0.0	0·5 0·4 0·2 0·0	161 165 175 252	1.1 1.3 0.9 0.4	0·5 0·6 0·5 0·2	168 182 200 342	1.8 0.7 0.1 0.4	0·9 0·4 0·0 0·2	169 169 169 327	2·3 1·6 0·7 0·3	1.0 0.6 0.3 0.1	165 164 183 325	2·4 1·5 0·2 0·6	1.0 0.6 0.1 0.2	131 119 123 307	3·0 1·6 0·3 0·4	0·9 0·5 0·2 0·0	159 155 161 334	4·1 3·0 0·9 0·9	1-9 1-0 0-2 0-3

## 5600\_12(A) continued

(K)	0°47′ 1°06′	·23N ·49W		∙03N ∙29W		
346 339 337 331 334 333	0.8 0.8 0.5 1.1 1.7 2.3	0.2 0.6 0.6 0.8 0.9 0.8	325 320 324 329 331 325	0.9 0.7 0.6 1.1 1.4 1.3	0.2 0.2 0.3 0.7 0.8 0.7	-6 -5 -4 -3 -2 -1
333	0.3	0.3	318	0.7	0.3	0
135 151 154 154 156	0·1 1·1 3·9 1·8 0·2	0·1 1·4 1·4 1·0 0·4	196 156 146 147 149	0·2 0·4 3·6 2·0 0·7	0·0 0·5 1·4 1·1 0·3	+1 +2 +3 +4 +5
346	0.8	0.1	328	0.7	0.1	+6

5600 13

TIDAL STREAM STATIONS Table 5600\_10 Station (, Table 5600\_11 Stations () and () Extensive dredging has taken place in the River Test Deep Water Channel since the observations for these tables were taken. The data for these stations should therefore be used with caution.

TIDAL STREAM STATIONS Table 5600\_12@ and 5600\_15 Extensive capital dredging has taken place within Portsmouth Harbour and the approach channel since the observations for the tidal stream table were taken. The data for these stations should therefore be used with caution.

## Tidal Streams referred to HW at PORTSMOUTH

		-												a						
Hours	$\diamond^{\circ}$	eographical Position	$\bigotimes$	50°46'8N 1 13·9W	1 Z R N	50°47'4 N 1 13·4W	103	50°44'8 N 1 12·6W	$\diamond$	50°46'1N 1 11·9W	€	50°47'0 N 1 11·4W	I CES	50°45'1 N 1 09·5W	$\diamond$	50°45′9 N 1 09∙5W	$\langle \! \! \! \! \! \rangle$	50°45'9 N 1 06∙8W	$\Diamond$	50°46'5 N 1 06·4W
After High Water 9 G F & C L 1 C C F F G D High Water High Water	Directions of streams (degrees)	Rates at spring tides (knots) Rates at neap tides (knots)	112 106 100 096 286 283 285 287 286 270 120 113	$ \begin{array}{c} 1 \cdot 7 & 0 \cdot 8 \\ 2 \cdot 0 & 1 \cdot 0 \\ 1 \cdot 9 & 1 \cdot 0 \\ 1 \cdot 4 & 0 \cdot 7 \\ 0 \cdot 4 & 0 \cdot 2 \\ 0 \cdot 6 & 0 \cdot 3 \\ 1 \cdot 6 & 0 \cdot 8 \\ 2 \cdot 3 & 1 \cdot 2 \\ 2 \cdot 4 & 1 \cdot 2 \\ 1 \cdot 4 & 0 \cdot 7 \\ 0 \cdot 4 & 0 \cdot 2 \\ 0 \cdot 6 & 0 \cdot 3 \\ 1 \cdot 4 & 0 \cdot 7 \\ \end{array} $	117 119 111 096 305 298 294 291 295 125 118 117 117	1.0 0.5 1.5 0.8 1.9 1.0 1.1 0.6	107 109 113 170 269 280 286 293 290 083 097 103 105	1.1 0.6 1.4 0.7 1.2 0.6 0.4 0.2 0.4 0.2 0.8 0.4	110 116 126 134 216 289 295 297 293 325 070 091 106	$ \begin{array}{c} 1 \cdot 2 & 0 \cdot 6 \\ 1 \cdot 7 & 0 \cdot 9 \\ 1 \cdot 7 & 0 \cdot 9 \\ 1 \cdot 7 & 0 \cdot 9 \\ 1 \cdot 1 & 0 \cdot 6 \\ 0 \cdot 2 & 0 \cdot 1 \\ 0 \cdot 9 & 0 \cdot 5 \\ 1 \cdot 5 & 0 \cdot 7 \\ 2 \cdot 0 & 1 \cdot 0 \\ 1 \cdot 6 & 0 \cdot 8 \\ 0 \cdot 3 & 0 \cdot 2 \\ 0 \cdot 4 & 0 \cdot 2 \\ 0 \cdot 5 & 0 \cdot 3 \\ 1 \cdot 0 & 0 \cdot 5 \\ \end{array} $	117 114 108 087 359 321 287 295 292 125 128 128 120	$\begin{array}{cccc} 0.8 & 0.4 \\ 0.6 & 0.3 \\ 0.3 & 0.2 \\ 0.2 & 0.1 \\ 0.4 & 0.2 \\ 1.4 & 0.7 \\ 1.6 & 0.8 \\ 0.8 & 0.4 \\ 0.4 & 0.2 \\ 0.7 & 0.3 \\ 0.8 & 0.4 \end{array}$	110 115 118 120 249 282 289 286 286 008 075 096 107	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	103 109 114 127 176 270 284 288 294 306 087 101	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	085 098 096 094 308 290 277 275 279 255 107 106 089	1.3 0.6	060 075 072 030 312 288 266 257 234 174 103 083 053	$\begin{array}{ccccccc} 0.5 & 0.2 \\ 0.5 & 0.2 \\ 0.5 & 0.2 \\ 0.2 & 0.1 \\ 0.3 & 0.1 \\ 0.4 & 0.2 \\ 0.8 & 0.4 \\ 0.9 & 0.4 \\ 0.4 & 0.2 \\ 0.6 & 0.3 \\ 0.6 & 0.3 \\ 0.3 & 0.1 \\ 0.4 & 0.2 \\ \end{array}$

