



ADMIRALTY

Symbols and Abbreviations used on Paper Charts



UK Hydrographic
Office



NP5011
The official IHO guidance manual INT1
8th Edition
2020



UK Hydrographic
Office

NP5011
INT1
Edition 8 - 2020



SYMBOLS and ABBREVIATIONS

used on Paper Charts

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




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INTRODUCTION

General NP5011 is primarily a key to symbols and abbreviations used on ADMIRALTY and International paper and raster charts and leisure folios compiled by the UK Hydrographic Office (UKHO). Variations may occur on charts adopted into the ADMIRALTY Series that were originally produced by another hydrographic office. Where these symbols and abbreviations are easily understood they will not be included as examples in this publication. Symbols and abbreviations shown on Electronic Chart Display and Information Systems (ECDIS) may differ from those described in this document; a key to such symbols is available: NP5012.

Schematic Layout of NP5011 This edition of NP5011 is based on the International Hydrographic Organization (IHO) Publication S-4 Parts B and C "Chart Specifications of the IHO" adopted in 1982, with later additions and updates.

Tracks, Routes **M**

Tracks Marked by Lights → P		Leading Beacons → Q		Tracks			
⑤ 1	 2 Bns # 270-5°	④	Leading line (the firm line is the track to be followed)	④	 Bns in Line 270°30'	③	433.1 433.2 433.3
	 2 Bns # 270-5°	⑥		⑦	 Ldg Bns 270-5°	⑧	
				⑨	 270-5°		

- ① Section.
- ② Section designation. (In some nautical publications, this reference is pre-fixed "I", for International.)
- ③ Sub-section.
- ④ Cross-reference to terms in other sections.
- ⑤ Column 1: Numbering following the International "Chart Specifications of the IHO". A letter in this column, e.g. a, indicates a supplementary national symbol for which there is no International equivalent.
- ⑥ Column 2: International (INT) symbols used on paper and raster charts. True to scale representations are to the left of symbols, where both are shown.
- ⑦ Column 3: Term and explanation in English.
- ⑧ Column 4: Other symbol or abbreviation used on paper and raster charts, if different from Column 2. May be obsolescent or non-International.
- ⑨ Column 5: Not navigationally significant. Cross references to the "Chart Specifications of the IHO", S-4 (Part B, unless a reference letter to another part is given).

The mark † indicates that this representation or usage is obsolescent.

The mark # in Columns 2, 3 and 4 indicates that this symbol will only be found on paper charts adopted into the chart series. However, users should note that on such charts additional or different symbols not listed in this publication may be used. Where not easily understood, such symbols will be explained on those charts.

Metric Charts & Fathoms Charts Metric units are introduced on charts as they are modernised. Remaining Fathom and/or feet charts can be distinguished from metric charts by the use of grey for land areas, a note in the title block and in some cases by a prominent legend in the margin.

Chart Datum On metric charts, the reference level for soundings is given under the chart title. On fathoms charts, the reference level for soundings may be given under the title; if not, it can be deduced from the tidal information panel.

Depths The units used are given under the title of the chart. The position of a sounding is the centre of the area covered by the figures.

On metric charts, depths of less than 21m are generally expressed in metres and decimetres. Where source information is sufficiently precise, depths between 21m and 31m may be given in half-metres. All other depths are rounded down to whole metres.

On fathom charts, depths are generally expressed in fathoms and feet where less than 11 fms, and in fathoms elsewhere. Where source information is sufficiently precise, depths between 11 and 15 fms may be given in fathoms and feet. Older charts may show fractions of fathoms in depths of 10 fathoms or less, and some large-scale charts show all depths in feet.

On adopted or co-produced charts these ranges may vary.

Drying heights Underlined figures on rocks and banks which uncover indicate heights above chart datum. They are given in metres and decimetres or in feet as appropriate.

<i>Heights</i>	Heights are given in metres or in feet above the charted height datum; details are given in the Explanatory Notes under the chart title. The position of a height is normally that of the dot alongside it, thus ·79. Parentheses are used when the figure expressing height is set apart from the object (e.g. when showing the height of a small islet). Clearance heights may be referred to a higher datum than other heights. In such cases this will be stated in the Explanatory Notes.
<i>Bearings</i>	Bearings are given from seaward and refer to the true compass.
<i>Names</i>	<p>Names on ADMIRALTY charts are spelt in accordance with the principles and systems approved by the Permanent Committee on Geographical Names for British Official Use.</p> <p>A second name may be given, usually in parentheses, in the following circumstances:</p> <ol style="list-style-type: none">if the retention of a superseded rendering will facilitate cross-reference to related publications;if, in the case of a name that has changed radically, the retention of the former one will aid recognition;if it is decided to retain an English conventional name in addition to the present official rendering.
<i>Chart Catalogues</i>	Details of ADMIRALTY charts are given in the "Catalogue of ADMIRALTY Charts and Publications" (NP131), and regional catalogue "North West Europe" (NP109), both published annually, and in the ADMIRALTY online Catalogue.
<i>The Mariner's Handbook and other Publications</i>	<p>The Mariner's Handbook (NP100) includes information on the following:</p> <p>The use of charts and the degree of reliance that may be placed on them; chart supply and updating; depth and height datums; names; related publications; navigation (including regulations, routeing, hazards and aids to navigation); tides and currents; general marine meteorology. A glossary of terms used on ADMIRALTY charts is also given.</p> <p>Information about features represented on charts can also be found in the following publications or their digital equivalents:</p> <p>ADMIRALTY Sailing Directions; ADMIRALTY List of Lights and Fog Signals; ADMIRALTY Tide Tables and Tidal Stream Atlases; ADMIRALTY List of Radio Signals; Annual Notices to Mariners; IALA Maritime Buoyage System.</p>
<i>How to Keep Your ADMIRALTY Products Up-to-Date</i>	How to Keep Your ADMIRALTY Products Up-to-Date (NP294) provides comprehensive guidance on how to update both paper and digital ADMIRALTY charts and publications.
<i>Copyright</i>	ADMIRALTY charts and publications (including this one) are protected by Crown Copyright. They are derived from Crown Copyright information and from copyright information published by other organisations. They may not be reproduced in any material form (including photocopying or storing by electronic means) without prior permission of the copyright owners, which may be sought by applying, in the first instance, to the Copyright Manager, The UK Hydrographic Office, Admiralty Way, Taunton, Somerset TA1 2DN, UK.

Chart Number, Title, Marginal Notes **A**

Magnetic Features → B	Tidal Data → H	Satellite Navigation Systems → S
① Chart number in the series.		251
② Chart number in the International (INT) Chart series.		251.1
③ Use of WGS84 geodetic reference system. A reference to the depth units may be shown.		201 255.3
④ Publication note (imprint) showing the date of publication as a New Chart.		252.1 252.4
⑤ Reproduction and Copyright acknowledgement note. All ADMIRALTY charts are subject to Crown Copyright restrictions.		253
⑥ Customer Information: Edition Number and Date. (Charts revised prior to May 2000 have New Edition date at bottom right of chart)		252.2
⑦ Notices to Mariners: (a) the year dates and numbers of Notices to Mariners and (b) the dates (usually bracketed) of minor updates included in reprints but not formally promulgated (abandoned as a method of updating in 1986). (Charts revised prior to May 2000 have the legend 'Small corrections').		252.3
⑧ Dimensions of the inner neat-lines of the chart border in millimetres. In the case of charts on Transverse Mercator and Gnomonic projections, dimensions may be quoted for all borders of the chart which differ. Some Fathoms charts show the dimensions in inches e.g. (38.40 x 25.40).		222.3 222.4
⑨ Corner co-ordinates.		214
⑩ Chart title. This should be quoted, in addition to the chart number, when ordering a chart.		241.3
⑪ Explanatory notes on chart content; to be read before using the chart.		242
⑫ Seals. Where a chart is in the International Chart series, the seal of the International Hydrographic Organization (IHO) is shown in addition to the national seal. Reproductions of international charts of other nations (facsimile) have the seals of the original producer (left), publisher (centre) and the IHO (right). Reproductions of other charts have the seals of original producer (left) and publisher (right); charts which are co-productions carry the seals of the nations involved in their production.		241.1 241.2
⑬ Scale of chart; on Mercator projection, at a stated latitude.		211 241.4
⑭ Linear scales on large-scale plan.		221
⑮ Linear border scales (metres). On smaller scale charts, the latitude border should be used to measure Sea Miles and Cables.		221.1
⑯ Cautionary notes (if any) on charted detail; to be read before using the chart.		242
⑰ Source Diagram (if any). If a Source Diagram is not shown, details of the sources used in the compilation of the chart are given in the explanatory notes (see 11). The Source Diagram or notes should be studied carefully before using the chart in order to assess the reliability of the sources. See also section V.		290-298
⑱ Reference to a larger scale chart or plan (with reference letter if multiple plans on same chart). May also be shown in yellow.		254
⑲ Reference to an adjoining chart of similar scale.		254
⑳ Note 'IMPORTANT - THE USE OF CHARTS'. References to other publications.		243
Ⓐ Conversion scales. To allow approximate conversions between metric and fathoms and feet units. On older charts, conversion tables are given instead.		280
Ⓑ Copyright Notice.		
Ⓒ Quick Response (QR) code.		243.1

B Positions, Distances, Directions, Compass

Geographical Positions				
1	Lat	Latitude		
2	Long	Longitude		
4	°	Degree(s)		130
5	'	Minute(s) of arc		130
6	"	Second(s) of arc		130
7	PA	Position approximate (not accurately determined or does not remain fixed)	† (PA)	† (P.A.) 417 424.1
8	PD	Position doubtful (reported in various positions)	† (PD)	† (P.D.) 417 424.2
9	N	North		131.1
10	E	East		131.1
11	S	South		131.1
12	W	West		131.1
13	NE	North-east		
14	SE	South-east		
15	NW	North-west		
16	SW	South-west		

Control Points, Distance Marks				
20		Triangulation point		304.1
21	†	Observation spot	† + Obs Spot	† + Obsn. Spot 304.2
22		Fixed point		125.3
23	†	Benchmark	† ≠ BM	† ≠ B.M. 304.3
25.1		Distance along waterway, no visible marker		307
25.2		Distance along waterway, with visible marker		
a		Viewpoint		◦ See View 390.2

Symbolised Positions (Examples)				
30		Symbols in plan: position is centre of primary symbol		125.3
31		Symbols in profile: position is at bottom of symbol		
32		Point symbols		
33	†	Approximate position		

Positions, Distances, Directions, Compass **B**


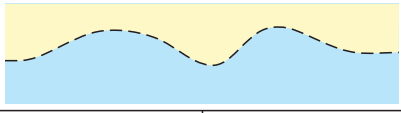
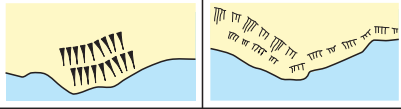
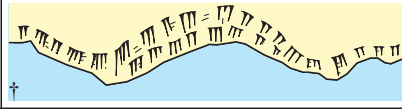
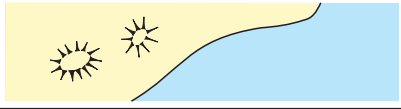
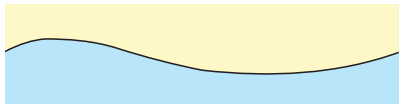
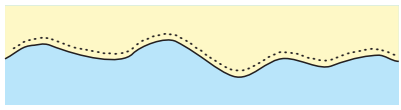
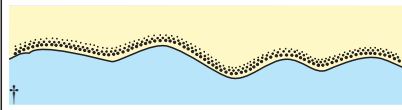
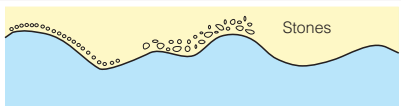
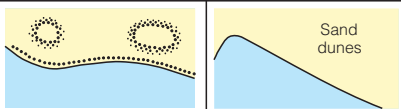

				Units
40	km		<i>Kilometre(s)</i>	
41	m		<i>Metre(s)</i>	130
42	dm		<i>Decimetre(s)</i>	130
43	cm		<i>Centimetre(s)</i>	
44	mm		<i>Millimetre(s)</i>	130
45	M		<i>International Nautical Mile(s) (1852m), Sea Mile(s)</i>	n mile(s) M 130
47	ft		<i>Foot/feet</i>	
48	fm, fms		<i>Fathom(s)</i>	<i>fm., fms.</i>
49	h		<i>Hour</i>	130
50	# m	min	<i>Minute(s) of time</i>	130
51	s	# sec	<i>Second(s) of time</i>	† sec 130
52	kn		<i>Knot(s)</i>	130
53	t		<i>Tonne(s), Ton(s), tonnage (weight)</i>	328.3
54	# cd		<i>Candela</i>	

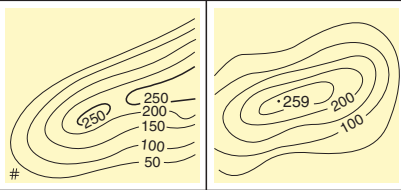
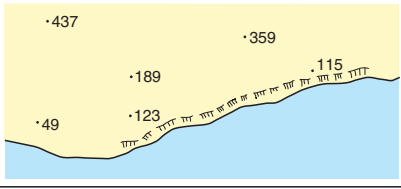
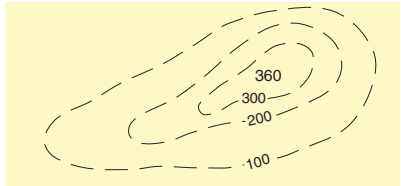
				Magnetic Compass
68.1	#	Magnetic Variation 4°30'W 2015 (8°E)	<i>Note of magnetic variation, in position</i>	
68.2	#	Magnetic Variation at 55°N 8°W 4°30'W 2015 (8°E)	<i>Note of magnetic variation, out of position</i>	Magnetic Variation: 4°30'W 2015 (8°E) 272.2

B Positions, Distances, Directions, Compass

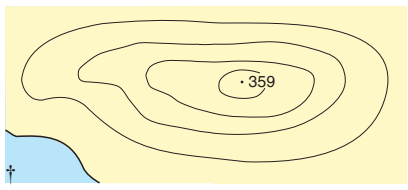
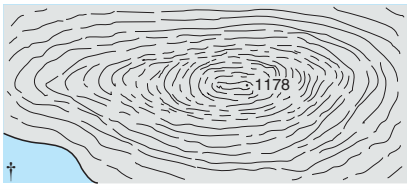
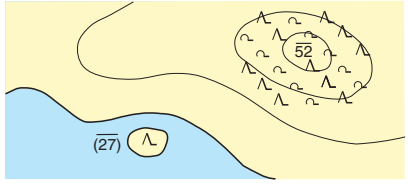
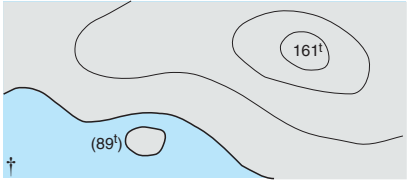
<p>70</p>	<p><i>Compass Roses, True and Magnetic.</i> <i>4°30' W 2018 (9' E) on magnetic north arrow means</i> <i>Magnetic Variation 4°30' W in 2018, annual change 9' E</i> <i>(i.e. magnetic variation decreasing 9' annually).</i></p> <p>Magnetic Variation is expressed to the nearest 5' and relates to 1 January of the year stated. Annual change E or W is given to the nearest minute.</p> <p>True Compass Rose Magnetic North indicated by arrow.</p> <p>The arrow indicating Magnetic North is omitted on charts comprising separate plans and on charts showing isogonals.</p> <p>† #</p> <p>†</p>	<p>260- 262.2 272.3</p>	
<p>71</p>	<p><i>Magnetic Variation Lines, Isogonals (lines of equal magnetic variation)</i></p> <p>MAGNETIC VARIATION LINES ARE FOR 2015</p> <p>The magnetic variation is shown in degrees, followed by the letter E or W, as appropriate, at certain positions on the lines. The annual change is expressed in minutes with the letter E or W and is given in brackets, immediately following the variation.</p> <p>Magnetic variation values are for 1 January of the year stated</p>	<p>272.1</p>	
<p>82.1</p>	<p>Local Magnetic Anomaly Within the enclosed area the magnetic variation may deviate from the normal by the value shown.</p>	<p>†</p>	<p>274</p>
<p>82.2</p>	<p>Local Magnetic Anomaly (see Note)</p> <p>Where the area affected cannot be easily defined, a legend only is shown at the position.</p>	<p>Local Magnetic Anomaly (see Note)</p> <p>†</p>	<p></p>

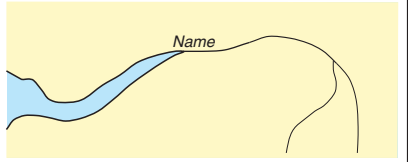
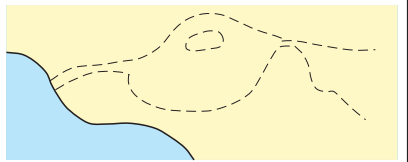
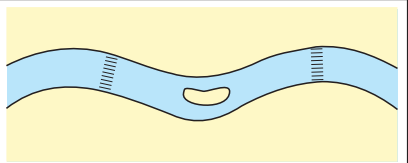
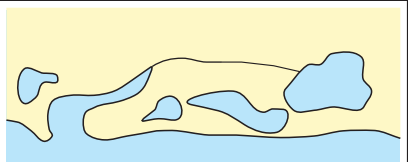
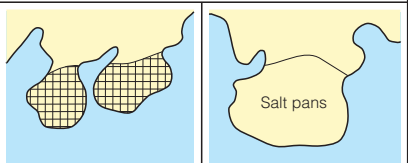
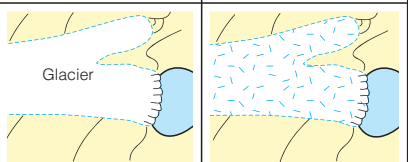
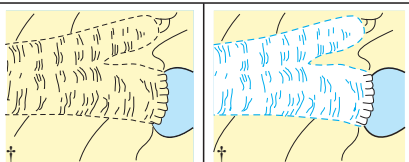
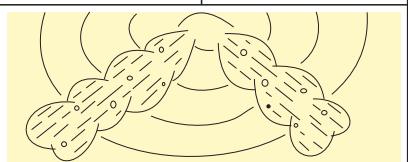

Natural Features **C**

Foreshore → I, J		Coastline	
1		Coastline, surveyed	310.1 310.2
2		Coastline, unsurveyed	311
3		Steep coast, Cliffs	 312.1
4		Hillocks	312.1
5		Flat coast	312.2
6		Sandy shore	 312.2
7	 Stones	Stony shore, Shingly shore	312.2
8	 Sand dunes	Sandhills, Dunes	 312.3

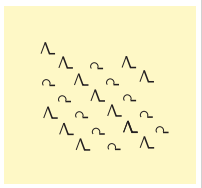
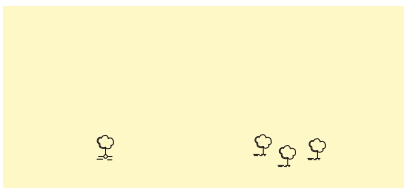





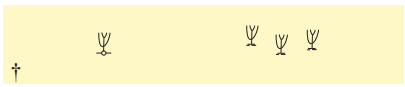

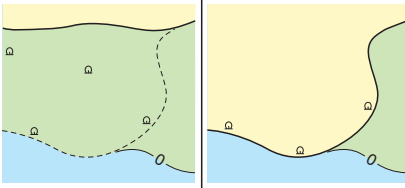
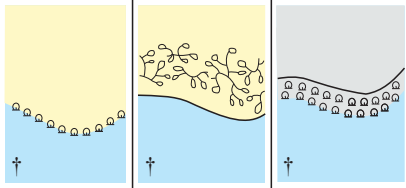
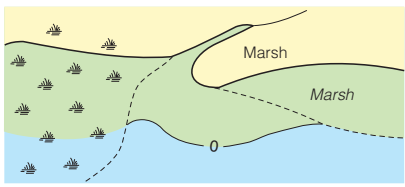
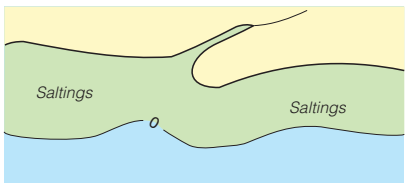
Plane of Reference for Heights → H		Relief	
10		Contour lines with values and spot height	351.3 351.5 351.6 352.2
11		Spot heights	352.1 352.2
12		Approximate contour lines with values and approximate height	351.3 351.4 351.5 351.6 352.3

C Natural Features

13		Form lines with spot height		351
14		Approximate height of top of trees (above height datum)		352.4

Water Features, Lava				
20		River, Stream		353.1 353.2
21		Intermittent river, Intermittent lake		353.3 353.6
22		Rapids, Waterfalls		353.5
23		Lakes		353.6
24		Salt pans		353.7
25		Glacier		353.8
26		Lava flow		355

Natural Features C

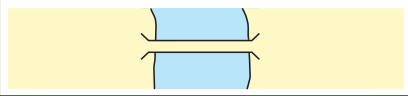

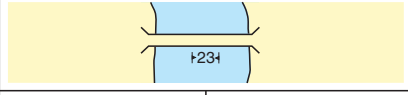

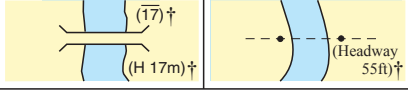
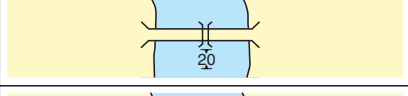
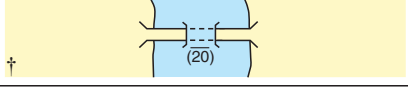
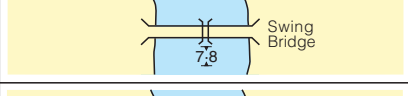
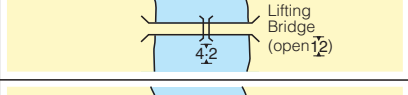
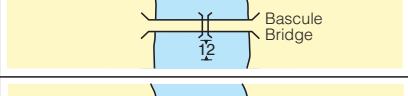
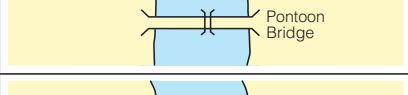
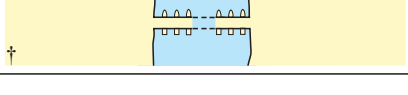
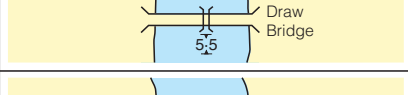

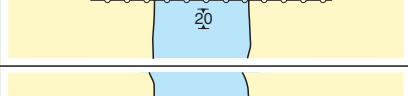
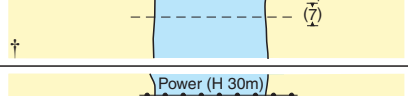
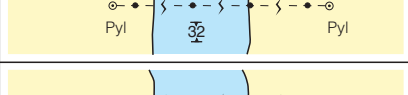
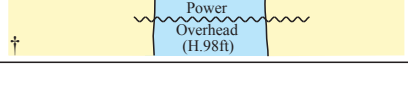
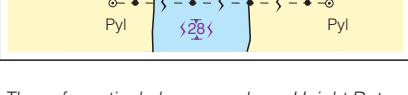
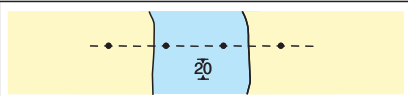
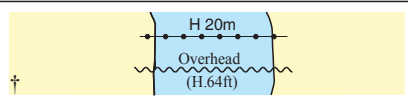
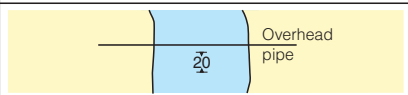
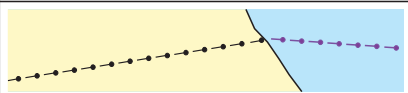
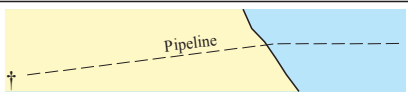
					Vegetation
30		Wooded	<i>Woods in general</i>		354.1
31			<i>Prominent trees (isolated or in groups)</i>		
31.1			<i>Deciduous tree, unknown or unspecified tree</i>		
31.2			<i>Evergreen (except conifer)</i>		
31.3			<i>Conifer, Casuarina</i>		
31.4			<i>Palm</i>		354.2
31.5			<i>Nipa palm</i>		
31.6			<i>Casuarina</i>		
31.7			<i>Filao</i>		
31.8			<i>Eucalypt</i>		
32			<i>Mangrove, Nipa palm</i>		312.4
33			<i>Marsh, Swamp, Salt marsh, Reed beds</i>		312.2

D Cultural Features










Settlements, Buildings		Height of objects → E	Landmarks → E
1		Urban area	370.4
2		Settlement with scattered buildings	370.5
3	○ Name # □ Name	Settlement (on medium and small-scale charts)	■ Name 370.7
4	⊕ Name ■ Name HOTEL	Inland village	370.6
5	■ ■ □ ■ ■	Building	Bldg 370.5
6		Important building in built-up area	370.3 370.4
7	NAME NAME	Street name, Road name	371
8	⊖ Ru ⊖ Ru	Ruin, Ruined landmark	† ⊖ (ru) 378 378.2











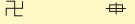













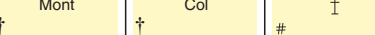




Roads, Railways, Airfields		Height of objects → E	Landmarks → E
10		Motorway	365.1
11		Road (hard surfaced)	365.2
12		Track, Path (loose or unsurfaced)	365.3
13	# ———— # ———— # ————	Railway, with station	† Rly † Ry † Sta † Stn 328.4 362.1 362.2
14		Cutting	† 363.2
15		Embankment	† 364.1
16		Tunnel	363.1
17		Airport, Airfield	366.1 366.2
18	⊕	Heliport, Helipad	366.3
a		Tramway	

Cultural Features **D**







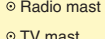



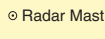
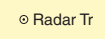








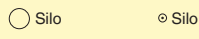











Plane of Reference for Heights → H		Other Cultural Features	
20.1		Fixed bridge	
20.2		Footbridge, fixed bridge on smaller scale charts	
21		Horizontal clearance	
22		Vertical clearance (see 'Heights' in Introduction)	
23.1		Opening bridge (in general) with vertical clearance	
23.2		Swing Bridge	
23.3		Lifting Bridge (open 12)	
23.4		Bascule Bridge	
23.5		Pontoon Bridge	
23.6		Draw Bridge	
24		Transporter Bridge	
25		Overhead transporter, Aerial cableway with vertical clearance	
26.1		Overhead power cable with pylons and physical vertical clearance	
26.2		Overhead power cable with pylons and safe vertical clearance	
<p><i>Note: The safe vertical clearance above Height Datum to avoid risk of electrical discharge, as defined by the responsible authority, is given in magenta where known (see H20); otherwise the physical vertical clearance is shown in black as in D22.</i></p>			
27		Overhead cable, Telephone line, with vertical clearance	
28		Overhead pipe	
29		Pipeline on land	

E Landmarks

General	Plane of Reference for Heights → H	Lighthouses → P	Beacons → Q
1	 Factory  Hotel	Examples of landmarks	340
2	 FACTORY  HOTEL  WATER TOWER	Examples of conspicuous landmarks. A legend in capital letters indicates that a feature is conspicuous	340.3
3.1		Pictorial sketches (in true position)	340.2 340.5 373.1 390 456.5 457.3
3.2		Pictorial sketches (out of position)	
4	 (30)	Height of top of a structure above height datum	302.3
5	 (30)	Height of top of a structure above ground level	303

Landmarks					
10.1		 Ch	Church	 Cath	373.1 373.2
10.2		 Tr	Church tower		373.2
10.3		 Sp	Church spire		
10.4		 Cup	Church cupola (dome)		
13			Temple, Pagoda, Shrine, Joss house	 Pag	373.3
17			Mosque, Minaret		373.4
19			Cemetery (all religions)	 Cem	373.6
20		 Tr	Tower		374.3
21			Water tower, Water tank on a tower	 Water Tr	374.2 376
22		 Chy	Chimney		374.1
23			Flare stack (on land)		374.1
24		 Mon	Monument (including column, pillar, obelisk, statue, calvary cross)	 Mont Col †	374.4
25.1			Windmill		374.5
25.2		 Ru	Windmill (without sails)	 (ru)	378.2

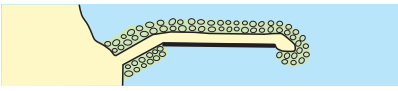


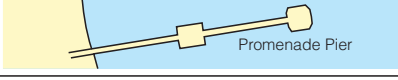

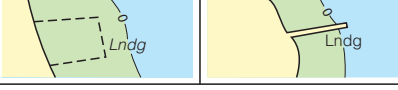
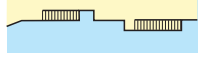







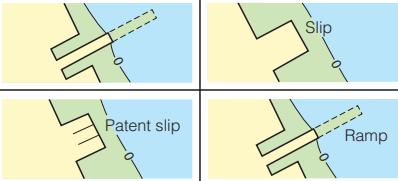
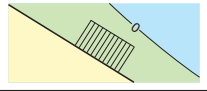
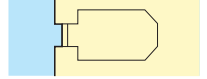


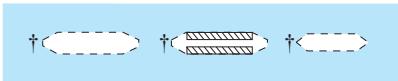
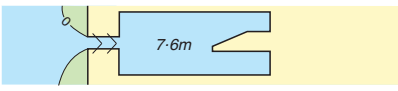
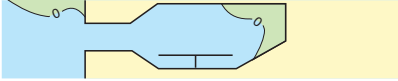
Landmarks E

26.1		<i>Wind turbine</i>	<i>Wind turbine</i> <i>Windmotor</i>			374.6
26.2		<i>Onshore wind farm</i>				
27		<i>Flagstaff, Flagpole</i>				374.7
28		<i>Radio mast, Television mast, Mast</i>				375.1
29		<i>Radio tower, Television tower</i>				375.2
30.1		<i>Radar mast</i>				487.3
30.2		<i>Radar tower</i>				
30.3		<i>Radar scanner</i>				
30.4		<i>Radome</i>				
31		<i>Dish aerial</i>				375.4
32		<i>Tanks</i>				376.1 376.2
33		<i>Silo</i>				376.3
34.1		<i>Fortified structure</i> <i>(on large-scale charts)</i>				379.1
34.2		<i>Castle, Fort, Blockhouse</i> <i>(on smaller scale charts)</i>			<i>Cas</i>	379.2
34.3		<i>Battery, Small fort</i> <i>(on smaller scale charts)</i>			<i>Baty</i>	
35.1		<i>Quarry (on large-scale charts)</i>				367.1
35.2		<i>Quarry (on smaller scale charts)</i>				367.2
36		<i>Mine</i>				367.2
37.1		<i>Caravan site</i>				368
37.2		<i>Camping site, camping and caravan site</i>				

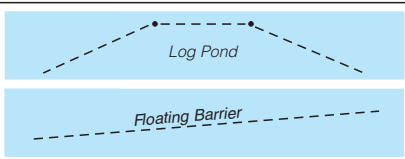
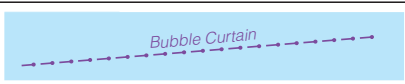
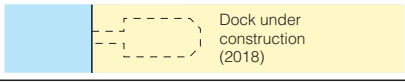
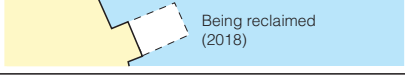



F Ports


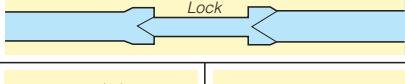
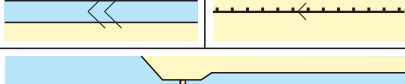
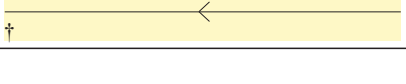

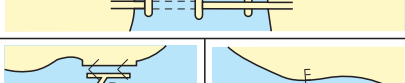

Protection Structures					
1		<i>Dyke, Levee, Berm</i>			313.1
2.1		<i>Seawall (on large-scale charts)</i>			313.2
2.2		<i>Seawall (on smaller scale charts)</i>			
3		<i>Causeway</i>			313.3
4.1		<i>Breakwater (in general)</i>			322.1
4.2		<i>Breakwater (loose boulders, tetrapods, etc)</i>		<i>(covers)</i>	
4.3		<i>Breakwater (slope of concrete or masonry)</i>			
5		<i>Training wall</i>			322.2
6		<i>Groyne (always dry)</i> <i>Groyne (intertidal)</i> <i>Groyne (always underwater)</i>			313.4 324

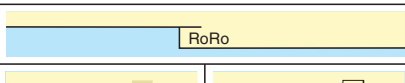

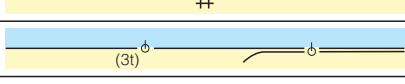
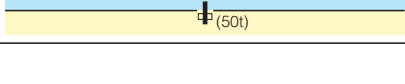

Harbour Installations <i>Depths</i> → I <i>Anchorage, Limits</i> → N <i>Beacons and other fixed marks</i> → Q				
10		<i>Fishing harbour</i>		320.1
11.1		<i>Boat Harbour, Marina</i>		320.2
11.2		<i>Yacht berth without facilities</i>		
11.3		<i>Yacht club, Sailing club</i>		







12		Mole (with berthing facility)		321.3
13		Quay, Wharf	Whf	321.1
14		Pier, Jetty		321.2 321.4
15		Promenade pier		321.2
16		Pontoon		324.3
17		Landing for boats	Ldg	324.2
18		Steps, Landing stairs		324.4
19.1		Designation of berth	4	321.7
19.2		Visitors' berth		321.8
19.3		Dangerous Cargo berth		
20		Dolphin		327.1
21		Deviation dolphin		327.2
22		Minor post or pile		327.3
23		Slipway, Patent slip, Ramp		324.1 324.2
24		Gridiron, Scrubbing grid, Careening grid		326.8
25		Dry dock, Graving dock		326.1
26		Floating dock		326.2
27		Non-tidal basin, Wet dock		326.3
28		Tidal basin, Tidal harbour		326.4

F Ports

29.1		Floating barrier, e.g. security, containment booms (ice, logs, oil), shark nets: with support without supports		449.2
29.2		Bubble curtain (bubbler, pneumatic pipe)		444.10
30		Works on land, with year date		329.1
31		Works at sea, Area under reclamation, with year date		329.2
32	Under construction (2018) Works in progress (2018)	Works under construction, with year date	const † constn. † constn	329 329.4
33.1		Ruin		378.1
33.2		Ruined pier, partly submerged at high water		
34		Hulk		330
a		Bollard	◦ Bol	

Canals, Barrages		Clearances → D	Signal Stations → T	Cultural Features → D
40		Canal		361
41.1		Lock (on large-scale charts)		326.6
41.2		Lock (on smaller scale charts)		
42		Caisson, Gate		326.5
43		Flood barrage		326.7
44		Dam, Weir → Direction of flow		364.2

Transshipment Facilities		Roads → D	Railways → D	Tanks → E
50		Roll-on, Roll-off (RoRo) Ferry Terminal		321.5
51		Transit shed, Warehouse (with designation)		328.1
52		Timber yard		328.2
53.1		Crane (with lifting capacity) Travelling crane on railway		328.3
53.2		Container crane (with lifting capacity)		

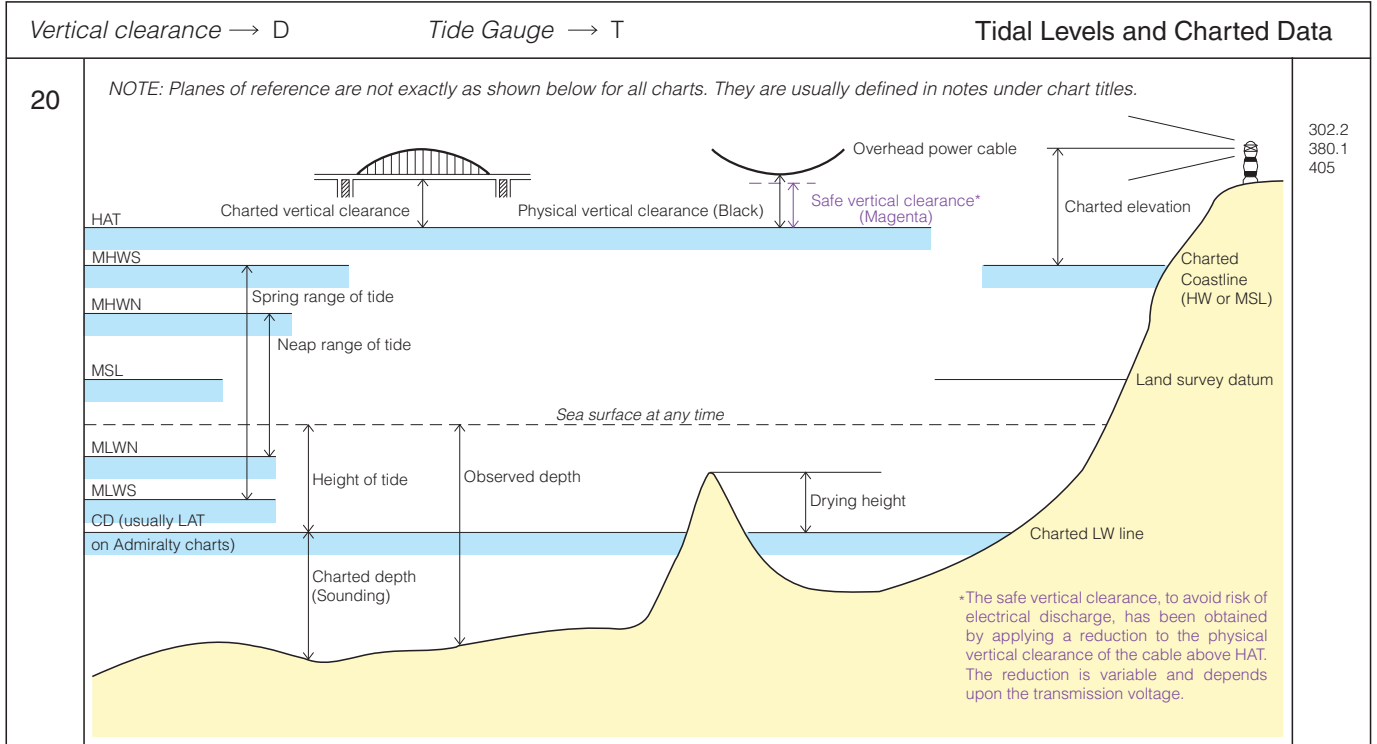
Public Buildings				
60		<i>Harbour Master's office</i>	† Hr Mr	325.1
61		<i>Custom office</i>		325.2
62.1		<i>Health office, Quarantine building</i>		325.3
62.2	 Hospital	<i>Hospital</i>	 Hosp † Hospl	
63	† 	<i>Post office</i>	† PO	372.1

H Tides, Currents

Terms Relating to Tidal Levels

1	CD	<i>Chart Datum (CD) Datum for sounding reduction</i>		405
2	LAT	<i>Lowest Astronomical Tide</i>		405.3
3	HAT	<i>Highest Astronomical Tide</i>		
4	MLW	<i>Mean Low Water</i>		
5	MHW	<i>Mean High Water</i>		
6	MSL	<i>Mean Sea Level</i>		
8	MLWS	<i>Mean Low Water Springs</i>		
9	MHWS	<i>Mean High Water Springs</i>		
10	MLWN	<i>Mean Low Water Neaps</i>		
11	MHWN	<i>Mean High Water Neaps</i>		
12	MLLW	<i>Mean Lower Low Water</i>		
13	MHHW	<i>Mean Higher High Water</i>		
14	MHLW	<i>Mean Higher Low Water</i>		
15	MLHW	<i>Mean Lower High Water</i>		
16	Sp	<i>Spring tide</i>	† Spr.	
17	Np	<i>Neap tide</i>		
a		<i>High Water</i>	HW	
b		<i>Low Water</i>	LW	
c		<i>Mean Tide Level</i>	MTL	
d		<i>Ordnance Datum</i>	OD	

Tides, Currents H



Tide Tables

30 *Tabular statement of semi-diurnal or diurnal tides*

Tidal Levels referred to Datum of Soundings

Place	Lat. N/S	Long. E/W	Heights in metres/feet above datum				Datum and Remarks
			MHWS	MHWN	MLWN	MLWS	
			MHHW	MLHW	MHLW	MLLW	

406.2
406.3
406.4
406.5


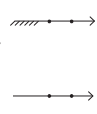

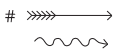


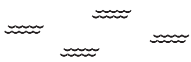







31 *Tidal stream table*

Tidal streams referred to....