ATIONS

## 5600\_13 continued $\Diamond$

275 1.

069

50° 1

0. 1 0. 0· 1.

0. 0. 0. 0.

50°45'1 N 1 06·3W

089 0.7 0.4 077 115 1.1 0.5 090 117 1.4 0.7 085 109 0.8 0.4 047 033 0.3 0.1 285 327 0.4 0.2 278

1.2 0.6

1.8 0.9 1.5 0.7

0.4 0.2 0.5 0.3 0.4 0.2 0.6 0.3

 $\otimes$ 

292

293 288

231 152 131

080

ntin	ue	ed		Wa	tream t POF TID	RTSM	NON	TH	
°46'0 N 04∙1 W			Hours	$\diamond^{\circ}$	ieogra Posit		<>>5		63 N 19W
4 0.2 2 0.6 8 0.4 2 0.1 6 0.3 0 0.5 1 0.5 7 0.3 2 0.1 5 0.3 6 0.3 0 0.0 2 0.1	-6 -5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5 +6		After High Water 9 2 4 8 7 1 1 2 8 4 2 9 1 7 8 4 2 9 1 7 8 4 2 9	irections of streams (degree	Rates at spring tides (knots)	Rates at neap tides (knots)	353 315 318 321 329 329 334 231 165 148 148 148 146 000	$\begin{array}{c} 0 \cdot 1 \\ 0 \cdot 1 \\ 0 \cdot 1 \\ 0 \cdot 5 \\ 0 \cdot 8 \\ 0 \cdot 9 \\ 0 \cdot 5 \\ 0 \cdot 1 \\ 0 \cdot 4 \\ 1 \cdot 6 \\ 1 \cdot 0 \\ 0 \cdot 1 \\ 0 \cdot 1 \\ 0 \cdot 1 \end{array}$	$\begin{array}{c} 0 \cdot 1 \\ 0 \cdot 2 \\ 0 \cdot 2 \\ 0 \cdot 2 \\ 0 \cdot 4 \\ 0 \cdot 5 \\ 0 \cdot 2 \\ 0 \cdot 0 \\ 0 \cdot 9 \\ 0 \cdot 3 \\ 0 \cdot 2 \\ 0 \cdot 1 \end{array}$