Hours	Geographical Position		A	B	C	D	E
	Directions of streams (degrees)	Rates at spring tides (knots)					
Before High Water	6						No Maximum Rates For predictions, use Admiralty Tide Tables
5							
4							
3							
2							
1							
High Water	1						
After High Water	2						
3							
4							
5							
6							









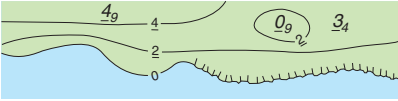
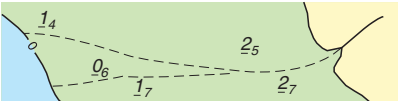
407.2
407.3


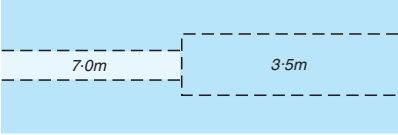
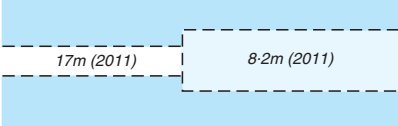
H Tides, Currents

Tidal Streams and Currents		Breakers →K	Tide Gauge →T	
40		<i>Flood tide stream (with mean spring rate)</i>	 <p>The number of black dots on the tidal stream arrows indicates the number of hours after High or Low Water at which the streams are running</p>	
41		<i>Ebb tide stream (with mean spring rate)</i>		407.4 408.2
42		<i>Current in restricted waters</i>		408.2
43		<i>Ocean current. Details of current strength and seasonal variations may be shown</i>		408.3
44		<i>Overfalls, tide rips, races</i>		423.1
45		<i>Eddies</i>		423.3
46		<i>Position of tabulated tidal stream data with designation</i>		407.2
47		<i>Offshore position for which tidal levels are tabulated</i>		406.5
e		<i>Wave recorder (see L25)</i>		
f		<i>Current meter (see L25)</i>		

Depths

General				
1	ED	Existence doubtful	† (ED)	417 424.3
2	SD	Sounding of doubtful depth		417 424.4
3.1	Rep	Reported, but not confirmed	† Repd	417 424.5
3.2	Rep (1973)	Reported, with year of report, but not confirmed	† Repd (1973)	
4	†  	Reported, but not confirmed, sounding or danger (on small-scale charts only)		S-4 Part C 404.3
a		Unexamined	unexam †unexamd	

Plane of Reference for Depths → H		Plane of Reference for Heights → H		Soundings and Drying Heights	
10	12 9 ₂ # 9.7	Sounding in true position			403.1 410/412 412.1
11	 + (12) 	Alongside depth, Sounding out of position		  # + 1 ₈  	412 412.1 412.2
12		Least depth in narrow channel			412 412.1 412.2
13		No bottom found at depth shown			412.3
14	12 9 ₁	Soundings which are unreliable (e.g. taken from old or smaller scale sources) shown in fine, upright figures			412.4 417.3
15		Drying heights and contours above chart datum			413 413.1 413.2
16		Natural watercourse (in intertidal area)			413.3




Plane of Reference for Depths → H		Depths in Channels and Areas	
20		Limit of dredged channel or area (major and minor)	# _____ 414
21		Dredged channel or area with minimum depth regularly maintained	Depths may be shown as 3,5 or 3 ₅ on some adopted charts. There may be a note to clarify the maintenance regime 414
22		Dredged channel or area with minimum depth not regularly maintained and year of latest survey	414.1

Depths

24		<p>Area swept by wire drag. The depth is shown at Chart Datum. (The latest date of sweeping may be shown in parentheses)</p>		<p>415 415.1</p>
25		<p>Unsurveyed or inadequately surveyed area; area with inadequate depth information</p>	<p>†</p>	<p>410 417 417.6 417.7 418</p>

Depth Contours				
30		<p>Dries 2m contour Low Water (LW) Line, Chart Datum (CD)</p> <p>Blue tint, in one or more shades, and tint ribbons, are shown to different limits according to the scale and purpose of the chart and the nature of the bathymetry.</p> <p>On some charts, the standard set of contours is augmented by additional contours in order to delimit particular bathymetric features or for the benefit of particular categories of shipping. However, in some instances where the provision of additional contours would be helpful, the survey data available does not permit it.</p> <p>On charts which are metric conversions of fathoms charts there will be a non-standard series of contours.</p> <p>On some charts, contours are printed in blue.</p>	<p>On charts showing depths in fathoms/feet, the following contours are used:</p> <p>On some charts, contours may be shown by continuous lines.</p>	<p>404.2 410 411</p>
31		<p>Approximate depth contours (length of dashes may vary)</p>		<p>411.2 417.5</p>

Nature of the Seabed

Rocks →K			Types of Seabed		
1	S	Sand	†	s	425-427
2	M	Mud	†	m	
3	Cy	Clay	†	cl	
4	Si	Silt			
5	St	Stones	†	st	
6	G	Gravel	†	g	
7	P	Pebbles	†	peb	
8	Cb	Cobbles			
9.1	R	Rock, Rocky	†	r	421.2 425-427
9.2	Bo	Boulder(s)			
10	Co	Coral	†	crl	425-427
11	Sh	Shells	†	sh	
12.1	S/M	Two layers e.g. Sand over Mud		#M (25)/SG S (<1)/R (Thickness of surface layer in metres)	425.8
12.2	fS.M.Sh	Mixed: where the seabed comprises a mixture of materials, the main constituent is given first, e.g. fine Sand with Mud and Shells			425.9
13.1	Wd	Weed (including Kelp)	†	wd	425.5
13.2					428.2
13.3	Sg		Seagrass		
14		Sandwaves			428.1
15		Spring in seabed			428.3
a		Ground	†	Gd grd	
b		Ooze	†	Oz	
c		Marl	†	Ml	
d		Shingle	†	Sn shin	
e		Chalk	†	Ck chk	
f		Quartz	†	Qz qrtz	
g		Madrepore	†	Md mad	
h		Basalt	†	Ba	
i		Lava	†	Lv	
j		Pumice	†	Pm pum	
k		Tufa	†	T	
l		Scoriæ	†	Sc	
m		Cinders	†	Cn cin	

J Nature of the Seabed

n		Manganese	†	Mn	man	
o		Glauconite	†	Gc		
p		Oysters	†	Oy	oys	
q		Mussels	†	Ms	mus	
r		Sponge	†	Sp		
s		Algae	†	Al		
t		Foraminifera	†	Fr	for	
u		Globigerina	†	Gl		
v		Diatoms	†	Di		
w		Radiolaria	†	Rd	rad	
x		Pteropods	†	Pt		
y		Polyzoa	†	Po	pol	

Intertidal Areas					
20		Area of sand and mud with patches of stones or gravel			426.1
21		Rocky area			426.2
22		Coral reef			426.3

Qualifying Terms					
30	f	Fine	} only used in relation to sand		425 427
31	m	Medium			
32	c	Coarse			
33	bk	Broken	†	brk	
34	sy	Sticky	†	stk	
35	so	Soft	†	sft	
36	sf	Stiff	†	stf	
37	v	Volcanic	†	vol	
38	ca	Calcareous	†	cal	
39	h	Hard			425.5 425.7

Nature of the Seabed **J**

aa		<i>Small</i>	†	<i>sm</i>	
ab		<i>Large</i>	†	<i>l</i>	
ac		<i>Glacial</i>	†	<i>ga</i> <i>glac</i>	
ad		<i>Speckled</i>	†	<i>sk</i> <i>spk</i>	
ae		<i>White</i>	†	<i>w</i>	
af		<i>Black</i>	†	<i>bl</i> <i>blk</i>	
ag		<i>Blue</i>	†	<i>b</i>	
ah		<i>Green</i>	†	<i>gn</i>	
ai		<i>Yellow</i>	†	<i>y</i>	
aj		<i>Red</i>	†	<i>rd</i>	
ak		<i>Brown</i>	†	<i>br</i>	
al		<i>Chocolate</i>	†	<i>ch</i> <i>choc</i>	
am		<i>Grey</i>	†	<i>gy</i>	
an		<i>Light</i>	†	<i>lt</i>	
ao		<i>Dark</i>	†	<i>d</i>	

K Rocks, Wrecks, Obstructions, Aquaculture

General			
1		Dangerline: A danger line draws attention to a danger which would not stand out clearly enough if represented solely by its symbol (e.g. isolated rock) or delimits an area containing numerous dangers, through which it is unsafe to navigate	411.4 420.1
2		Depth swept by wire drag or confirmed by diver. The symbol may be used with other symbols, e.g. wrecks, obstructions, wells	415 422.3 422.9
3		Safe clearance depth. The exact depth is unknown, but is estimated to have a safe clearance at the depth shown. The symbol may be used with other symbols, e.g. obstructions, wrecks, wells, turbines	422.5 422.7 422.9
a		Dries	† Dr † dr
b		Covers	† cov
c		Uncovers	† uncov

Rocks		Plane of Reference for Heights → H	Plane of Reference for Depths → H	
10		Rock (islet) which does not cover, height above height datum	(1.7) (3.1) (4.1)	421.1
11		Rock which covers and uncovers, height above Chart Datum, where known	† Dries 1-6m † Dr 1-6m	421.2
12		Rock awash at the level of Chart Datum		421.3
13		Underwater rock over which the depth is unknown, but which is considered dangerous to surface navigation		421.4
14		Underwater rock of known depth:		421.4
14.1		inside the corresponding depth area		
14.2		outside the corresponding depth area, dangerous to surface navigation		

Rocks, Wrecks, Obstructions, Aquaculture **K**

15		<i>Underwater rock of known depth, not dangerous to surface navigation</i>		421.4
16		<i>Coral reef which is always covered</i>		421.5
17		<i>Breakers</i>		423.2
d		<i>Discoloured water</i>	<i>Discol</i> † <i>Discold</i>	424.6

	<i>Hulk</i> → F	<i>Plane of Reference for Depths</i> → H	<i>Wrecks and Fouls</i>		
20		<i>Wreck, hull never covers, on large-scale charts</i>			422.1
21		<i>Wreck, hull covers and uncovers, on large-scale charts</i>	†	†	
22		<i>Submerged wreck, depth known, on large-scale charts</i>	†		422.1
23		<i>Submerged wreck, depth unknown, on large-scale charts</i>	†		422.1
24		<i>Wreck showing any part of hull or superstructure at the level of Chart Datum</i>			422.2
25		<i>Wreck of which the mast(s) only are visible at Chart Datum</i>			422.2
26		<i>Wreck over which the depth has been obtained by sounding but not by wire drag</i>			422.4
27		<i>Wreck, depth swept by wire drag or confirmed by diver</i>			422.3
28		<i>Wreck, depth unknown, which is considered potentially dangerous to surface navigation</i>			422.6
29		<i>Wreck which is considered not dangerous to surface navigation. Depth over wreck unknown, or water depth greater than 200m. For information about depth criteria which may vary, see NP100, The Mariner's Handbook</i>			422.6
e		<i>Submerged wreck, depth unknown</i>	†		

K Rocks, Wrecks, Obstructions, Aquaculture

30		Wreck over which the exact depth is unknown, but which is estimated to have a safe clearance at the depth shown		422.5 422.7
31.1	# # (22)	Foul ground, not dangerous to surface navigation, but to be avoided by vessels anchoring, trawling, etc. (e.g. remains of wreck, cleared platform). Foul ground with depth		422.8
31.2		Area of foul ground		
f		Navigation light on stranded wreck		470.5

Obstructions and Aquaculture		Plane of Reference for Depths → H	Kelp, Seaweed → J	
		Underwater Installations → L		
40		Obstruction or danger to navigation the exact nature of which is not specified or has not been determined, depth unknown		422.9
41		Obstruction, depth obtained by sounding but not wire drag		422.9
42		Obstruction, depth swept by wire drag or confirmed by diver		422.9
43.1	#	Stumps of posts or piles, wholly submerged		422.9
43.2	#	Submerged pile, stake, snag or stump (with exact position)		
44.1		Fishing stakes		447.1
44.2		Fish trap, fish weir, tunny nets		447.2
45		Fish trap area, tunny nets area		447.3
46.1		Fish haven		447.5
46.2		Fish haven, with minimum depth		
47		Shellfish beds		447.4
48.1		Marine farm (on large-scale charts), area of marine farms		447.6
48.2		Marine farm (on small-scale charts)		

Offshore Installations L

Combined symbols → K (General)		Areas, Limits → N	General	
1		Name of oilfield or gasfield		445.3
2		Platform with designation/name		445.3
3		Limit of safety zone around offshore installation		439.2 445.6
4		Limit of development area		445.7
5.1		Wind turbine, floating wind turbine and wind turbine with vertical clearance		445.8
5.2		Offshore wind farm		445.9
		Offshore wind farm (floating)		
6		Wave farm, Renewable energy device		445.12
Mooring Buoys → Q		Platforms and Moorings		
10		Production platform, Platform, Oil derrick		445.2
11		Flare stack (at sea)		445.2
12		Fixed Single Point Mooring, including Single Anchor Leg Mooring (SALM), Articulated Loading Column (ALC)		445.2 445.4
14		Disused platform, with superstructure removed		445.2
16		Floating Single Point Mooring, including Catenary Anchor Leg Mooring (CALM), Single Buoy Mooring (SBM)		445.4
17		Moored vessel associated with offshore production		445.5
18		Mooring ground tackle for fixing floating structures		431.6
Plane of Reference for Depths → H		Obstructions → K	Underwater Installations	
20		Production well, with depth where known		445.1
21.1		Suspended well (wellhead and pipes projecting from the seabed) over which the depth is unknown		445.1
21.2		Suspended well over which the depth is known		445.1

L Offshore Installations

23		Above-water wellhead (lit and unlit). The drying height or height above height datum is charted if known	445.1
24		Underwater turbine	445.10 445.11
25		Subsurface Ocean (or oceanographic) Data Acquisition System (ODAS)	448.4

Submarine Cables			
<i>Note: In complex areas, cables maybe shown in lighter print, to avoid obscuring other detail</i>			142.3
30.1		Submarine cable	443.1 443.8
30.2		Submarine cable area	439.3 443.3
31.1		Submarine power cable	443.2
31.2		Submarine power cable area	439.3 443.2
32		Disused submarine cable	443.7

Submarine Pipelines			
<i>Note: In complex areas, cables maybe shown in lighter print, to avoid obscuring other detail</i>			142.3
40.1		Supply pipeline: unspecified, oil, gas, chemicals, water	444 444.1
40.2		Supply pipeline area: unspecified, oil, gas, chemicals, water	439.3 444.3
41.1		Outfall and intake: unspecified, water, sewer, outfall, intake	444 444.2
41.2		Outfall and intake area: unspecified, water, sewer, outfall, intake	439.3 444.3
42.1		Buried pipeline / pipe (with nominal depth to which buried)	444.5
42.2		Pipeline tunnel	
43		Diffuser, crib (nature of obstruction may be stated)	444.8
44		Disused pipeline / pipe	444.7

Tracks, Routes M

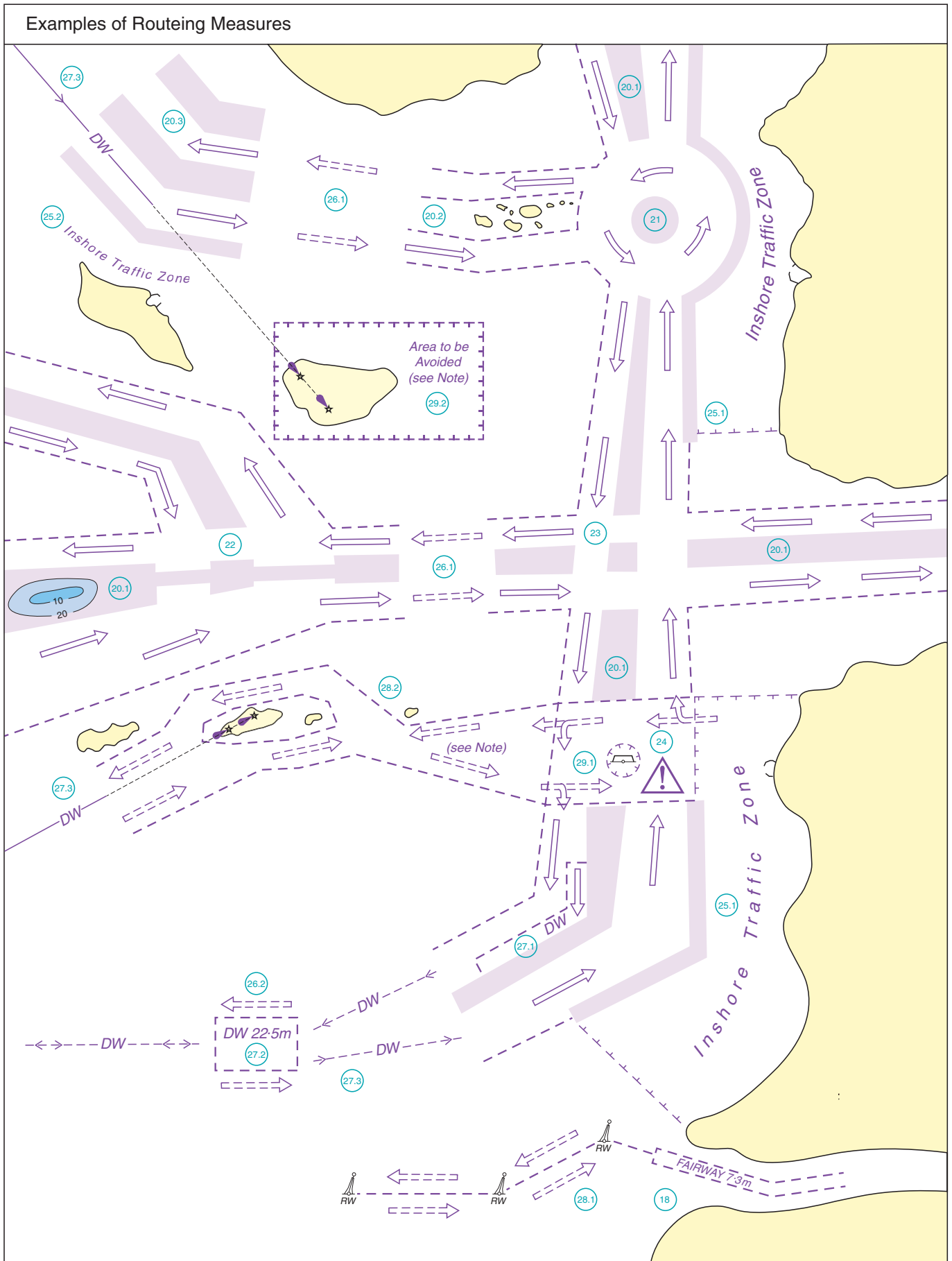
Tracks Marked by Lights → P		Leading Beacons → Q		Tracks	
1		Leading line (≠ means "in line", the continuous line is the track to be followed)		433.1 433.2 433.3	
2		Transit (other than leading line), Clearing line		433.4 433.5	
3		Recommended track based on a system of fixed marks		434.1 434.2	
4		Recommended track not based on a system of fixed marks		434.1 434.2	
5.1		One-way track and DW track based on a system of fixed marks		432.3 434.1	
5.2		One-way track and DW track not based on a system of fixed marks			
6		Recommended track with maximum authorised draught		432.4 434.3 434.4	



















Routing Measures - Basic Symbols

10		Established (mandatory) direction of traffic flow		435.1
11		Recommended direction of traffic flow		435.5
12		Separation line (large-scale, small-scale)		435.1 436.3
13		Separation zone		435.1 436.3
14		Limit of restricted routing measure (e.g. Inshore Traffic Zone, Area to be Avoided)		435.1 436.3 439.2
15		Limit of routing measure		435.1 436.3
16		Precautionary area		435.2
17		Archipelagic Sea Lane; axis line and limit beyond which vessels shall not navigate		435.10
18		Fairway, designated by regulatory authority: with minimum depth with maximum authorised draught		434.5





‡ The term 'recommended' in connection with tracks and routing measures does not imply recommendation by the UK Hydrographic Office. It is usually by a regulatory authority, but may be established by precedent.



M Tracks, Routes





Examples of Routeing Measures (see diagram on page 34)		
	Traffic separation scheme (TSS), traffic separated by separation zone	435.1
	Traffic separation scheme, traffic separated by natural obstructions	435.1
	Traffic separation scheme, with outer separation zone, separating traffic using scheme from traffic not using it	435.1
	Traffic separation scheme, roundabout	435.1
	Traffic separation scheme with "crossing gates"	435.1
	Traffic separation schemes crossing, without designated precautionary area	435.1
	Precautionary area	435.2
	Inshore traffic zone (ITZ), with defined end limits	435.1
	Inshore traffic zone, without defined end limits	435.1
‡ 	Recommended direction of traffic flow, between traffic separation schemes	435.5
‡ 	Recommended direction of traffic flow, for ships not needing a deep water route	435.5
	Deep water route (DW), as part of one-way traffic lane	435.3
	Two-way deep water route, with minimum depth stated	435.3
	Deep water route, centre line shown as recommended one-way or two-way track	435.3
‡ 	Recommended route (often marked by centre line buoys)	435.4
	Two-way route with one-way sections	435.6
	Area to be avoided (ATBA), around aid to navigation	435.7
	Area to be avoided, because of danger of stranding	435.7






‡ The term 'recommended' in connection with tracks and routeing measures does not imply recommendation by the UK Hydrographic Office. It is usually by a regulatory authority, but may be established by precedent.















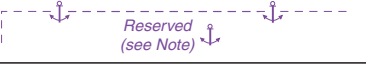





Radar Surveillance System			
30		Radar surveillance station	487 487.3
31		Radar range	487.1
32.1		Radar reference line	487.2
32.2		Radar reference line coinciding with a leading line	

Radio Reporting			
40.1		Radio calling-in point, way point, or reporting point (with designation, if any) showing direction(s) of vessel movement and VHF-channel	488.1
40.2		Radio reporting line (with designation, if any) showing direction(s) of vessel movement	488.2






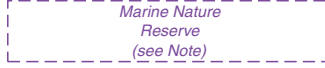










Ferries			
50		Ferry Route	438.1
51		Cable Ferry Route	438.2








N Areas, Limits

General		<i>Dredged and Swept Areas</i> → I	<i>Submarine Cables, Submarine Pipelines</i> → L	<i>Tracks Routes</i> → M
Note: On multicoloured charts, symbols in section N may be in green when associated with environmental areas				
1.1		Maritime limit in general, usually implying permanent physical obstructions		439.1 439.6
1.2		Maritime limit in general, usually implying no permanent physical obstructions		
2.1		Limit of restricted area		439.2- 439.4 439.6 441.6
2.2		Limit of area into which entry is prohibited		

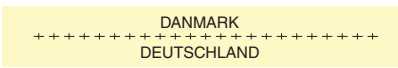
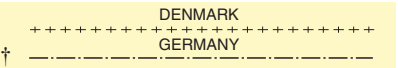


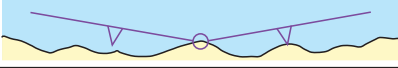
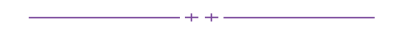









Anchorages, Anchorage Areas				
10		Reported anchorage (no defined limits)		431.1
11.1		Anchor berths		431.2
11.2		Anchor berths with swinging circle		
12.1		Anchorage area in general. On smaller scale charts, the limits may be omitted		431.3 439.4
12.2		Numbered anchorage area		
12.3		Named anchorage area		
12.4		Deep water anchorage area, anchorage area for deep-draught vessels		
12.5		Tanker anchorage area		
12.6		Anchorage area for periods up to 24 hours		
12.7		Dangerous cargo anchorage area		
12.8		Quarantine anchorage area		
12.9		Reserved anchorage area		
Note: These symbols maybe adapted for other purposes or types of vessels by addition of legend or symbol				
13		Seaplane operating area		449.6
14		Anchorage for seaplanes		449.6

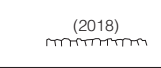




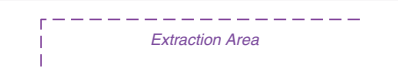



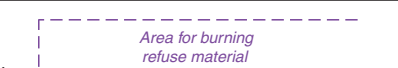
Areas, Limits N

Restricted Areas				
20		<i>Anchoring prohibited</i>	†  	431.4 435.11 436.3 439.3 439.4
21.1		<i>Fishing prohibited</i>		439.3 439.4
21.2		<i>Diving prohibited</i>		
22	<p><i>Examples</i></p> <p style="text-align: center;"> TTTT MR TTTT MR TTTT TTTT MR TTTT MR TTTT </p>	<p><i>Environmentally Sensitive Sea Areas:</i> (colour may be green or magenta) <i>Limit of marine reserve, national park, non-specific nature reserve</i></p>	†  # 	437.3 437.6 437.7
	<p><i>Examples</i></p> 	<p><i>Bird sanctuary, Seal sanctuary (other animal silhouettes may be used for specialized areas)</i></p>		
		<p><i>Particularly Sensitive Sea Area</i> (coloured tint band may vary in width between 1 and 5mm)</p>		
23.1		<i>Explosives dumping ground, Individual mine or explosive</i>	† 	442.1 442.2 442.3 442.4
23.2		<i>Explosives dumping ground (disused)</i>	† 	
24		<i>Dumping ground for chemical waste</i>		442.1 442.2 442.3
25		<i>Degaussing range</i>	† <i>D.G. Range</i> <i>DG Range</i>	448.1 448.2
27	<i>5kn</i>	<i>Maximum speed, Speed limit</i>		430.2
a		<i>Seabed operations dangerous/prohibited</i>	# 	

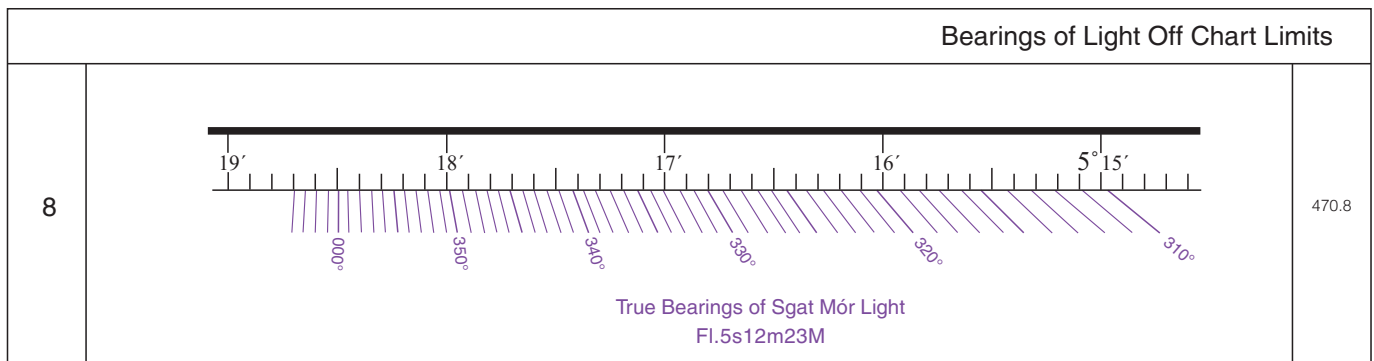
Military Practice Areas				
30		<i>Firing practice area</i>		441.1 441.2 441.3
31		<i>Military restricted area into which entry is prohibited</i>	† 	441.6
32		<i>Mine-laying (and counter-measure) practice area</i>		441.4
33		<i>Submarine transit lane and exercise area</i>		441.5
34		<i>Minefield</i>	† 	441.8

N Areas, Limits






















International Boundaries and National Limits						
40		DANMARK DEUTSCHLAND	International boundary on land		DENMARK GERMANY	440.1
41		UNITED KINGDOM NORGE	International maritime boundary		UNITED KINGDOM NORWAY Continental Shelf Boundary	440.3
42			Straight territorial sea baseline with base point			440.4
43			Seaward limit of Territorial Sea			440.5
44			Seaward limit of Contiguous Zone			440.6
45			National fishery limits			440.7
46		Continental Shelf	Limit of Continental Shelf			440.8
47		EEZ	Limit of Exclusive Economic Zone			440.9
48			Customs limit			440.2
49		Harbour Limit	Harbour limit			430.1


Various Limits					
60.1		#	Limit of fast ice, Ice front (with date)		449.1
60.2		#	Limit of sea ice (pack ice) seasonal (with date)		
62.1			Spoil ground		446.1
62.2			Spoil ground (disused)		446.2
63			Extraction (dredging) area		446.4
64			Cargo transhipment area		449.4
65		†	Incineration area		449.3

Beacons → Q			Light Structures		
1.1	★ ★	Lt LtHo	Position of navigation light (size and style of 'star' may vary), light, lighthouse	#	!
1.2	★		Light on standard charts		470.4 470.5
1.3	★		Significant all-round light on multicoloured charts (generally for offshore navigation)		
<p><i>Note:</i> On standard charts, positions of light are highlighted by one magenta flare. On multicoloured charts, the flare indicates the colour of the light, except for multicoloured sector lights where a magenta flare may be used if the sectors are not charted. This guide shows standard magenta flares with examples of multicoloured depiction where significantly different.</p>					
2.1	☐		Lighted offshore platform		445.2
2.2	☐	☐	Lighted offshore platform on multicoloured charts		
3	BY	★ BnTr	Lighted beacon tower ‡		456.4 457.1 457.2
4		★ Bn	Lighted beacon ‡ On smaller scale charts, where navigation within recognition range of the daymark is unlikely, lighted beacons are charted solely as lights		457.1 457.2
5	R	★ Bn	Lighted buoyant beacon, resilient beacon ‡		459.1 459.2
7			Navigation lights on landmarks or other structures (examples)		470.5
<p>‡ Minor lights, fixed and floating, usually conform to IALA Maritime Buoyage System characteristics</p>					



P Lights

Light Characters			Light Characters on Light Buoys → Q		471.2
	Abbreviation		Class of Light	Illustration	Period shown 
	International	National			
10.1	F		Fixed		
10.2	<i>Occulting (total duration of light longer than total duration of darkness)</i>				
	Oc	† Occ	Single-occulting		
	Oc(2) Example	† GpOcc(2) Example	Group-occulting		
	Oc(2+3) Example	† GpOcc(2+3) Example	Composite group-occulting		
10.3	<i>Isophase (duration of light and darkness equal)</i>				
	Iso		Isophase		
10.4	<i>Flashing (total duration of light shorter than total duration of darkness)</i>				
	Fl		Single-flashing		
	Fl(3) Example	† GpFl(3) Example	Group-flashing		
	Fl(2+1) Example	† GpFl(2+1) Example	Composite group-flashing		
10.5	LFl		Long-flashing (flash 2s or longer)		
10.6	<i>Quick (repetition rate of 50 to 79 - usually either 50 or 60 - flashes per minute)</i>				
	Q	† QkFl	Continuous quick		
	Q(3) Example	† QkFl(3) Example	Group quick		
	† IQ	† IntQkFl	Interrupted quick		
10.7	<i>Very quick (repetition rate of 80 to 159 - usually either 100 or 120 - flashes per minute)</i>				
	VQ	† VQkFl	Continuous very quick		
	VQ(3) Example	† VQkFl(3) Example	Group very quick		
	† IVQ	† IntVQkFl	Interrupted very quick		
10.8	<i>Ultra quick (repetition rate of 160 or more - usually 240 to 300 - flashes per minute)</i>				
	UQ		Continuous ultra quick		
	IUQ		Interrupted ultra quick		
10.9	Mo(K) Example		Morse Code		
10.10	FFl		Fixed and flashing		
10.11	Al.WR Example	† Alt.WR Example	Alternating		

Colours of Lights				
11.1	W		White (only on sector and alternating lights)	450.2 450.3 470.4
11.2	R		Red	470.6 471.3
11.3	G		Green	471.4 475.1
11.4	Bu		Blue	† BI
11.5	Vi		Violet	
11.6	Y		Yellow	
11.7	Y	# Or	Orange	† Or
11.8	Y	# Am	Amber	
 <p>Colours of lights shown on: standard charts on multicoloured charts on multicoloured charts at sector lights</p>				

Period				
12	90s	2.5s	Period in seconds and tenths of a second	90sec 471.5
		Examples		

Plane of Reference for Heights → H		Tidal Levels → H		Elevation
13	12m		Elevation of light given in metres	On fathoms charts, the elevation of a light is given in feet e.g. 40ft 471.6
		Example		

Range					
Note: Charted ranges are nominal ranges given in sea miles					
14	15M		Light with single range	471.7 471.9 475.5	
	15/10M		Light with two different ranges		† 15,10M
	15-7M		Light with three or more ranges		† 15,10,7M
		Example			

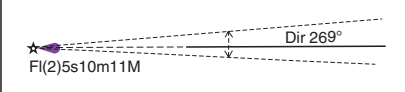

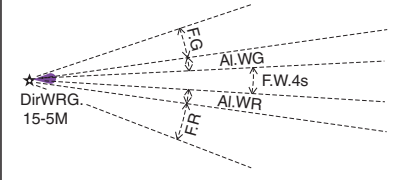
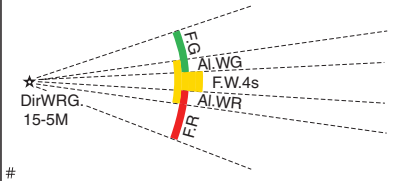
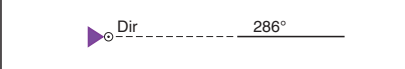
Disposition				
15	(hor)		horizontally disposed	† (horl.)
	(vert)		vertically disposed	† (vertl.)
	(Δ)	(▽)	3 lights disposed in the shape of a triangle	
				471.8

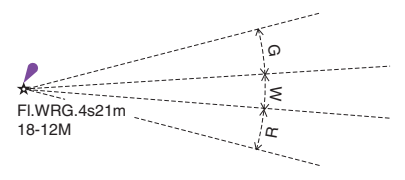
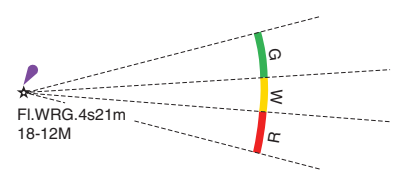
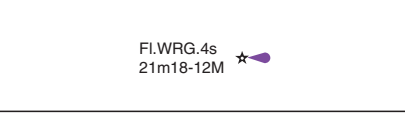
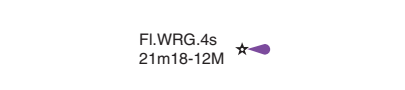
Example of a full Light Description					
16	<p>Example of a light description on a metric chart using international abbreviations: ★FI(3)WRG.15s13m7-5M</p> <p>FI(3) Class or character of light: in this example a group-flashing light, regularly repeating a group of three flashes.</p> <p>WRG. Colours of light: white, red and green, exhibiting the different colours in defined sectors.</p> <p>15s Period of light in seconds, i.e., the time taken to exhibit one full sequence of 3 flashes and eclipses: 15 seconds.</p> <p>13m Elevation of focal plane above height datum: 13 metres.</p> <p>7-5M Luminous range in sea miles: the distance at which a light of a particular intensity can be seen in 'clear' visibility, taking no account of earth curvature. In those countries (e.g. United Kingdom) where the term 'clear' is defined as a meteorological visibility of 10 sea miles, the range may be termed "nominal". In this example the ranges of the colours are: white 7 miles, green 5 miles, red between 7 and 5 miles.</p>		<p>Example of a light description on a fathoms chart using international abbreviations: ★Al.FI.WR.30s110ft23/22M</p> <p>Al.FI. Class or character of light: in this example exhibiting single flashes of differing colours alternately.</p> <p>WR. Colours of light shown alternately: white and red all-round (i.e. not a sector light).</p> <p>30s Period of light in seconds, i.e. the time taken to exhibit the sequence of two flashes and two eclipses: 30 seconds.</p> <p>110ft Elevation of focal plane above height datum: 110 feet.</p> <p>23/22M Range in sea miles. Until 1971 the lesser of geographical range (based on a height of eye of 15 feet) and luminous range was charted. Now, when the charts are corrected, luminous (or nominal) range is given. In this example the luminous ranges of the colours are: white 23 miles, red 22 miles. The geographical range can be found from the table in the ADMIRALTY List of Lights (for the elevation of 110 feet, it would be 16 miles).</p>		471.9

P Lights

Lights marking Fairways Note: Quoted bearings are always from seaward

Leading Lights and Lights in line				
20.1		Leading lights with leading line (the firm line is the track to be followed) and arcs of visibility on standard charts		
20.2		Leading lights with leading line (the firm line is the track to be followed) and arcs of visibility on multicoloured charts		
20.3		Leading lights on standard charts (≠ means "in line"; the firm line is the track to be followed; the light descriptions will be at the light stars or on the leading line, not usually both)		433 433.1 433.2 433.3 475.1 475.6
20.4		Leading lights on multicoloured charts (≠ means "in line"; the firm line is the track to be followed; the light descriptions will be at the light stars or on the leading line, not usually both)		
20.5		Leading lights on small-scale standard charts		
20.6		Leading lights on small-scale multicoloured charts		
21.1		Lights in line on standard charts (for example, marking the sides of a channel)		433.4 475.6
21.2		Lights in line on multicoloured charts (for example, marking the sides of a channel)		
22	Rear Lt or Upper Lt	Rear or upper light	† Upr.	470.7
23	Front Lt or Lower Lt	Front or lower light	† Lr	470.7

Direction Lights			
30.1		<i>Direction light with narrow sector and course to be followed, flanked by darkness or unintensified light</i>	†
30.2		<i>Direction light with course to be followed. Sector(s) uncharted</i>	†
30.3		<i>Direction light with narrow fairway sector flanked by light sectors of different characters on standard charts</i>	471.3 471.9 475 475.1 475.5 475.7
30.4		<i>Direction light with narrow fairway sector flanked by light sectors of different characters on multicoloured charts</i>	
31		<i>Moiré effect light (day and night), variable arrow mark. Arrows show when course alteration needed</i>	475.8








Sector Lights			
40.1		<i>Sector light on standard charts</i>	
40.2		<i>Sector light on multicoloured charts</i>	470.4 475 475.1 475.2 475.5
40.3		<i>Sector light on standard charts. Sectors not charted</i>	
40.4		<i>Sector light on multicoloured charts. Sectors not charted</i>	