#### 5600\_16A&C Tidal Streams referred to HW at PORTSMOUTH

Hours	$\diamond^{c}$	Geographical Position	$\otimes$	50°48'2 N 1 01·5W	₿	50°47'3 N 1 01·6W	$\diamond$	50°46'4 N 1 01·3W
Before Before 1 High Water Water	ee	ng tides (knots) ap tides (knots)	045 045 045 045 045 045 045 225	$\begin{array}{c} 0.4 & 0.2 \\ 0.5 & 0.3 \\ 0.6 & 0.3 \\ 1.0 & 0.5 \\ 1.3 & 0.7 \\ 0.7 & 0.4 \\ 0.4 & 0.2 \end{array}$	005 003 004 354 353 355	$\begin{array}{cccc} 0.4 & 0.2 \\ 0.7 & 0.3 \\ 1.5 & 0.7 \\ 2.8 & 1.4 \\ 3.4 & 1.7 \\ 1.9 & 1.0 \\ 0.0 & 0.0 \end{array}$	055 039 040 003 347 323 290	$\begin{array}{cccc} 0.3 & 0.1 \\ 0.4 & 0.2 \\ 0.5 & 0.2 \\ 0.7 & 0.3 \\ 0.9 & 0.5 \\ 0.8 & 0.4 \\ 0.4 & 0.2 \end{array}$
High Water	irections of	Rates at spring Rates at neap	225 225 225 225 225 225 045	$\begin{array}{cccc} 0\cdot 4 & 0\cdot 2 \\ 0\cdot 5 & 0\cdot 3 \\ 1\cdot 6 & 0\cdot 8 \\ 1\cdot 4 & 0\cdot 7 \\ 0\cdot 2 & 0\cdot 1 \\ 0\cdot 4 & 0\cdot 2 \end{array}$	171 167 171 157 171	$\begin{array}{cccc} 1\cdot 5 & 0\cdot 7 \\ 3\cdot 1 & 1\cdot 5 \\ 2\cdot 9 & 1\cdot 4 \\ 1\cdot 7 & 0\cdot 9 \\ 0\cdot 5 & 0\cdot 3 \\ 0\cdot 0 & 0\cdot 0 \end{array}$	218 190 153 148 145 110	$\begin{array}{cccc} 0\cdot 4 & 0\cdot 2 \\ 0\cdot 4 & 0\cdot 2 \\ 2\cdot 4 & 1\cdot 2 \\ 2\cdot 4 & 1\cdot 2 \\ 1\cdot 1 & 0\cdot 6 \\ 0\cdot 4 & 0\cdot 2 \end{array}$

Note: In positions to F inclusive, the streams follow with the channels

tI	ne stre	eams follow	with the	cnanr	neis.
	Pos	sition		Max <i>(kno</i> Sp	
	$\diamond$	50°49'2 N 0 52·2W	Flood Ebb	0·9 1·5	-
	¢	50°48'5 N 0 51.9W	Flood Ebb	1·0 2·4	0.5 1.0
	\$	50°48'4 N 0 50·2W	Flood Ebb	0·5 0·7	-