P Lights






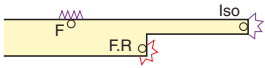
Sector Lights			
41.1		Sector lights on standard charts, the white sector limits marking the sides of the fairway	470.4 475 475.1 475.5
41.2		Sector lights on multicoloured charts, the white sector limits marking the sides of the fairway	
42.1		Main light visible all-round with red subsidiary light seen over danger on standard charts	471.8 475.4
42.2		Main light visible all-round with red subsidiary light seen over danger on multicoloured charts	
43.1		All-round light with obscured sector on standard charts	475.3
43.2		All-round light with obscured sector on multicoloured charts	
44.1		Light with arc of visibility deliberately restricted on standard charts	475.1
44.2		Light with arc of visibility deliberately restricted on multicoloured charts	

			Sector Lights	
45.1		<i>Light with faint sector on standard charts</i>		475.3
45.2		<i>Light with faint sector on multicoloured charts</i>		
46.1		<i>Light with intensified sector on standard charts</i>		475.2
46.2		<i>Light with intensified sector on multicoloured charts</i>		
a		<i>Light with unintensified sector</i>		

P Lights

Lights with limited Times of Exhibition				
50.1	 F.R(occas)	Lights exhibited only when specially needed (e.g. for fishing vessels, ferries) and some private lights on standard charts	† (fishg.) † (Priv.) † (occasl.)	473.2
	 F.R(occas)	Lights exhibited only when specially needed (e.g. for fishing vessels, ferries) and some private lights on multicoloured charts		
51.1	 Fl.10s40m27M (F.37m11M Day)	Daytime light (charted only where the character shown by day differs from that shown at night) on standard charts	†	473.4
	 Fl.10s40m27M (F.37m11M Day)	Daytime light (charted only where the character shown by day differs from that shown at night) on multicoloured charts		
52.1	 Q.WRG.5m10-3M (Fl.5s Fog)	Fog light (exhibited only in fog, or character changes in fog) on standard charts		473.5
	 Q.WRG.5m10-3M (Fl.5s Fog)	Fog light (exhibited only in fog, or character changes in fog) on multicoloured charts	†	
53	†  Fl.5s(U)	Unwatched (unmanned) light with no standby or emergency arrangements		473.1
54	# (temp)	Temporary	† (temp) † (tempy.)	473.6
55	(exting)	Extinguished	† (extingd.)	473.7
56	(man)	Manually activated		473.8

Lights P

Flare Stack (at Sea) → L		Flare Stack (on Land) → E		Signal Stations → T	Special Lights
60	 AeroAl.FI.WG.7-5s11M	<i>Aeronautical light (may be unreliable)</i>			476.1
61.1	 AeroF.R.353m11M RADIO MAST (353)	<i>Air obstruction light of high intensity</i>			476.2
61.2	(89)  (R Lts)	<i>Air obstruction lights (e.g. on radio mast)</i>		† (Red Lt.)	
62	Fog Det Lt	<i>Fog detector light</i>			477
63	  (illum)	<i>Floodlit, floodlighting of a structure</i>		† (lit)	478.2
64		<i>Strip light</i>			478.5
<p>Note: On multicoloured charts, P63 and P64 may be in any appropriate colour</p>					
65	# (priv)	<i>Private light other than one exhibited occasionally</i>		# ○ Y.Lt # ○ R.Lt	† (Priv) 473.2
66	(sync) or (sync)	<i>Synchronized (synchronous or sequential)</i>			478.3

Q Buoy, Beacons

Buoy and Beacons	IALA Maritime Buoyage System, which includes Beacons → Q 130
------------------	--

General			
1	—○—	Position of buoy or beacon	455.3 460.1 462.1
<p><i>Note:</i> On standard charts, lights on buoys and beacons are highlighted by magenta flares. On multicoloured charts, the flare indicates the colour of the light. This guide shows standard magenta flares, with a few examples of coloured flares.</p>			
Colour of Buoys and Beacons		Abbreviations for colours (lights) → P 11	
2		Single colour: green (G) and black (B)	†
3		Single colour other than green and black: red (R), yellow (Y), orange (Or)	†
4		Multiple colours in horizontal bands: the colour sequence is from top to bottom	†
5		Multiple colours in vertical or diagonal stripes; the darker colour is given first. In these examples, red(R), white(W), blue (Bu), yellow (Y) & black(B)	†
a		Single colour other than green and black (non-IALA system: white (W) grey (Gy), blue (Bu))	† 464
b		Wreck buoy (not used in the IALA System)	†
c		Chequered	†

Lighted Marks		Marks with Fog Signals → R	
7		Lighted marks on standard charts (examples)	†
8		Lighted marks on multicoloured charts (examples)	†

Topmarks and Radar Reflectors		For Application of Topmarks within the IALA System → Q 130		Radar reflector → S	
9		IALA System buoy topmarks (beacon topmarks shown upright)	Non-IALA System #		463 463.1
10		Beacon with topmark, colour, radar reflector and designation (example)			450 455.2 455.7 455.8
11		Buoy with topmark, colour, radar reflector and designation (example). Radar reflectors are not generally charted on IALA System buoys			460.3 460.6 465.1 465.2

Buoys, Beacons Q

Features Common to Beacons and Buoys → Q 1-11 Buoys

Shapes				
20		<i>Conical buoy, nun buoy, ogival buoy</i>	†	462.2
21		<i>Can buoy, cylindrical buoy</i>	†	462.3
22		<i>Spherical buoy</i>	†	462.4
23		<i>Pillar buoy, buoy with no distinctive shape</i>	†	462.5
24		<i>Spar buoy, spindle buoy</i>	†	462.6
25		<i>Barrel buoy, tun buoy</i>		462.7
26		<i>Superbuoy. Superbuoys are very large buoys, e.g. an aid to navigation mounted on a circular hull of about 5m diameter. Mooring for tankers, of superbuoy size, is a variation of the superbuoy symbol (L16)</i>	†	445.4 460.4 462.9 474

Light Vessels and Minor Light Floats				
30.1	Fl. G. 3s Name	<i>Light float (example) on standard charts</i>		462.8
30.2	Fl. G. 3s Name	<i>Light float (example) on multicoloured charts</i>		
31	† Fl. 10s	<i>Light float not part of IALA System</i>	†	462.8
32.1	Fl. 5s12m15m	<i>Light vessel on standard charts</i>	†	474
32.2	Fl. 5s12m15m	<i>Light vessel on multicoloured charts</i>		














Q Buoys, Beacons











Mooring Buoys		Oil or Gas Installation Buoy → L	Visitors' (Small Craft) Mooring → U	
40		Mooring buoy		431.5
41.1	Fl.Y.2-5s	Lighted mooring buoy (example) on standard charts		431.5 466.1 466.2 466.3 466.4
41.2	Fl.Y.2-5s	Lighted mooring buoy (example) on multicoloured charts		
42		Trot, mooring buoys with ground tackle and berth numbers		431.6
43		Mooring buoy with telephonic communications		431.5
44		Numerous moorings (example)		431.7
45		Visitors' mooring		431.5








Special Purpose Buoys		<i>The symbols shown below are examples: shapes of buoys may differ; lateral or cardinal buoys may be used in some situations; the use of the 'X' topmark is optional. Purpose of buoy may be shown by textual label.</i>		
50		Firing danger area (Danger Zone) buoy		441.2
54		Degaussing Range buoy		448.2
58		Ocean (or Oceanographic) Data Acquisition System (ODAS) buoy, Data collection buoy		448.3 460.4 462.9
70		Buoy privately maintained (example)		
71		Seasonal buoy (the example shows a yellow spherical buoy on station between April and October)		460.5
d		Racing mark		

Buoys, Beacons Q

<i>Lighted Beacons</i> → P	<i>Features Common to Beacons and Buoys</i> → Q 1-11	Beacons
----------------------------	--	----------------

General				
80	 ⊙Bn	<i>Beacon in general, characteristics unknown or chart scale too small to show</i>		455.5
			#	
81	 BW	<i>Beacon with colour, no distinctive topmark (example)</i>		450.2 455.4 459.2
82	 R  BY  BRB	<i>Beacon with colour and topmark (examples)</i>	 W  B  R  BW etc.	455.4 456 459.2 463 463.1
			†	
83	 BRB	<i>Beacon on submerged rock (topmark and colours as appropriate)</i>	 BRB	455.6
			#	
e		<i>Beacon which does not conform with the IALA system</i>	 (non-IALA) W	

<i>Minor Pile</i> → F		Minor Impermanent Marks usually in Drying Areas (Lateral Mark for Minor Channel)						
90	↓	<i>Pole</i>		456.1				
			†					
91	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">PORT HAND</td> <td style="width: 50%; text-align: center;">STARBOARD HAND</td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;"></td> </tr> </table>	PORT HAND	STARBOARD HAND			<i>Perch, withy</i>		456.1
PORT HAND	STARBOARD HAND							
								
			†					
92		<i>Withy</i>						
	†		†					

<i>Landmarks</i> → E		Minor Marks, usually on Land		
100		<i>Cairn</i>	⊙ Cairn	456.2
			†	
101	□ Mk	<i>Coloured or white mark (the colour may be indicated)</i>		456.2
102.1	 RW 	<i>Coloured topmark (colour known or unknown) with function of a beacon</i>	 R  G	
			†	
102.2	 RW  RW _____	<i>Painted boards with function of leading beacons</i>		
			†	

Q Buoys, Beacons

Beacon Towers				
110		Beacon towers without and with topmarks and colours (examples)		456.4
111	#	Lattice beacon		456.4







Special Purpose Beacons		Leading Lines, Clearing Lines → M		
<i>Note: Topmarks and colours are shown where scale permits</i>				
120		Leading beacons (the firm line is the track to be followed)		458
121		Beacons marking a clearing line or transit		458
122		Beacons marking measured distance with quoted bearings. The track is shown as a firm line if it is to be followed precisely		458
123		Cable landing beacon (example)		443.5 458
124	#	Refuge beacon		456.4
126	#	Notice board	NB	456.2

Buoys, Beacons Q

130 IALA Maritime Buoyage System

IALA International Association of Marine Aids to Navigation and Lighthouse Authorities

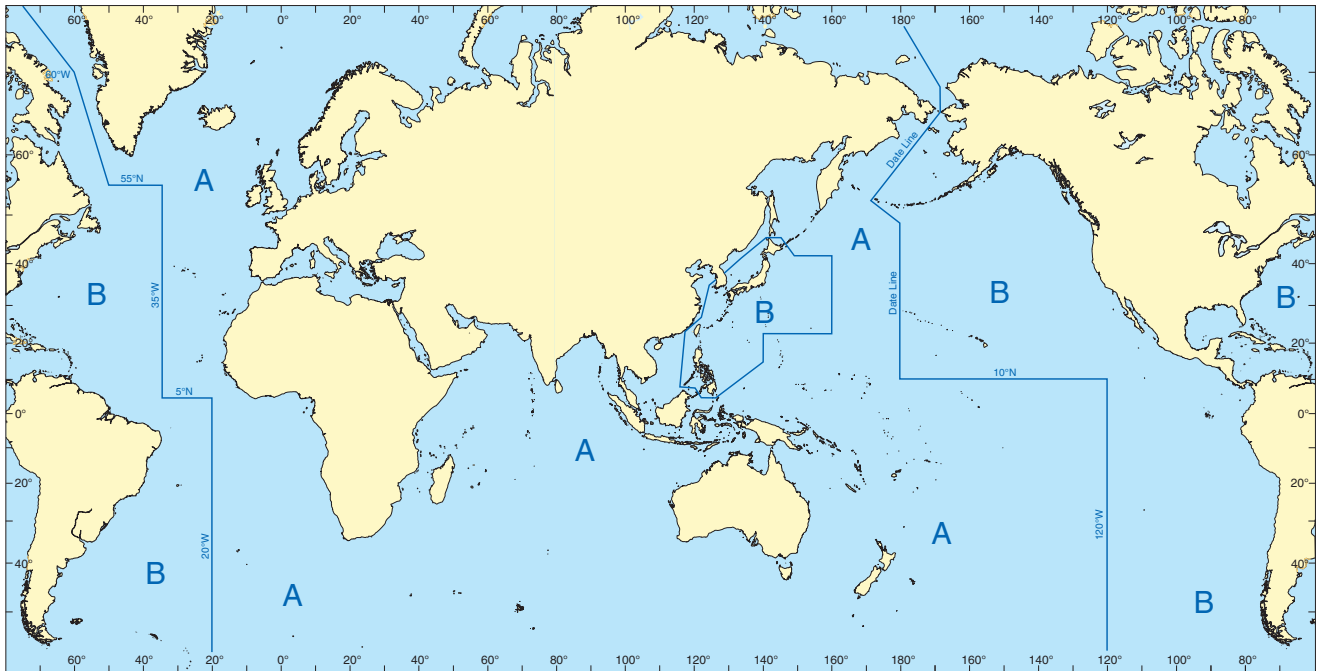
NP735

Where in force, the IALA System applies to all fixed and floating marks except landfall lights, leading lights and marks, sectored lights and major floating lights. The standard buoy shapes are cylindrical (can) , conical , spherical , pillar , and spar , but variations may occur, for example: minor light floats . In the illustrations on the next page, only the standard buoy shapes are used. In the case of fixed beacons (lit or unlit) only the shape of the topmark is of navigational significance.

IALA Buoyage Regions A and B

There are two international buoyage regions where lateral marks differ.

Region A is primarily comprised of the waters surrounding Greenland, Europe, Africa, Australia and Asia (except for Japan, the Republic of Korea and the Philippines). **Region B** is primarily comprised of the waters surrounding North and South America, Japan, the Republic of Korea and the Philippines (see illustration).



130.1 Lateral marks are generally for well-defined channels. There are two international Buoyage Regions - A and B - where Lateral marks differ.

REGION A	REGION B
<p>Port-hand Marks are red with cylindrical topmarks (if any). Lights are red and have any rhythm except F(2+1)R</p> <p>Preferred channel to Starboard F(2+1)R, if lit</p> <p>Preferred channel to Port F(2+1)G, if lit</p> <p>Starboard-hand Marks are green with conical topmarks (if any). Lights are green and have any rhythm except F(2+1)G</p>	<p>Port-hand Marks are green with cylindrical topmarks (if any). Lights are green and have any rhythm except F(2+1)G</p> <p>Preferred channel to Starboard F(2+1)G, if lit</p> <p>Preferred channel to Port F(2+1)R, if lit</p> <p>Starboard-hand Marks are red with conical topmarks (if any). Lights are red and have any rhythm except F(2+1)R</p>

Buoy shape may be cylindrical or conical (to indicate port or starboard) but may be another shape with appropriate topmark. Marks which indicate the preferred channel at a junction have three horizontal colour bands and, if lit, the rhythm will be F(2+1)

130.2



Symbol showing direction of buoyage where not obvious.






Symbol showing direction of buoyage where not obvious, on multicoloured charts (red and green circles coloured as appropriate to region).




Q Buoys, Beacons

<p>130.3 Cardinal Marks indicating navigable water to the named side of the marks. Cardinal marks have the same meaning in Regions A and B</p>	
<p>Topmark: 2 black cones Light: White</p> <p>The same abbreviations are used for lights on spar buoys and beacons.</p> <p>The periods, 5s, 10s and 15s, may not always be charted.</p> <p>Time (seconds) 0 5 10 15 Period shown</p>	
<p>130.4</p> <p>Body: black with red horizontal band(s) Topmark: 2 black spheres</p>	<p>Isolated Danger Marks, stationed over dangers with navigable water around them.</p> <p>BRB BRB</p> <p>Fl(2) GpFl(2)</p> <p>White light</p>
<p>130.5</p> <p>Body: red and white vertical stripes Topmark (if any): red sphere</p>	<p>Safe Water Marks, including mid-channel and landfall marks.</p> <p>RW RW RW</p> <p>Isa, or Oc, or LFl.10s, or Mo(A), or Occ</p> <p>White light</p>
<p>130.6</p> <p>Body: (shape optional): yellow Topmark (if any): yellow X</p>	<p>Special Marks, not primarily to assist navigation but to indicate special features.</p> <p>Y Y Y Y etc.</p> <p>Fl.Y</p> <p>Yellow light</p>
<p>130.7</p> <p>Body: pillar or spar, blue and yellow vertical stripes Topmark: yellow upright cross</p>	<p>New Danger Marks, until the information is sufficiently promulgated.</p> <p>Emergency Wreck Marking Buoy</p> <p>BuY BuY</p> <p>Al.Oc.BuY.3s</p> <p>Blue and Yellow light</p>

Fog Signals **R**






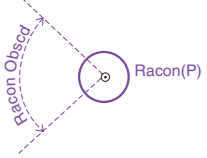
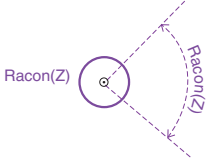





	Fog Detector Light → P	Fog Light → P		General	
1				<i>Position of fog signal. Type of fog signal not stated</i>	† Fog Sig 451 451.2 452.8
2	(man)			<i>Manually activated</i>	452.9

Types of Fog Signals, Abbreviations				
10	Explos	<i>Explosive</i>	† Gun	452.1
11	Dia	<i>Diaphone</i>		452.2
12	Siren	<i>Siren</i>		452.3
13	Horn	<i>Horn (nautophone, reed, tyfon)</i>	† Nauto † E.F. Horn † Tyfon † Reed	452.4
14	Bell	<i>Bell</i>		452.5
15	Whis	<i>Whistle</i>		452.6
16	Gong	<i>Gong</i>		452.7















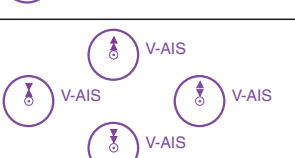






Examples of Fog Signal Descriptions				
20	 Fl.3s70m29M Siren Mo(N)60s	<i>Siren at a lighthouse, giving a long blast followed by a short one (N), repeated every 60 seconds</i>		452.3 453.3
21	 Bell	<i>Wave-actuated bell buoy. The provision of a legend indicating number of emissions, and sometimes the period, distinguishes automatic bell or whistle buoys from those actuated by waves</i>		452.5 453 454.1
22	 Q(6)+LFl.15s Horn(1)15sWhis YB	<i>Light buoy, with horn giving a single blast every 15 seconds, in conjunction with a wave-actuated whistle</i>	Reserve fog signals are fitted to certain buoys Only those actuated by waves are charted	452.4 453.1 454.3

‡ The Fog Signal symbol (R1) is usually omitted when associated with another aid to navigation (e.g. light or buoy) when a description of the signal is given

S Radar, Radio, Satellite Navigation Systems

Radar	Radar Structures Forming Landmarks → E	Radar Surveillance Systems → M	
1	 Ra	Coast radar station providing range and bearing from station on request	485.1
2	 Ramark	Ramark, radar beacon transmitting continuously	486.1
3.1	 Racon(Z) (3cm)	Radar transponder beacon, with morse identification, responding within the 3cm (X) band	486.2 486.3
3.2	 Racon(Z) (10cm)	Radar transponder beacon, with morse identification, responding within the 10cm (S) band	
3.3	 Racon(Z)	Radar transponder beacon, with morse identification	
3.4	 Racon(P)	Radar transponder beacon with sector of obscured reception	486.4
	 Racon(Z)	Radar transponder beacon with sector of reception	
3.5	 Racons ≠ 270°	Leading radar transponder beacons (‡ and † mean "in line")	486.5 433.3
	 Lts ≠ 270° Racons ≠ 270°	Leading radar transponder beacons coincident with leading lights	
3.6	 Racon	Radar transponder beacons on floating marks (examples)	486.2
4		Radar reflector (not usually charted on IALA System buoys and buoyant beacons)	455.8 459.2 465
5		Radar conspicuous feature	485.2








Radar, Radio, Satellite Navigation Systems S

Radio Structures Forming Landmarks → E		Radio Reporting (Calling-in or Way) Points → M		Radio	
10	 Name RC	Non-directional marine or aeromarine radiobeacon		480 481.1 480.1	
11	 RD 269°5'	Directional radiobeacon with bearing line	 Dir.Ro.Bn 269°30'	480 481.2	
	 Lts# 270° RD 270°	Directional radiobeacon coincident with leading lights (± means "in line")			
12	 RW	Rotating pattern radiobeacon		480 481.1	
13	 Consol	Consol beacon		480	
14	 RG	Radio direction-finding station	 Ro.D.F	483	
15	 R	Coast radio station providing QTG service	 Ro.	480 484	
16	 Aero RC	Aeronautical radiobeacon		480 482	
17.1	 AIS	Automatic Identification System transmitter		489.1	
17.2	 AIS	Automatic Identification System transmitters on floating marks (examples)		489.1	
18.1	 V-AIS	Virtual AIS aid to navigation with no known IALA-defined function. Other carriers may be used		489.2	
18.2	 V-AIS	Virtual AIS aid to navigation with IALA cardinal mark function			
18.3	 V-AIS	Virtual AIS aid to navigation with IALA lateral mark function			
18.4	 V-AIS	Virtual AIS aid to navigation with IALA isolated danger mark function			
18.5	 V-AIS	Virtual AIS aid to navigation with IALA safe water mark function			
18.6	 V-AIS	Virtual AIS aid to navigation with IALA special mark function			
18.7	 V-AIS	Virtual AIS aid to navigation with IALA new danger mark function			
Satellite Navigation Systems					
50	WGS	WGS72	WGS84	World Geodetic System, 1972 or 1984	201
				<i>Note: A note may be shown to indicate the shifts of latitude and longitude, to one, two or three decimal places of a minute, depending on the scale of the chart, which should be made to satellite-derived positions (which are referred to WGS84) to relate them to the chart.</i>	202
51	 DGPS	Station providing Differential Global Positioning System corrections		481.4	









T Services

Pilotage					
1.1		<i>Pilot boarding place, position of pilot cruising vessel</i>	Pilots	Pilots	
1.2	Name	<i>Pilot boarding place, position of pilot cruising vessel, with name (e.g. District, Port)</i>			491.1 491.2
1.3	Note	<i>Pilot boarding place, position of pilot cruising vessel, with note (e.g. Tanker, Disembarkation)</i>			
1.4	H	<i>Pilots transferred by helicopter</i>			
2	Pilot lookout	<i>Pilot office with Pilot lookout, Pilot lookout station</i>			
3	Pilots	<i>Pilot office</i>			491.3
4	Port Name (Pilots)	<i>Port with pilotage service (boarding place not shown)</i>			491.4










Coastguard, Rescue					
10	CG CG CG	<i>Coastguard station</i>	CGFS		492 492.1 492.2
11	CG CG CG	<i>Coastguard station with Rescue station</i>	CGFS		493.3
12		<i>Rescue station, Lifeboat station, Rocket station</i>	LB		493 493.1
13		<i>Lifeboat lying at a mooring</i>			493.2
14	Ref Ref	<i>Refuge for mariners, Refuge for vessels</i>			431.3 456.4 493.4

Stations					
20	⊙SS	<i>Signal station in general</i>	† Sig Sta	† Sig Stn	494
21	 ⊙SS(INT)	<i>Signal station showing International Port Traffic Signals</i>			495.4
22	 ⊙SS(Traffic)	<i>Traffic signal station, Port entry and departure signals</i>			495.1
23	 ⊙SS(Port Control)	<i>Port control signal station</i>			495.1
24	 ⊙SS(Lock)	<i>Lock signal station</i>			495.2
25.1	 ⊙SS(Bridge)	<i>Bridge passage signal station</i>			495.3
25.2	†  F Traffic Sig	<i>Bridge lights including traffic signals</i>			
28	⊙SS(Storm)	<i>Storm signal station</i>	† Storm Sig	† Stm. Sig. Stn.	497.1
29	⊙SS(Weather)	<i>Weather signal station, Wind signal station</i>			497.1
30	⊙SS(Ice)	<i>Ice signal station</i>			497.1
31	⊙SS(Time)	<i>Time signal station</i>			494.1
32.1		<i>Tide scale or gauge</i>	⊙Tide gauge		496.1
32.2	⊙Tide gauge	<i>Automatically recording tide gauge</i>			
33	⊙SS(Tide)	<i>Tide signal station</i>			496.2
34	⊙SS(Stream)	<i>Tidal stream signal station</i>			496.3
35	⊙SS(Danger)	<i>Danger signal station</i>			497.2
36	⊙SS(Firing)	<i>Firing practice signal station</i>			497.2

U Small Craft (Leisure) Facilities

Small Craft (Leisure) Facilities		Transport Features, Bridges →D Public Buildings, Cranes →F	Pilots, Coastguard, Rescue, Signal Stations →T
a		Visitors' mooring	† 
b		Public slipway	† 
c		Public landing, Steps, Ladder	† 
d		Public house, Inn	† 
e		Restaurant	† 
f		Water tap	† 
g		Fuel station (Petrol, Diesel)	† 
h		Electricity	† 

Small Craft (Leisure) Facilities **U**

i		Laundrette	†																																																																																																			
j		Public toilets	†																																																																																																			
k		Post box	†																																																																																																			
l		Public telephone	†																																																																																																			
m		Refuse bin	†																																																																																																			
n		Public car park	†																																																																																																			
o		Parking for boats and trailers	†																																																																																																			
p		Caravan site	†																																																																																																			
q		Camping site	†																																																																																																			
r	<table border="1"> <thead> <tr> <th colspan="2">HARBOUR / MARINA FACILITIES</th> <th colspan="13">MARINA FACILITIES</th> <th>Telephone Area Code</th> <th>Telephone Number</th> <th>Fax Number</th> </tr> <tr> <th></th> <th></th> <th>Diesel</th> <th>Bottled Gas</th> <th>Electricity</th> <th>Holding Tank Disposal</th> <th>Repairs</th> <th>Crane/Boat Hoist</th> <th>Scrubbing Berth</th> <th>Launching Berth</th> <th>Pontoon Berthing</th> <th>Swinging Moorings</th> <th>Chandlery</th> <th>Laundrette</th> <th>VHF Radio Channels</th> <th>Shower</th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>FALMOUTH</td> <td>- Falmouth Visitors Yacht Haven</td> <td></td> <td></td> <td></td> <td>●</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>●</td> <td>●</td> <td>●</td> <td>●</td> <td>●</td> <td>12</td> <td>+44 (0) 1326</td> <td>312285</td> <td>211352</td> </tr> <tr> <td></td> <td>- Mylor Yacht Harbour</td> <td>●</td> <td>●</td> <td>●</td> <td>●</td> <td>●</td> <td>●</td> <td>●</td> <td>●</td> <td>●</td> <td>●</td> <td>●</td> <td>●</td> <td>●</td> <td>●</td> <td>80/M</td> <td>+44 (0) 1326</td> <td>372121</td> <td>372120</td> </tr> <tr> <td>†</td> <td>HELDFORD - Helford Moorings Officer</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>●</td> <td>●</td> <td>●</td> <td></td> <td>-</td> <td>+44 (0) 1326</td> <td>250749</td> <td>-</td> </tr> </tbody> </table> <p><i>Marina Facilities are no longer inserted on ADMIRALTY charts. Users are recommended to contact the marina, or visit their website, for the latest information. Contact details are given on some ADMIRALTY charts.</i></p>					HARBOUR / MARINA FACILITIES		MARINA FACILITIES													Telephone Area Code	Telephone Number	Fax Number			Diesel	Bottled Gas	Electricity	Holding Tank Disposal	Repairs	Crane/Boat Hoist	Scrubbing Berth	Launching Berth	Pontoon Berthing	Swinging Moorings	Chandlery	Laundrette	VHF Radio Channels	Shower				FALMOUTH	- Falmouth Visitors Yacht Haven				●						●	●	●	●	●	12	+44 (0) 1326	312285	211352		- Mylor Yacht Harbour	●	●	●	●	●	●	●	●	●	●	●	●	●	●	80/M	+44 (0) 1326	372121	372120	†	HELDFORD - Helford Moorings Officer											●	●	●		-	+44 (0) 1326	250749	-
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		Diesel	Bottled Gas	Electricity	Holding Tank Disposal	Repairs	Crane/Boat Hoist	Scrubbing Berth	Launching Berth	Pontoon Berthing	Swinging Moorings	Chandlery	Laundrette	VHF Radio Channels	Shower																																																																																							
FALMOUTH	- Falmouth Visitors Yacht Haven				●						●	●	●	●	●	12	+44 (0) 1326	312285	211352																																																																																			
	- Mylor Yacht Harbour	●	●	●	●	●	●	●	●	●	●	●	●	●	●	80/M	+44 (0) 1326	372121	372120																																																																																			
†	HELDFORD - Helford Moorings Officer											●	●	●		-	+44 (0) 1326	250749	-																																																																																			

V Data Quality Indicators - Supplementary National Guidance

Following a large chart user survey, it became apparent that some mariners are insufficiently aware of the importance of data quality indicators on charts. This section of NP5011 aims to provide more detail and clarification of the implications of data quality indicators on paper charts. Mariners should not assume that the information shown on a modern chart, especially depth, is absolutely accurate or precisely positioned. In general, this will largely depend on the age of the source data, how it was obtained and for what purpose. While a vessel with satellite navigation equipment may be able to navigate very accurately, dangers on the chart may not be accurately positioned so a wide berth is still advisable.

The most important guide to data quality on most paper charts of 1:500 000 scale and larger is the Source diagram or Source statement in the chart title. Some Source diagrams are based on the ENC Category of Zone of Confidence (CATZOC) but more usually the Sources will be listed by authority (e.g. government, harbour authority, foreign chart), age (see technology horizons table below), and scale (where relevant). Some may also add information about method of data collection (e.g. leadline, multibeam, passage soundings), type of survey (e.g. reconnaissance), % seafloor ensonification. From this, the mariner should be able to assess the likely accuracy of the charted detail. Note: Not every chart has a source diagram, particularly very large scales which may have a single source; in such cases, the source data will usually be stated under the title.

Data quality on ENC is mainly expressed by Zones of Confidence (ZOC). These provide a more exact guide to the positional accuracy and seafloor coverage of the source survey, compared to the 'clues' to data quality on paper charts from which the mariners will make their own assessment. Initially, ENC were compiled from paper charts. Often there was no time to reassess all source information to apply the different criteria used to establish ZOC, so some areas were marked as U (=unassessed); in such cases, the paper chart is likely to give more information. Some paper chart source diagrams now use ZOCs, sometimes with the addition of a temporal element to allow the mariner to assess how much the survey information may have degraded over time (especially in changeable areas). ZOCs are defined in various places including The Mariner's Handbook and on charts where they are used.

In changeable areas, the contours and depths at the edges of different surveys are unlikely to match. In such cases, a deliberate break may be left to show the edge, sometimes with a legend such as 'Discontinuity between surveys'. The date of the surveys may be shown either side of the break or can be determined from the Source diagram.

Survey technology has changed over the years. Fortunately, there have been relatively few fundamental technology changes and these, once introduced, have tended to rapidly take over for all surveys. Hence, there are a few 'technology horizons' at which survey accuracy took a step change. Between these technology horizons the quality of surveys will have remained relatively static. The dates and reasons for the technology horizons are given in the 'technology horizons' table below.

Year	Sounding method	Fixing method	Remarks
Pre 1865	Leadline	Angles to local land marks or celestial observations if in an offshore location	Surveys were mainly concerned with recording previously undiscovered lands. More attention was given to fixing the coast than to providing soundings. Soundings, where present at all, tend to be sparse with irregular gaps between them. The quoted scale is largely irrelevant when used to judge likely sounding density.
1865	Leadline	Angles to local land marks or celestial observations if in an offshore location	Steam replaced sail in British survey ships and regular lines of sounding begin to appear. The scale of survey will give an indication of the expected density of soundings (the larger, the denser). Inshore, where boats were used instead of the ships, oars still remained as the motive power and sounding lines continued to be irregular.
1905	Leadline	Angles to local land marks or celestial observations if in an offshore location	Steam replaced oars as the power for survey boats allowing regular lines to be extended to all areas and water depths of the survey. The scale of survey gives an indication of the expected density of soundings (the larger, the denser).
1935	Single beam echo Sounder	Angles to local land marks or celestial observations if in an offshore location	Greater ease of collecting soundings allowed a far greater density to be gathered. The scale of survey gives an indication of the expected density of soundings.
1950	Single beam echo Sounder	Electronic position fixing	Greater accuracy/consistency of position fixing extending further off shore than was possible with sextant angles to shore marks.
1973	Single beam echo sounder and Side Scan Sonar	Electronic position fixing	Side Scan Sonar (SSS) allows surveyors to locate hazards that exist between survey lines. For the first time the survey will have covered the entire sea floor.
1985	Single beam echo sounder and Side Scan Sonar	Satellite position fixing	Introduction of satellite positioning allows surveyors to accurately position ship anywhere in the world to a common datum.
2000	Swathe echo sounder	Satellite position fixing	Swathe (including beam-forming/multibeam, interferometric and LIDAR) replaces single beam and side scan sonar. Swathe allows the surveyor to not only detect obstructions between survey lines but also allows depths to be gathered over them. Scale is irrelevant, % ensonification is important.

Data Quality Indicators - Supplementary National Guidance V

In addition to the Source diagram, there may be other clues to the accuracy of data. These are listed in various sections of NP5011, but a more detailed explanation is given below:

'PA' Position approximate (B7). Used to indicate that the position of a land or water feature has not been accurately determined or does not remain fixed.

'PD' Position doubtful (B8). Used principally to indicate that a wreck, obstruction, shoal, etc., has been reported in various positions and not definitely determined in any (e.g. a wreck or container washed overboard, where the last known position still afloat is the best data available).

'ED' Existence doubtful (I1). Used principally to indicate the reported existence of a rock, shoal, etc., the actual existence of which is considered improbable (e.g. because of doubts about the validity of the data or the context of the position).

'SD' Sounding doubtful (I2). Used to indicate that a depth over a shoal, a rock, etc., may be less than charted, though the position is not in doubt.

'Rep' Reported (I3). Used to chart a reported danger to navigation, the existence of which has not been confirmed by a controlled survey, but there is no reason to doubt the validity. Sometimes called a vigia. It may indicate that a shoal area exists and there may be even shoaler depths in the vicinity. Sometimes a date will be included.


Discoloured water. This legend may indicate the possible existence of shoal water.


Imprecise shoal areas. In areas where reliable hydrographic survey data is very limited or non-existent, it may be possible to identify shoal areas by reference to other sources (e.g. satellite imagery, altimetry, gravimetric data). If confidence in the data is low (including extent and even approximate depth) such areas may be charted by an area of full shallow water blue tint, without limiting line, danger line or contour.


Soundings in fine upright font (I14). are used to draw attention to sources which are considered unreliable for some reason (e.g. enlarged from a small-scale survey, age of source, poor positional control). Usually in such areas, the depth contours will be shown as broken lines (I31) and the Source diagram may provide further information. Odd upright soundings scattered amongst normal soundings usually indicates that they are from older sources but have not been definitely disproved by a more modern survey of the area.

Unsurveyed/Inadequately surveyed (I25). Some areas are surrounded by a bold dashed line (usually black, but on some charts magenta) with a legend warning that the area is unsurveyed or that there is something 'inadequate' about the survey (which should be explained in a note or by reference to the Source diagram). Unsurveyed areas may also be shown by alternating bands of white and blue tint. Such areas are usually shown for comparatively small unsurveyed areas amongst surveyed areas; large unsurveyed areas will be apparent simply from a lack of any soundings.

Sandwaves (J14). The depth in sandwave areas may be less than charted, because surveys were not necessarily conducted at the time of maximum sandwave height.

Swept depths (I24, K2, K27, K42). A 'bracket'  under a depth indicates that the depth over a feature or within an area has been carefully measured by a physical means (e.g. drag sweep, diver). The depth was therefore accurate at the time of survey but it may have changed since. A date may be given.

Safe clearance depth (K3, K30). A 'bar' over a depth, e.g.  must not be confused with the symbol above; it means the opposite! It indicates that the depth has only been estimated, e.g. the depth over a wreck may be estimated by subtracting the height of the wreck from the general depth in the area and applying a safety margin. However, it is possible that the wreck is not lying flat on the sea floor.

Wreck 'not considered dangerous to surface navigation' (K29).  The draught of surface vessels has increased since the symbol was originally designed (when it was assumed that the greatest draught was 8 fathoms/14.6m). Unfortunately, it cannot be assumed that the symbol has been updated on a later chart (even though the depth criteria for the symbol has been changed over time). Any vessel with a draft greater than 14m is therefore recommended to avoid passing over such wrecks (except where they are in water deep enough to render them completely safe). More details are given in The Mariner's Handbook.

Spoil grounds and extraction areas (N62, N63). Even if marked disused, such areas indicate that depths are likely to have changed since the last survey. It should not be assumed that extraction areas will be deeper; the extraction process may result in material being heaped up in some areas.

After disasters. Sometimes the charted depths covering large areas of seafloor may become suspect as the result of a major disaster (e.g. tsunami, earthquake, hurricane). A cautionary note on the chart and/or a preliminary Notice to Mariners will generally be issued. Emergency surveys completed after the disaster to cover shipping lanes may then be highlighted in some way on the chart, with an explanatory note provided on the chart.

Index of Abbreviations of Principal Non-English Terms

Glossaries of non-English terms will be found in the volumes of Sailing Directions.

On metric charts, non-English terms are generally given in full wherever space and information permits. Where abbreviations are used on metric charts they accord with the following list, apart from those on charts published before 1980 where full stops are omitted. Obsolescent forms of abbreviations may also be found on these charts and on reproductions of other nations' charts.