560	0_	17		Ti	idal	Streams	refe	rred to I	IW a	t PORTS	SMO	UTH				
Hours	$\diamond^{\circ}$	Geographical Position	$\Diamond$	50°46'0N 1 04·1W	₿	50°43'7 N 1 03∙9W	$\diamond$	50°47'3 N 1 01·6W	$\diamond$	50°46'4N 1 01∙3W	€	50°45'3 N 0 59∙7W	50°46'9 N 0 56·1W	$\diamond$	50°44'1 N 0 53·3W	
High Water 95 f b 25 L 95 f b 25 L 95 f b 25 L 1 2 5 f 5 g 9 1 7 5 f 5 g 9 1 7 5 f 9 1 7 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	irections of streams (degree	Rates at spring tides (knots) Rates at neap tides (knots)	077 090 085 047 285 278 275 270 227 121 112 069	$ \begin{array}{cccccc} 0.4 & 0.2 \\ 1.2 & 0.6 \\ 0.8 & 0.4 \\ 0.2 & 0.1 \\ 0.6 & 0.3 \\ 1.0 & 0.5 \\ 1.1 & 0.5 \\ 0.7 & 0.3 \\ 0.2 & 0.1 \\ 0.5 & 0.3 \\ 0.6 & 0.3 \\ 0.0 & 0.0 \\ 0.2 & 0.1 \\ \end{array} $	122 129 129 114 335 314 311 313 168 149 141 111	$ \begin{array}{ccccc} 0.6 & 0.3 \\ 1.2 & 0.6 \\ 1.3 & 0.7 \\ 0.5 & 0.3 \\ 0.4 & 0.2 \\ 1.0 & 0.5 \\ 1.5 & 0.8 \\ 1.7 & 0.9 \\ 1.0 & 0.5 \\ 0.2 & 0.1 \\ 0.9 & 0.5 \\ 0.7 & 0.3 \\ 0.4 & 0.2 \\ \end{array} $	005 003 004 354 353 355 171 167 171 157 171	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	055 039 040 003 347 323 290 218 190 153 148 145 110	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	072 082 073 038 320 301 279 259 230 152 128 118 075	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Max Rates (knots) Flood Sp 2.8. Flood Np 1.0. Ebb Sp 6.4. Ebb Np 1.2.	090 096 095 093 298 290 283 272 246 190 092	0001	$ \begin{array}{r} -6 \\ -5 \\ -4 \\ -3 \\ -2 \\ -1 \\ 0 \\ +1 \\ +2 \\ +3 \\ +4 \\ +5 \\ +6 \\ \end{array} $

## 5600\_19 Tidal Streams referred to HW at PORTSMOUTH

Hours	$\diamond$	eographica Position		50°43'7 N 1 03·9W	₿	50°42'3 N 0 59·5W	$\diamond$	50°41'6N 0 57·2W	$\diamond$	50°40′5 N 1 03·5W
High Water E Before 9 G F & C T and High Water 1 C C F C D and High Water	Directions of streams (degrees)	Rates at spring tides (knots) Rates at neap tides (knots)	122 129 129 144 335 314 311 311 313 168 149 141 111	$ \begin{array}{ccccc} 0 \cdot 6 & 0 \cdot 3 \\ 1 \cdot 2 & 0 \cdot 6 \\ 1 \cdot 3 & 0 \cdot 7 \\ 0 \cdot 5 & 0 \cdot 3 \\ 0 \cdot 4 & 0 \cdot 2 \\ 1 \cdot 0 & 0 \cdot 5 \\ 1 \cdot 5 & 0 \cdot 8 \\ 1 \cdot 7 & 0 \cdot 9 \\ 1 \cdot 0 & 0 \cdot 5 \\ 0 \cdot 2 & 0 \cdot 1 \\ 0 \cdot 9 & 0 \cdot 5 \\ 0 \cdot 7 & 0 \cdot 3 \\ 0 \cdot 4 & 0 \cdot 2 \\ \end{array} $	094 085 072 353 310 287 275 247 196 170 128 100	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	083 081 073 046 012 324 285 267 248 205 179 160 088	$\begin{array}{ccccccc} 1 \cdot 0 & 0 \cdot 5 \\ 1 \cdot 2 & 0 \cdot 6 \\ 1 \cdot 2 & 0 \cdot 6 \\ 0 \cdot 9 & 0 \cdot 5 \\ 0 \cdot 8 & 0 \cdot 4 \\ 1 \cdot 3 & 0 \cdot 7 \\ 1 \cdot 6 & 0 \cdot 8 \\ 1 \cdot 4 & 0 \cdot 7 \\ 1 \cdot 1 & 0 \cdot 6 \\ 1 \cdot 1 & 0 \cdot 6 \\ 0 \cdot 9 & 0 \cdot 4 \\ 0 \cdot 8 & 0 \cdot 4 \end{array}$	042 044 045 048 317 228 225 223 221 215 180 040	$\begin{array}{cccccccccccccccccccccccccccccccccccc$

5600\_20

Hours	$\diamond^{\circ}$	ieogra Posit		$\otimes$	50°4 0 5	9°6 N 6∙8W	⊗	50°4 0 54	7'8 N 4·1W
After High Water & High Water 9 G P & N J a J C V P G 9	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	010 020 015 010 009 200 187 187 199 215	0.1 0.2 0.0 0.5 0.8 0.7 0.4 0.1 0.2 1.1 0.7 0.2 0.0	$\begin{array}{c} 0 \cdot 1 \\ 0 \cdot 1 \\ 0 \cdot 0 \\ 0 \cdot 2 \\ 0 \cdot 4 \\ 0 \cdot 3 \\ 0 \cdot 2 \\ 0 \cdot 1 \\ 0 \cdot 5 \\ 0 \cdot 3 \\ 0 \cdot 1 \\ 0 \cdot 5 \\ 0 \cdot 3 \\ 0 \cdot 1 \\ 0 \cdot 0 \end{array}$	023 025 023 022 009 226 223 217 220 223 005	0.0 0.7 1.2 1.6 0.7 0.7 0.5 1.7 1.5	$\begin{array}{c} 0.2 \\ 0.2 \\ 0.0 \\ 0.3 \\ 0.6 \\ 0.8 \\ 0.3 \\ 0.4 \\ 0.2 \\ 0.8 \\ 0.5 \\ 0.5 \\ 0.1 \end{array}$

 Tidal Streams referred to HW at PORTSMOUTH

 50°49'6N
 50°47'8N

 0 56'8W
 50°47'8N

 0 54'1W
 Note: In positions to to to the channels.

ι	le streams follow with the chamiles.											
	F	Position		Max <i>(kno</i> Sp	Rate o <i>ts)</i> Np							
	$\diamond$	50°49'2 N 0 52·2W	Flood Ebb	0∙9 1∙5	-							
	$\diamond$	50°48'5 N 0 51·9W	Flood Ebb	1.0 2.4	0.5 1.0							
	¢	50°48'0N 0 56·5W	Flood Ebb	2·0 1·2	0.6 0.7							
	¢	50°46'9N 0 56·1W	Flood Ebb	2·8 6·4	1.0 1.2							