CURRENT FORM	OBSOLESCE FORM(S)	TERM	ENGLISH MEANING	CURRENT FORM	OBSOLESCE FORM(S)	TERM	ENGLISH MEANING
ALBANIAN				FRENCH (continued)			
	K	Kodër, Kodra	Hill	F.	Fl	Fleuve	Large river
ARABIC				Ft.	Ft	Fort	Fort
Geb.	Djeb, Dj	Djebel	Mountain, Hill	G.	Gd, G ^d , Gde, G ^d e	Golfe	Gulf
J.	G	Gebel	Mountain, Hill	Ht.Fd.	H.F., Ht fd, H ^t d, H ^t fond	Grand, Grande	Great
Jaz.	Jab, J ^l	Jabal, Jib ^o l, Jebel	Mountain(s), Hill(s)			Haut-fond	Shoal
Jeb.	Jazt	Jazat, Jaz ^o 'ir Jaz ^o eh	Island(s), Peninsula	Î.	I, I ^t	Île, Îles, Îlot	Island(s), Islet
Jez.	J, J ^l	Jebel	Mountain, Hill	L.		Lac	Lake
Kh.	Jez ^t	Jezat	Island, Peninsula	Mlg.	Mn, M ⁿ	Moulin	Mill
W.	K	Khawr, Khër	Inlet, Channel	Mt.	Mge, M ^{age} , Mou	Mouillage	Anchorage
	Si, S ⁱ	Sidi	Tomb		M ^t	Mont	Mount, Mountain
		W ^o d, W ^o di	Valley, River, River bed	P.	N.D.	Notre Dame	Our Lady
CHINESE						Port	Port
Chg.	Ch ^g	Chiang	River, Shoal, Harbour, Inlet, Channel, Sound	Pit.	Pet, pit, pite, Pt	Petit, Petite	Small
DANISH				Pl.	Pn, P ^{on}	Piton	Peak
B.		Bugt	Bay, Bight	Plat.	Pla, Plat ^u	Plateau	Beach
Bk.	B ^k	Banke	Bank				Tableland, Sunken flat
Fj.	F ^d	Fjord	Inlet	Pte.	pte	Pointe	Point
Gr.	Grd, Gr ^d , G ^d	Grund	Shoal	Qu.	Q	Quai	Quay
H.	Hm, H ^m , Hne, H ^{ne}	Holm, Holmene	Islet(s)	R.	Rau, Riv, R ^{au}	Rivière, Ruisseau	River, Stream
Hd.	H ^d	Hoved	Headland		Rav, R ^{ne}	Ravine	Ravine
Hn.	H ⁿ	Havn, Havnen	Harbour	Rf.		Récif	Reef
Ll.		Lille	Little	Roc.	Re, R ^e , Rer, R ^{er}	Roche, Rocher	Rock
N.		Nord, Nordre	North, Northern	S.	St, S ^t , Ste, S ^{te}	Saint, Sainte	Saint, Holy
Ø.		Øst, Østre	East, Eastern		Som.	Sommet	Summit
Øy.	Øne, Ø ^{ne} , Öne, Ö ^{ne}	Øyane, Øyene, Öyane	Islands	Tr.	T ^r	Tour	Tower
		Öyene			Vi, V ^x	Vieux, Vieil, Vielle	Old
Pt.	P ^t	Pynt	Point	Gaelic			
S.		Sønder, Søndre	South, Southern	Bo.		Bogha	Below water rock
Sd.	S ^d	Sund, Sundet	Sound	Eil.	E, En, E ⁿ	Eilean, Eileanan	Island(s), Islet(s)
Sk.	Skr, Sk ^r	Skær, Skjær	Rock above water	Ru.	R ^u	Rubha	Point
St.		Stor	Great	Sg.	Sgr, Sg ^r	Sgeir	Rock
V.		Vest, Vestre	West	German			
DUTCH				B.		Bucht	Bay
B.	B ⁱ	Baai	Bay	Bg.	B ^g	Berg	Mountain
Bg.	B ^g	Berg	Mountain	Gr.	Grd, Gr ^d , G ^d	Grund	Shoal
Bk.	B ^k	Bank	Bank	Hn.	H ⁿ	Hafen	Harbour
Eil.	Eiln, Eil ⁿ	Eiland, Eilanden	Island(s)	K.		Kap	Cape
G.		Golf	Gulf	Rf.	R ^f	Riff	Reef
H.	Gt, Grt, G ^t , G ^{rt}	Groot, Groote	Great		Schl	Schloss	Castle
H.		Hoek	Cape, Hook	Greek			
Pt.	P ^t	Punt	Point	Ág., Ag.	Áy., Ay.	Ágios, Ágia	Saint, Holy
R.		Rivier	River	Ágk.	Ang.	Agkáli	Bight, Open bay
Rf.	R ^f	Rif	Reef	Ágky.	Angir., Ang	Agkyrovólio	Anchorage
Str.	Stn, St ^r , St ⁿ	Straat, Straten	Strait(s)	Ák., Ak.		Ákra, Akrotirio	Cape
FINNISH				Kól.	Kol	Kólipos	Gulf
K.		Kari, Kallio, Kivi	Rock, Reef	Lim.		Limín, Liménas	Harbour
Lu.		Luoto, Luodet	Rock(s)	N.	N	Nísos, Nísoi	Island(s)
Ma.		Matala	Shoal	N.	N	Nísida, Nísides	Islet(s)
	P	Pieni, Pikku	Small	Ó.	O	Órmos	Bay
Sa.	S ^a	Saari, Saaret	Island(s)	Or.	Or	Ormískos	Cove
Tr.	T ^r	Torni	Tower	Ór.	Or	Óros, Óroi	Mountain(s)
FRENCH				Pot.		Potamós	River
A.	A ^e	Anse	Inlet	Prof		Profitís	Prophet
B.	B ^e	Baie	Bay	Sk.		Skópelos, Skópeloi	Reef(s), Drying rock(s)
Bc.	Bas. Bsse	Basse	Shoal	Vrach.	Vrak	Vrachonisída, Vrachonisídes	Rocky islets
	B ^c	Banc	Bank	Vrach.	Vrák	Vráchos, Vráchol	Rock(s)
	Bssn, Bn, B ⁿ	Bassin	Basin	Ýf.	Íf.	Ýfalos, ýfaloi	Reef(s)
C.		Cap	Cape	ICELANDIC			
Cal.	Ch ^{al} , Chen	Chenal	Channel	Fj.	Fjr, F ^{dr}	FjörÉur	Fjord
Ch.	Chap, Chap ^e	Chapelle	Chapel	Gr.		Grunn	Shoal
Chát.	Chát ^u , Chát ^{au}	Château	Castle				

Index of Abbreviations of Principal Non-English Terms

CURRENT FORM	OBSOLESCE FORM(S)	TERM	ENGLISH MEANING	CURRENT FORM	OBSOLESCE FORM(S)	TERM	ENGLISH MEANING
INDONESIAN and MALAY				JAPANESE (continued)			
A.		Air, Ajer, Ayer	<i>Stream</i>	J.	Ja	Jima	<i>Island</i>
B.	Bu, Bu ^u	Batu	<i>Rock</i>	K.	Ka, Ka ^a	Kawa	<i>River</i>
Bat.	Btg, Btg ^g	Batang	<i>River</i>		Kaik, Ko, Ko ^o	Kaikyō	<i>Strait</i>
	Bdr, Bdr ^r	Bandar, Bendar	<i>Port</i>	M.	Mki, Mki ⁱ , Mi ⁱ	Misaki	<i>Cape</i>
	Br, Br ^r	Besar	<i>Great</i>		Ma, Ma ^a	Mura	<i>Village</i>
Buk.	Bt, Bt ^t	Bukit	<i>Hill</i>	S.	Mi, Mi ⁱ	Machi	<i>Town</i>
G.	Gg, Gg ^g	Gosong, Gosung, Gusong, Gusung	<i>Shoal, Reef, Islet</i>	Sh.	Si, Si ⁱ	Saki	<i>Cape, Point</i>
Gun.	Gg, Gg ^g	Gunong, Gunung	<i>Mountain</i>		Sa, Sa ^a	Shima	<i>Island</i>
K.	Ki, Ki ⁱ	Kali	<i>River</i>		Sn, Sn ⁿ	San	<i>Mountain</i>
K.	Kr	Kroeng, Krueng	<i>River</i>	Su.	So, So ^o	Seto	<i>Strait</i>
Kam.	Kg, Kg ^g	Kampong, Kampung	<i>Village</i>		Sdo, Sdo ^o	Suidē	<i>Channel</i>
Kar.	Kg, Kg ^g	Karang	<i>Coral reef, Reef</i>		Te, Te ^e	Take	<i>Hill, Mountain</i>
Kep.	Kpn, Kpn ⁿ	Kepulauan	<i>Archipelago</i>	Z.	Ya, Ya ^a	Yama	<i>Mountain</i>
Kl.	Kl ⁱ	Kachil, Kechil, Ketjil, Kecil	<i>Small</i>		Zi ⁱ	Zaki	<i>Cape, Point</i>
Ku.	Kla, Kla ^a	Kuala	<i>River mouth</i>		Zn ⁿ	Zan	<i>Mountain</i>
Lab.	Labn, Labn ⁿ	Labuan, Labuhan	<i>Anchorage, Harbour</i>	MALAY (see INDONESIAN)			
Mu.	Ma, Ma ^a	Muara	<i>River mouth</i>	NORWEGIAN			
P.	Pu, Pu ^u , Po ^o	Pulau, Pulu, Pulo	<i>Island</i>	B.	B, Bkt ^t	Bukt, Bukta	<i>Bay, Bight</i>
Peg.		Pegunungan	<i>Mountain range</i>	Bg.	Bg ^g	Berg, Bieng, Bjerg	<i>Mountain, Hill</i>
Pel.	Pln, Pln ⁿ	Pelabuan, Pelabuhan	<i>Roadstead, Anchorage</i>	Fd.	Fd ^d , Fj	Fjord, Fjorden	<i>Fjord</i>
P.-P.	P.P.	Pulau-pulau	<i>Group of islands</i>	Fjel.	Fj	Fjell, Fjellet, Fjeld, Fjeldet	<i>Mountain</i>
	Prt, Prt ^t	Parit	<i>Stream, Canal, Ditch</i>	Fl.	Fine, Fin ^e	Flu, Flua, Fluen, Fluane, Fluene	<i>Below water rock(s)</i>
S.	Si, Si ⁱ	Sungai, Sungei	<i>River</i>	Gr.	Grne, Grn ^e	Grunn, Grunnen, Grunnane	<i>Shoal(s)</i>
Sel.	Sl ^t , Sl ^t	Tandjong, Tandjung, Tanjong, Tanjung	<i>Strait</i>	H.	Hm, Hm ^m , Hne, Hn ^e	Holm, Holmen, Holmane	<i>Islet(s)</i>
T.	Tg, Tg ^g	Tanjing	<i>Cape</i>	Hn.	Hn ⁿ	Hamn, Havn	<i>Harbour</i>
Tel.	Tal, Tk, Tk ^k	Taluk, Telok, Teluk	<i>Bay</i>	in.	In ^r , I	Indre, Inre, Inste	<i>Inner</i>
U.	Ug, Ug ^g	Udjung, Ujung	<i>Cape</i>	L.		Lille, Liten, Litla, Litle	<i>Little</i>
W.		Wai	<i>River</i>	Lag.	La, La ^a	Laguna	<i>Lagoon</i>
ITALIAN				N.		Nord, Nordre	<i>North, Northern</i>
Anc.		Ancoraggio	<i>Anchorage</i>	Ø.	Ø	Øst, Østre, Øst, Østre	<i>East, Eastern</i>
B.		Baia	<i>Bay</i>	Od.	O	Odde, Odden	<i>Point</i>
Banch.	Bna, Bna ^a	Banchina	<i>Quay</i>	Øy.	Ø, Ø, O	Øy, Øya, Øy, Øya	<i>Island</i>
Bco.	Bco ^o	Banco	<i>Bank</i>	Øy.	Øne, Øn ^e , Øne, Øn ^e	Øyane, Øyene, Øyane, Øyene	<i>Islands</i>
C.		Capo	<i>Cape</i>	Pt.	Pt ^t	Pynt, Pynten	<i>Point</i>
Cal.		Calata	<i>Wharf</i>	S.		Syd, Søre, Søndre	<i>South, Southern</i>
Can.		Canale	<i>Channel</i>	Sd.	Sd ^d	Sund, Sundet	<i>Sound</i>
Cas.		Castello	<i>Castle</i>	Sk.	Skr, Skr ^r	Skjær, Skjer, Skjeret	<i>Rock above water</i>
F.		Fiume	<i>River</i>	Sk.	Skne, Skn ^e	Skjerane, Skjærane	<i>Rocks above water</i>
Fte.	Fte ^e	Forte	<i>Fort</i>	St.		Stor, Stora, Store	<i>Great</i>
G.		Golfo	<i>Gulf</i>	Tar.	Tn, Tn ⁿ	Taren	<i>Below water rock</i>
	Gde, Gde ^e	Grande	<i>Great</i>	V.		Vest, Vestre	<i>West</i>
I.	Ia, Ia ^e	Isola, Isole	<i>Island(s)</i>	Vag.	Vg, Vg ^g	Våg, Vågen	<i>Bay, Cove</i>
I.	Ito, Ito ⁱ	Isolotto, Isolotti	<i>Islet(s)</i>	Vd.	Vd, Vd ^d	Vand	<i>Lake</i>
L.		Lago	<i>Lake</i>	Vik.	Vk, Vk ^k	Vik, Vika, Viken	<i>Bay, Inlet</i>
Lag.	La, La ^e	Laguna	<i>Lagoon</i>	Vn.	Vn, Vn ⁿ	Vann, Vatn	<i>Lake</i>
	Mda, Mad, Mad ^a , Mad ^{na}	Madonna	<i>Our Lady</i>	Yt	Yt ^t	Ytre, Ytter, Yttre	<i>Outer</i>
Mte.	Mte ^e	Monte	<i>Mount, Mountain</i>	PERSIAN			
P.	Pto, Pto ^o	Porto	<i>Port</i>	B.		Bandar	<i>Harbour</i>
P.	Portlo, Portlo ^o	Porticciolo	<i>Small port</i>	Jab.		Jabal	<i>Mountain, Hill</i>
Pco.	Pco ^o	Picco	<i>Peak</i>	Jaz.	Jazh, Jazh ^h	Jazireh	<i>Island, Peninsula</i>
Pog.	Pgio, Pgio ^o	Poggio	<i>Mound, Small hill</i>	Kh.	K	Khowr	<i>Inlet, Channel</i>
Pta.	Pta ^a	Punta	<i>Point, Summit</i>	R.		Rød	<i>River</i>
	Pte, Pte ^e	Ponte	<i>Bridge</i>	POLISH			
	Pzo, Pzo ^o	Pizzo	<i>Peak</i>	Jez.		Jeziro	<i>Lake</i>
S.	Sto, Sto ^o , Sta, Sta ^a	San, Santo, Santa	<i>Saint, Ho/y</i>	Kan.		Kanal	<i>Channel</i>
S.	SS, S.S.	Santi	<i>Saints</i>	Miel.		Mielizna	<i>Shoal</i>
Scog.	Sco, Sci, Sc, Sci ⁱ	Scoglio, Scogli	<i>Rock(s), Reef(s)</i>	R.		Rzeka	<i>River</i>
Scog.	Sc, Scra	Scogliera	<i>Ridge of rocks, Breakwater</i>	W.	Wys, Wa, Wa ^a	Wyspa	<i>Island</i>
Sec.	Se	Secca, Secche	<i>Shoal(s)</i>	Zat.		Zatoka	<i>Gulf, Bay</i>
	T, Tte ^e	Torrente	<i>Intermittent stream</i>	PORTUGUESE			
Tr.	Tre, Tre ^e	Torre	<i>Tower</i>	Anc.		Ancoradouro	<i>Anchorage</i>
	Va, Va ^a	Villa	<i>Villa</i>	Arq.	Arqu ^o	Arquipélago	<i>Archipelago</i>
JAPANESE				B.		Baía	<i>Bay</i>
B.	Ba	Bana	<i>Cape, Point</i>	Bco.	Bco ^o	Banco	<i>Bank</i>
By.	Bi, Bi ⁱ	Byéchi	<i>Anchorage</i>	Bxo.	Ba, Bxo ^o , Bxa, Bxa ^a	Baixo, Baixa, Baixia, Baixio	<i>Shoal</i>
	D ^e	Dake	<i>Mountain, Hill</i>	Co.	C.	Cabo	<i>Cape</i>
G.	Ga	Gawa	<i>River</i>				
H.	Ha, Ha ^a	Hana	<i>Cape, Point</i>				
Hak.	Hi, Hi ⁱ	Hakuchi	<i>Roadstead</i>				

Index of Abbreviations of Principal Non-English Terms

CURRENT FORM	OBSOLESCENT FORM(S)	TERM	ENGLISH MEANING	CURRENT FORM	OBSOLESCENT FORM(S)	TERM	ENGLISH MEANING
PORTUGUESE (continued)							
Can.		Canal	<i>Channel</i>				
Ens.	Ens ^a	Enseada	<i>Bay, Creek</i>				
Est.	Est ^o	Esteiro	<i>Creek, Inlet</i>				
Estr.		Estreito	<i>Strait</i>				
Estu.	Est, Est ^o Fte, F ^{te}	Estuário	<i>Estuary</i>				
	Fte, Ftza, Ftza	Forte	<i>Fort</i>				
		Fortaleza	<i>Fortress</i>				
Fund.		Fundeadoiro	<i>Anchorage</i>				
G.		Golfo	<i>Gulf</i>				
	Gde, G ^{de}	Grande	<i>Great</i>				
I.		Ilhéu, Ilhéus, Ilhota	<i>Islet(s)</i>				
I.		Ilha, Ilhas	<i>Island(s)</i>				
	L.	Lago	<i>Lake</i>				
	L.	Lagoa	<i>Small lake, Marsh</i>				
La.	Le, L ^e	Laje	<i>Flat-topped rock</i>				
Lag.	La, L ^a	Laguna	<i>Lagoon</i>				
	Mol, Me, M ^e	Molhe	<i>Mole</i>				
	Mor, Mo, M ^o	Morro	<i>Headland, Hill</i>				
Mt.	M ^{te} , Mte	Monte, Montanha	<i>Mount, Mountain</i>				
NS.	Na.Sa, N ^a S ^a	Nosso Senhor, Nossa Senhora	<i>Our Lord, Our Lady</i>				
P.	Pto, P ^{to}	Porto	<i>Port</i>				
	Pal, Pals, Pal ^s	Palheiros	<i>Fishing village</i>				
	Par, Pel, P ^{el}	Parcel	<i>Shoal, Reef</i>				
Pass.	Pas	Passagem, Passo	<i>Passage, Pass</i>				
	Pco, P ^{co} , P ^o	Pico	<i>Peak</i>				
	Pda, P ^{da}	Pedra	<i>Rock</i>				
	Peq	Pequeno, Pequena	<i>Small</i>				
	Pr, Pa, P ^a	Praia	<i>Beach</i>				
Pta.	P ^{ta}	Ponta	<i>Point</i>				
	Queb.	Quebrada, Quebrado	<i>Cut, Ravine</i>				
Rch.		Riacho, Ribeira, Ribeirão	<i>Creek, Stream, River</i>				
Rf.		Recife	<i>Reef</i>				
Ro.	R	Rio	<i>River</i>				
Roc.	Ra, R ^a	Rocha, Rochedo	<i>Rock</i>				
S.	Sto, S ^{to} , Sta, S ^{ta}	São, Santo, Santa	<i>Saint, Holy</i>				
Sa.	Sa, S ^a , Sr Va, V ^a	Serra, Cordilheira Vila	<i>Mountain range Town, Village, Villa</i>				
ROMANIAN							
A.		Ans` , Ansa	<i>Cove</i>				
B.		Baie, Baia	<i>Bay</i>				
Br.		Braç Braçu, Braçu	<i>Branch, Arm (of the sea)</i>				
C.		Cap, Capul, Capu	<i>Cape</i>				
Di., D-le.		Deal, Dealul, Dealuri, Dealurile	<i>Hill(s)</i>				
Fd.mic		Fund mic	<i>Shoal</i>				
I.		Insul` , Insula	<i>Island</i>				
L.		Lac, Lacul, Lacu	<i>Lake</i>				
Mt., M-ăi.		Munte, Muntele, Munđ, Muntii	<i>Mountain, Mounts</i>				
O.		Ostrov, Ostrovul, Ostrovu	<i>Island</i>				
S.		Stinca, Stinca	<i>Rock</i>				
Sf.		Sfint, Sfintu, Sfintul, Sfinta	<i>Saint, Holy</i>				
Str.		Strimtoare, Strimtoarea	<i>Pass, Strait</i>				
RUSSIAN							
B		Bukhta	<i>Bay, Inlet</i>				
b-ka.	Bka, B ^{ka} , Bki, B ^{ki} , Bk	Banka, Banki	<i>Bank(s)</i>				
Bol.		Bol'shoy, Bol'shaya, Bol'shoye	<i>Great, Large</i>				
Gb.	G, Ga, G ^a	Guba	<i>Gulf, Bay, Inlet</i>				
G.		Gora	<i>Mountain, Hill</i>				
Gav.	G	Gavan'	<i>Harbour, Basin</i>				
Kam.		Kamen'	<i>Rock</i>				
M.		Mys	<i>Cape, Headland</i>				
O.	Mal O ^{va}	Malyy, Malaya, Maloye Ostrov, Ostrova	<i>Little Island(s)</i>				
Oz.		Ozero	<i>Lake</i>				
P-ov.	Po ^{ov} , P ^{ov} , Pol	Poluostrov	<i>Peninsula</i>				
Pr.	Prv, Pr ^v	Proliv	<i>Channel, Strait</i>				
R.		Reka	<i>River</i>				
Zal.		Zaliv	<i>Gulf, Bay</i>				
				SPANISH			
				A, Arro, Arr ^o			
				Arroyo			
				<i>Stream</i>			
				Arch.			
				Arch ^o			
				Archipelago			
				<i>Archipelago</i>			
				Arrf.			
				Arr ^e , Arr ^{fe} , Arr			
				Arrecife			
				<i>Reef</i>			
				Ba.			
				B ^a			
				Bahía			
				<i>Bay</i>			
				Bo, B ^o			
				Bajo			
				<i>Shoal</i>			
				Bco, B ^{co}			
				Banco			
				<i>Bank</i>			
				Br.			
				Bzo, B ^{zo}			
				Rompientes			
				<i>Breakers</i>			
				C.			
				Cabo			
				<i>Cape</i>			
				Cal, Cta			
				Caleta			
				<i>Cove</i>			
				Can.			
				Canal			
				<i>Channel</i>			
				Cer, Co, C ^o			
				Cerro			
				<i>Hill</i>			
				Cre.			
				Cumbre, Cima			
				<i>Summit</i>			
				Cy			
				Cayo			
				<i>Cay, Key</i>			
				Ens, Ens ^a			
				Ensenada			
				<i>Cove</i>			
				Est, Est ^o			
				Estero			
				<i>Creek, Inlet</i>			
				Estr.			
				Estrecho			
				<i>Strait</i>			
				Estu, Est, Est ^o			
				Estuario			
				<i>Estuary</i>			
				Fond, Fond ^o			
				Fondeadero			
				<i>Anchorage</i>			
				Fte, F ^{te}			
				Fuerte			
				<i>Fort</i>			
				G.			
				Golfo			
				<i>Gulf</i>			
				Gde, G ^{de}			
				Grande			
				<i>Great</i>			
				I, Is			
				I ^a			
				Isla, Islas			
				<i>Island(s)</i>			
				I, I ^{te}			
				Islote, Isleta			
				<i>Islet</i>			
				L.			
				Lago			
				<i>Lake</i>			
				Lag, La, L ^a			
				Laguna			
				<i>Lagoon</i>			
				Mor, Mo, M ^o			
				Morro			
				<i>Headland, Hill</i>			
				Mte, M ^{te}			
				Monte			
				<i>Mount, Mountain</i>			
				Mu, Me, M ^e , M ^{lle}			
				Muelle			
				<i>Mole</i>			
				Na. Sa, N ^a S ^a			
				Nuestra Señora			
				<i>Our Lady</i>			
				P, Pto, P ^{to}			
				Puerto			
				<i>Port</i>			
				Pco, P ^{co} , P ^o			
				Pico			
				<i>Peak</i>			
				Pda, P ^{da}			
				Piedra			
				<i>Rock</i>			
				Pen ^{la}			
				Peninsula			
				<i>Peninsula</i>			
				Peq			
				Pequeño, Pequeña			
				<i>Small</i>			
				Pl, Pa, P ^a			
				Playa			
				<i>Beach</i>			
				Prom ^{to}			
				Promontorio			
				<i>Promontory</i>			
				Pta, P ^{ta}			
				Punta			
				<i>Point</i>			
				Queb.			
				Quebrada			
				<i>Cut, Ravine</i>			
				R.			
				Río			
				<i>River</i>			
				Rga.			
				Restinga			
				<i>Shoal, Sandbank</i>			
				Roc, Ra, R ^a			
				Roca			
				<i>Rock</i>			
				Sn, S ⁿ , Sto, S ^{to} , Sta, S ^{ta}			
				San, Santo, Santa			
				<i>Saint, Holy</i>			
				Sr, Sa, S ^a			
				Sierra			
				<i>Mountain range</i>			
				Surg, Surgo, Surg ^o			
				Surgidero			
				<i>Anchorage, Roadstead</i>			
				Tr.			
				Te, T ^{re}			
				Torre			
				<i>Tower</i>			
				Va, V ^a			
				Villa			
				<i>Villa, Small town</i>			
				SWEDISH			
				B.			
				Bukt			
				<i>Bay, Bight</i>			
				Bg.			
				Bgt, B ^g			
				Berg, Berget			
				<i>Mountain</i>			
				Bk, B ^k			
				Bank			
				<i>Bank</i>			
				Fj.			
				F ^d			
				Fjärd, Fjord			
				<i>Fjord</i>			
				Gla, G ^{la}			
				Gamla			
				<i>Old</i>			
				Gr.			
				Grn, Grd, G rd , G ^d			
				Grund			
				<i>Shoal</i>			
				H.			
				Hm, H ^m			
				Holme, Holmarna			
				<i>Islet</i>			
				Hud, H ^d			
				Huvud			
				<i>Headland</i>			
				Hn, H ⁿ			
				Hamn, Hamnen			
				<i>Harbour</i>			
				I.			
				Inre			
				<i>Inner</i>			
				L.			
				Lilla, Liten			
				<i>Little, Small</i>			
				N.			
				Nord, Norra			
				<i>North, Northern</i>			
				Ö.			
				Öst, Östra			
				<i>East, Eastern</i>			
				S.			
				Syd, Södra			
				<i>South, Southern</i>			
				Sk.			
				Sk ^r			
				Skär, Skäret, Skären			
				<i>Rock above water</i>			
				St.			
				Stor			
				<i>Great, Large</i>			
				V.			
				Väst, Västra			
				<i>West, Western</i>			
				Y.			
				Yt			
				<i>Outer</i>			
				THAI			
				Kh.			
				Khao			
				<i>Hill, Mountain</i>			
				L.			
				Lm, L ^m			
				Laem			
				<i>Cape, Point</i>			
				M.N.			
				Mae Nam			
				<i>River</i>			
				TURKISH			
				Ad.			
				Ada, Adası			
				<i>Island</i>			
				Aİ p			
				Takimadalar			
				<i>Archipelago</i>			
				Adc.			
				Adacık			
				<i>Islet</i>			
				BoQ			
				Boğaz, Boğazi			
				<i>Strait</i>			
				Br.			
				Bn, Bu			
				Burun, Burnu			
				<i>Point, Cape</i>			
				Ç.			
				Ça			
				Çay, Çayı			
				<i>Stream, River</i>			

Index of Abbreviations of Principal Non-English Terms

CURRENT FORM	OBSCOLESCENT FORM(S)	TERM	ENGLISH MEANING		CURRENT FORM	OBSCOLESCENT FORM(S)	TERM	ENGLISH MEANING
TURKISH (<i>continued</i>)					Languages of the former YUGOSLAVIA			
D.	Da	Dağ, Dağı	<i>Mountain</i>		Br.	Brdo, Brda		<i>Mountain(s)</i>
Dz.	De	Dere, Deresi	<i>Valley, Stream</i>		Gr.	Greben, Grebeni		<i>Rock, Reef, Cliff, Ridge</i>
G.		Deniz	<i>Sea</i>		Hr.	Hrid, Hridi		<i>Rock</i>
Isk.		Göl, Gölü	<i>Lake</i>		L.	Luka		<i>Harbour, Port</i>
Kf. Krf.		İskele, İskelesi	<i>Jetty</i>		M.	Mali, Mala, Malo, Malen		<i>Small</i>
Ky.	Kyl.	Körfez, Körfezi	<i>Gulf</i>		O.	Otočić, Otočići		<i>Islet(s)</i>
Lim. Lm.	Li	Kaya, Kayası	<i>Rock</i>		O.	Otok, Otoci		<i>Island(s)</i>
N.		Liman, Limanı	<i>Harbour</i>		Pl.	Pličina		<i>Shoal</i>
		Nehir, Nehri, Irmak, Irmağı	<i>River</i>		Pr.	Prolaz		<i>Passage</i>
T.	Te, T ^e	Tepe, Tepesi	<i>Hill, Peak</i>		S.	Sveti, Sveta, Sveto	Sv	<i>Saint, Holy</i>
Yad.		Yarımada, Yarımadası	<i>Peninsula</i>		-k.	Školj, Školjič		<i>Island, Reef</i>
					U.	Uvala, Uvalica		<i>Inlet</i>
					V.	Veli, Vela, Velo, Velik, Veliki, Velika, Veliko		<i>Great</i>
					Z.	Zaliv, Zaljev, Zaton		<i>Gulf, Bay</i>

Index of Abbreviations of Principal English Terms

(Note: INT abbreviations are in bold type)

CURRENT FORM	OBSOLESCENT FORM(S)	TERM	REFERENCES	CURRENT FORM	OBSOLESCENT FORM(S)	TERM	REFERENCES
abt	ab ^t	About	—	DGPS		Differential Global Positioning System	S 51
Accom		Accommodation Vessel	L17		Di, di	Diatoms	J v
Aero		Aeronautical	P 60, 61	Dia	Dir ⁿ	Diaphone	R 11
AIS		Automatic Identification System	S 17, 18	Dir	Dir Lt	Direction	—
	Al	Algae	J s	Dir	Discol ^d	Direction light	P 30-31
Al.	Alt	Alternating light	P 10.11	Discol	discont ^d , discont ^d	Discoloured water	K d
ALC		Articulated Loading Column	L 12	discont	dist	Discontinued	—
ALL		ADMIRALTY List of Lights and Fog Signals	—	dist	D ^k	Distant	—
ALRS		ADMIRALTY List of Radio Signals	—	Dk	dm.	Dock	—
Am		Amber	P 11.8	dm	D ⁿ	Decimetre(s)	B 42
Anch.	Anch ^e	Anchorage	—	Dn, Dns	Dr., Dr.	Dolphin(s)	F 20
Anct.	Anct, Anc ^t	Anchorage	—	dr		Dries	K a
ANM		Annual Summary of ADMIRALTY Notices to Mariners	—	DW		Deep-water, Deep-draught	M 27, N 12.4
Annly	Ann ^{ly}	Annually	—	dwt		Deadweight tonnage	—
Appr.	Apprs, Appr ^s	Approaches	—	DZ		Danger Zone	Q 50
approx	Approx	Approximate	—				
Apr		April	—	E	E.	East	B 10
Arch.	Archo, Arch ^o	Archipelago	—	ED	(ED), (E.D.)	Existence doubtful	I 1
ASD		ADMIRALTY Sailing Directions	—	EEZ		Exclusive Economic Zone	N 47
ASL		Archipelagic Sea Lane	M17		E.F. Horn	Electric fog horn	R 13
Astr.	Astr, Astrl, Astr ^l	Astronomical	—	Ent.	Entce, Ent ^{ce}	Entrance	—
ATBA		Area to be Avoided	M14, 29		Equin ^l	Equinoctial	—
ATT		ADMIRALTY Tide Tables	—	ESSA		Environmentally Sensitive Sea Area	N 22
Aug		August	—	Est.	Est ^y	Estuary	—
Aus		Australia	—	Estab ^t	ev.	Establishment	—
Ave	Av ^e	Avenue	—	exper	exper ^l , Exper ^l	Every	—
				explos	explos.	Experimental	—
B.		Bay	—	(exting)	(exting ^d)	Explosive	R 10
B	bl, blk	Black	J af, Q 2			Extinguished	P 55
Ba	Ba	Basalt	J h	f		Fine	J 30
Batt, Baty, Bat ^y	Batt, Baty, Bat ^y	Battery	E 34.3	F		Fixed	P 10.1
Bk.	B ^k	Bank	—	FAD		Fish Aggregating Device	—
brk	brk	Broken	J 33	F Racon		Fixed frequency radar	—
Bldg	B ^{ldg}	Building	D 5	Feb		Fixed frequency radar transponder beacon	S 3.4
	BM, B.M.	Bench Mark	B 23	FFL		February	—
Bn, Bns		Beacon(s)	M 1-2, P 4-5, Q 80-81	Fj.	Fd, F ^d	Fixed and flashing light	P 10.10
BnTr	Bn Tower	Beacon Tower	P 3, Q 110	Fl.	(fish ^g)	Fjord	—
Bo		Boulders	J 9.2	Fl	fl.	Fishing light	P 50
Bol	Boll.	Bollard	F a	Fla	Fl., fl	Flashing	P 10.4
Br		Breakers	K 17	Fm, F ^m	Fm, F ^m	Flood	—
Br		Brown	J ak	fm, fms	fm, fms	Flare stack (at sea)	L 11
Bu	bl, Bl., b	Blue	J ag, P 11.4, Q a	Fog Det Lt		Farm	—
					Fog Sig.	Fathom, fathoms	B 48
					Fog W/T	Fog detector light	P 62
						Fog signal station	R 1
						Radio fog signal	—
						Floating Production and Storage Offtake Vessel	L17
C.		Cape	—	FPSSO		Foraminifera	J t
c		Coarse	J 32	Fr, for	Fr, for	Flagstaff, Flagpole	E 27
ca		Calcareous	J 38	F.S.	F.S.	Floating Storage and Offtake Vessel	L17
CALM	cal	Catenary Anchor Leg Mooring	L 16	FSO		Floating Support Unit	L17
Cas	Cas.	Castle	E 34.2	FSU		Fort	E 34.2
Cb	Cath, Cath.	Cathedral	E 10.1	ft	Ft, F ^t	Foot, feet	B 47, P 13
cd		Cobbles	J 8	G	g	Gravel	J 6
CD		Candela	B 54	G	gn	Green	J ah, P 11.3, Q 2
		Chart Datum	H 1				
		Cemetery	E 19				
CG	Cem ^y , Cem ^y	Cemetry	E 19	G.	ga, glac	Gulf	—
Ch	C.G.	Coastguard station	T 10-11		Gc	Glacial	J ac
Ch	Ch.	Church, chapel	E 10.1		Gd, grd	Glauconite	J o
	ch, choc	Chocolate	J al		Gl, gl	Ground	J a
Chan.		Channel	—		Govt Ho, Gov ^t Ho	Globigerina	J u
Chem		Chemical	L 40	GNSS		Government House	—
	chk, Ck	Chalk	J e	Gp.		Global Navigation Satellite System	—
Chy	Ch ^y	Chimney	E 22	GpFl, Gp.Fl.		Group (of islands)	—
	cin, Cn	Cinders	J m	GpOcc, Gp.Occ.		Group-flashing	P 10.4
cm	cm.	Centimetre(s)	B 43	GPS		Group-occuling	P 10.2
Co	crl	Coral	J 10, K 16		grt	Global Positioning System	—
	Col	Column, pillar, obelisk	E 24		Gt, Grt, G ^t , Gr ^t	Gross Register Tonnage	—
	conspic	Conspicuous	E 2		G.T.S.	Great	—
const	constn, constr ⁿ	Construction	F 32		Gy, gy	Great Trigonometrical Survey Station (India)	—
cov	cov.	Covers	K b	GT		Grey	J am, Q a
Cr.		Creek	—			Gross Tonnage	—
Cup	Cup.	Cupola	E 10.4				
Cy	cl	Clay	J 3				
	(D)	Doubtful	—				
	d	Dark	J ao				
Dec		December	—	h	H, H.	Hard	J 39
decr	decr ^g	Decreasing	—	H		Headway	D 20, D 26-27
dest	destd, Dest ^d	Destroyed	—	h	h., H.	Helicopter transfer (Pilots)	T 1.4
Det		(see Fog Det Lt)	—	HAT		Hour	B 49
DG	D. G.	Degaussing	N 25, Q 54	Hd.	H ^d	Highest Astronomical Tide	H 3
				Hn.	H ⁿ	Headland	—
						Haven	—

Index of Abbreviations of Principal English Terms

(Note: INT abbreviations are in bold type)

CURRENT FORM	OBSOLESCE FORM(S)	TERM	REFERENCES	CURRENT FORM	OBSOLESCE FORM(S)	TERM	REFERENCES
Ho		House	—	Mar		March	—
(hor)	(hor ^l)	Horizontally disposed	P 15	MHLW	M.H.L.W.	Mean Higher Low Water	H 14
Hosp	Hospl, Hosp ^l	Hospital	F 62.2	MHW		Mean High Water	H 5
Hr.	H ^r	Harbour	—	MHWN	M.H.W.N.	Mean High Water Neaps	H 11
Hr, H ^r	Hr, H ^r	Higher	—	MHWS	M.H.W.S.	Mean High Water Springs	H 9
Hr Mr		Harbour Master	F 60		Mid, Mid.	Middle	—
	Ht, H ^t	Height	—	min	min., m.	Minute(s) of time	B 50
HW	H.W.	High Water	H a	Mk		Mark	Q 101
	H.W.F. & C.	High Water Full and Change	—		MI, ml	Marl	J c
	H.W.O.S.	High Water Ordinary Springs	—	MLHW	M.L.H.W.	Mean Lower High Water	H 15
I.	It	Island, islet	—	MLLW	M.L.L.W.	Mean Lower Low Water	H 12
IALA		International Association of Lighthouse Authorities	Q 130	MLW		Mean Low Water	H 4
IHO		International Hydrographic Organization	—	MLWN	M.L.W.N.	Mean Low Water Neaps	H 10
(illum)	Illum., (lit)	Illuminated	P 63	MLWS	M.L.W.S.	Mean Low Water Springs	H 8
IMO		International Maritime Organization	—	mm	mm.	Millimetre(s)	B 44
	in., ins.	Inch, inches	—	Mo		Morse code	P 10.9, R 20
incrg	incr ^g	Increasing	—	Mon	Mont, Mon ^t Mony, Mon ^y Ms, mus	Monument	E 24
INT		International	A 2, T 21	MR		Monastery	—
Intens	(intens)	Intensified	P 46	MRCC		Mussels	J q
IQ	IntQkFI, Int.Qk.FI. (irreg.)	Interrupted quick-flashing	P 10.6	MSL	M.S.L.	Marine reserve	N 22
	ISLW, I.S.L.W.	Irregular	—	Mt.	M ^t	Maritime Rescue and Coordination Centre	—
		Indian Spring Low Water	—	Mth.	M th	Mean Sea Level	H 6
Iso		Isophase	P 10.3	MTL	M.T.L.	Mountain, mount	—
	It	Islet	—	N	N.	Mouth	—
ITZ		Inshore Traffic Zone	—		Nauto	Mean Tide Level	H c
IUQ		Interrupted ultra quick-flashing	P 10.8	NB	N.B.	North	B 9
IVQ	IntVQkFI, Int.V.Qk.FI	Interrupted very quick-flashing	P 10.7	NE	N.E.	Nautophone	R 13
Jan		January	—	NM	N.M.	Notice Board	Q 126
Jul		July	—	NM n mile		North-east	B 13
km	km.	Kilometre(s)	B 40	No	N ^o	Notice(s) to Mariners	—
kn	kn.	Knot(s)	B 52, H 40-41	Nov		International Nautical Mile	B 45
				Np	Np.	Number	N 12.2
L.		Lake, Loch, Lough	—	nrt		November	—
Lag.	L	Large	J ab	NT		Neap Tides	H 17
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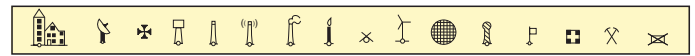
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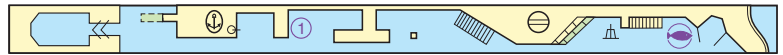
Cultural Features



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Ports



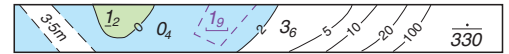
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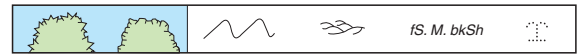
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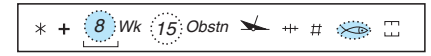
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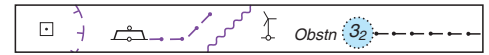
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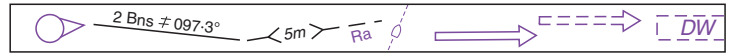
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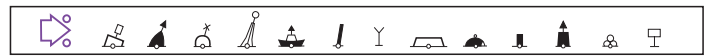
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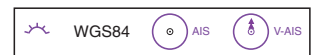
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About us

The UK Hydrographic Office is a leading provider of global marine geospatial data.

We help to inform maritime decision-making for navigation, infrastructure development and the management of marine resources.



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