## TIME & HEIGHT DIFFERENCES FOR PREDICTING THE SECONDARY PORTS ENGLAND, SOUTH COAST WITH TIDES

PLACE	Lat. N	Long. W		Water	ERENCES Low \ JT(GMT)		HEIGHT I MHWS		NCES (IN MLWN	METRES MLWS	)
PORTSMOUTH	50 48	1 07	<b>0005</b> and <b>1700</b>	<b>1000</b> and <b>2200</b>	0000 and 1200	<b>0600</b> and <b>1800</b>	4.7	3.8	1.9	0.8	d
Hurst Point	50 42	1 33	-0115	-0005	-0030	-0025	-2.0	-1.5	-0.5	-0.1	а
LYMINGTON	50 46	1 32		STANDA	RD PORT		See Table of	NON-REFER	RENCE STAN	DARD PORT	S
Bucklers Hard	50 48	1 25	-0040	-0010	+0010	-0010	-1.0	-0.8	-0.2	-0.3	а
Stansore Point	50 47	1 20	-0030	-0010	-0005	-0015	-0.7	-0.5	-0.3	-0.3	а
Isle of Wight											
Yarmouth	50 42	1 30	-0105	+0005	-0025	-0030	-1.7	-1.2	-0.3	0.0	а
Totland Bay	50 41	1 33	-0130	-0045	-0035	-0045	-2.2	-1.7	-0.4	-0.1	а
Freshwater Bay	50 40	1 31	-0210	+0025	-0040	-0020	-2.1	-1.5	-0.4	0.0	а
Ventnor	50 36	1 12	-0025	-0030	-0025	-0030	-0.8	-0.6	-0.2	+0.2	
Sandown	50 39	1 09	0000	+0005	+0010	+0025	-0.6	-0.5	-0.2	0.0	
Foreland (Lifeboat Slip)	50 33	1 04	-0005	0000	+0010	+0023	+0.1	+0.1	0.0	+0.1	
	50 41	1 04	-0005	-0005	+0005	+0010	+0.1		0.0	+0.1	
Bembridge Approaches	50 42 50 42		+0020	-0005	+0100	+0005	-1.5	+0.1		-1.0	
Bembridge Harbour Ryde	50 42 50 44	1 07 1 10	+0020 -0010	-0010	-0005	-0020	-0.1	-1.4 0.0	-1.3 0.0	-1.0	
Medina River											
COWES	50 46	1 18		STANDA	RD PORT		See Table of	NON-REFE	RENCE STAN		S
Folly Inn	50 44	1 17	-0015	+0015	0000	-0020	-0.6	-0.4	-0.1	+0.2	0
Newport	50 42	1 17	0010	0010	0	0020	-0.6	-0.4	+0.1	+0.8	
Newport	30 42	1 17			0		-0.0	-0.4	+0.1	+0.0	
			0400	1100	0000	0600					
SOUTHAMPTON	50 53	1 24	and <b>1600</b>	and <b>2300</b>	and <b>1200</b>	and <b>1800</b>	4.5	3.7	1.8	0.5	b, c
Calshot Castle	50 49 50 55	1 18 1 28	0000 -0020	+0025 +0005	0000 0000	0000 -0005	0.0 -0.1	0.0 -0.1	+0.2 -0.1	+0.3 -0.1	c c
Redbridge	50 55	1 20	-0020	+0005	0000	-0005	-0.1	-0.1	-0.1	-0.1	C
River Hamble	50 F1	1 10									_
WARSASH	50 51	1 18			RD PORT	.0010			RENCE STAN		S
Bursledon	50 53	1 18	+0020	+0020	+0010	+0010	+0.1	+0.1	+0.2	+0.2	
PORTSMOUTH	50 48	1 07	<b>0500</b> and <b>1700</b>	<b>1000</b> and <b>2200</b>	<b>0000</b> and <b>1200</b>	<b>0600</b> and <b>1800</b>	4.7	3.8	1.9	0.8	d
Lee-on-the-Solent	50 48	1 12	-0005	+0005	-0015	-0010	-0.2	-0.1	+0.1	+0.2	
Selsey Bill	50 44	0 47	+0010	-0010	+0035	+0020	+0.5	+0.3	-0.1	-0.2	
Nab Tower	50 40	0 47	+0010	0000	+0035	+0020	-0.2	0.0	+0.2	0.0	
Langstone Harbour Entrance	50 48	1 01	0000	-0015	0000	-0010	+0.1	+0.1	0.0	0.0	
CHICHESTER HARBOUR ENTRANCE	50 47	0 56	<b>0500</b> and <b>1700</b>	<b>1000</b> and <b>2200</b>	0000 and 1200	<b>0600</b> and <b>1800</b>	4.9	4.0	1.9	0.9	
Chichester Harbour			1700	2200	1200	1000					
Northney	50 50	0 58	+0020	+0010	0000	+0005	0.0	-0.2	-0.2	-0.4	
Bosham	50 50	0 52	+0010	+0005	0	0	0.0	-0.1	o	0	
Itchenor	50 48	0 52	+0005	0000	-0010	+0005	-0.1	-0.2	-0.2	-0.3	
Dell Quay	50 49	0 49	+0015	+0010	0	0	0.0	-0.1	0	0	

No Data

a. In the approaches to and within the Western Solent double high waters occur at or near springs; on other occasions there is a stand which lasts about 2 hours. The time differences refer to the first high water when there are two and are approximate.

b. With a north-east and high barometer, tidal heights at Southampton may be as much as 0.6m less than predictions.

Non-Reference Standard Ports													
STANDARD PORT	MHWS	MHWN	MLWN	MLWS									
LYMINGTON	3.1	2.6	1.5	0.7									
COWES	4.4	3.7	1.9	0.9									
WARSASH	4.5	3.8	1.9	0.8									

c. For intermediate heights use the Standard Curve for Southampton.

d. Strong winds between north-east and south-east coupled with high barometric pressures may reduce predicted levels by up to 1m and delay times of high and low waters by up to 1 hour. Strong winds from the West coupled with low barometric pressures may increase predicted levels and advance predicted times by a similar amount.

Owing to the complicated variations in tide between Portland and Portsmouth, the time and height differences will only give approximate predictions. For a more accurate representation of tidal curves and guidance on the use of Standard Curve diagrams see ADMIRALTY Tide Tables NP201A. For Tidal Streams refer to ADMIRALTY Tidal Stream Atlas NP337.

