

CLEAR CHARTS
SAFE WATERS
SMARTER
NAVIGATION

SYMBOLS AND ABBREVIATIONS

USED ON CHARTS

Understanding the language of charts
for safe and efficient navigation



AIDS TO NAVIGATION | BUOYS & BEACONS | SOUNDINGS & DEPTHS | ROUTES & TRACKS



- STANDARD SYMBOLS
- UNIVERSAL ABBREVIATIONS
- GLOBAL MARITIME STANDARDS
- SAFE NAVIGATION EVERY TIME

KNOW THE CHART
NAVIGATE WITH CONFIDENCE



CHART 5020 (INT 1)
EDITION 03 - 2026

SYSTEM OF CORRECTION

Revised edition of Chart 5020 (INT1) are published as necessary to show symbols which have been newly introduced and to record other development in charting practice.

The more important changes introduced between edition are issued in Indian Notices to Mariners as consecutively-numbered Amendment Supplements.On receipt,these Supplements should be recorded below, kept inside the cover of 5020 (INT1) and consulted whenever the Chart is used.

RECORD OF CORRECTIONS

SUPPLEMENT NUMBER	NOTICE NUMBER	YEAR

CHART 5020 (INT 1)

Edition 03 - 2026

INTERNATIONAL CHART SERIES

SYMBOLS AND ABBREVIATIONS USED ON INDIAN CHARTS

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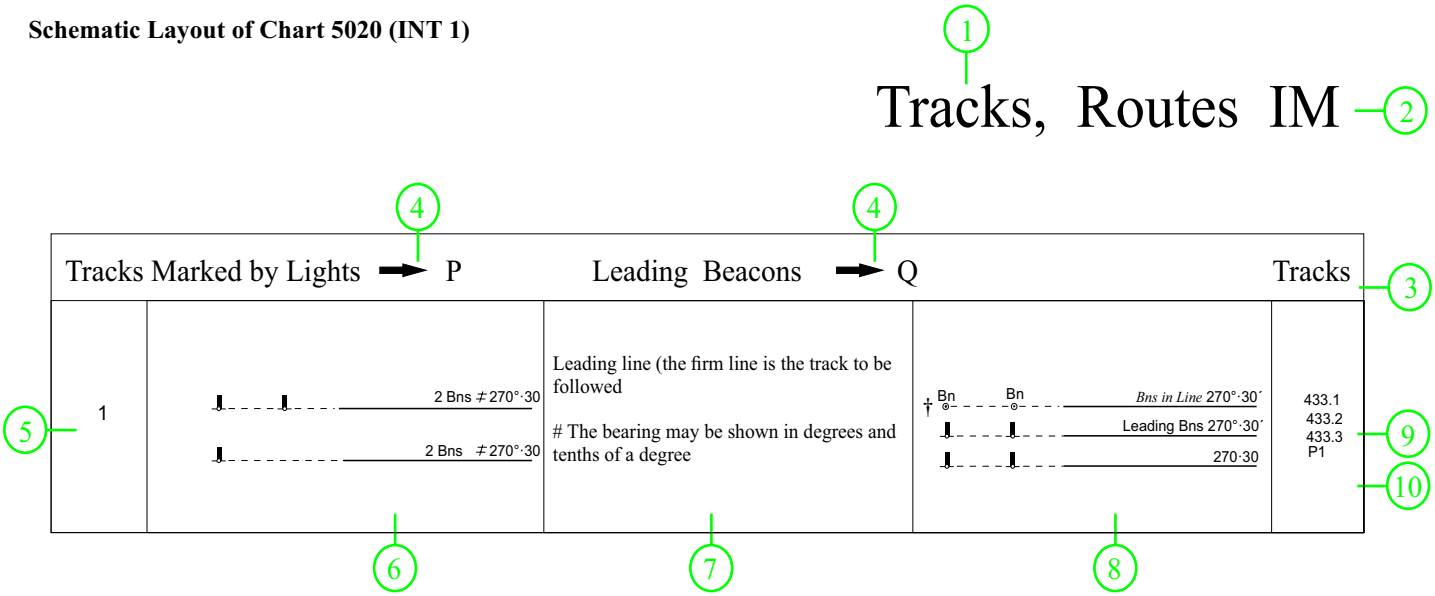
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INTRODUCTION

General Chart 5020 provides a reference to the many symbols and abbreviations used on Indian and International paper Charts.

Layout This edition of Charts 5020 (INT 1) is based on the "Chart Specifications of the IHO (International Hydrographic Organization)" adopted in 1982 with later additions/updates and the IHO Publication S-4 Part B and C

Schematic Layout of Chart 5020 (INT 1)



1 Section.

2 Section designation : The letter "*I*" means International.

3 Sub - section.

4 Cross - reference to terms in other section.

5 Column1: Numbering following the International "Chart Specification of the IHO". A letter in this column, eg a, indicate a national symbol for which there is no international equivalent.

6 Column 2: International (INT) symbols used on Indian Paper charts.

7 Column 3: The mark # indicates that this symbol will only be found on charts adopted into from that of other nations.

8 Column 4: Other symbol or abbreviation used on charts, if different from column 2. The mark † indicates that this representation is obsolescent.

9 Column 5: Numbering following the "Chart Specifications of the IHO"

10 Numbering following the superseded IHO "Standard List of Symbols and Abbreviations".

Charts Datum The reference level for soundings is given under the chart title.

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

On metric charts, depths from 0.1m to 20.9m are generally expressed in metres and decimetres. Where source Information is sufficiently precise, depths from 21m to 31m may be given in half-metres. All other depths are shown In whole metres "except 30.1m to 30.3m where 30m depth contour is depicted".

Drying heights

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

Heights

Heights including overhead clearances, are given in metres above Mean High Water Springs, Mean Higher High Water or Mean Sea Level, 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 (eg when showing the height of a small islet).

Bearings

Bearings are given from seaward and refer to the true compass.

Sea Miles and Cables

A sea mile is the length of one minute of latitude locally, and is the principal means of expressing distance on charts. A Cable is one tenth of a sea mile.

Names

Names on charts are spelt in accordance with the principles and systems approved by the Government of India.

A second name may be given in parentheses in the following circumstances

a. If the retention of a superseded rendering will facilitate cross-reference to related Publications;
b. If, in the case of a name that has changed radically, the retention of the former one will aid recognition,
c. If it is decided to retain an English conventional name in addition to the present official rendering.

Chart Catalouges

Details of charts are given in the “Catalogue of Charts and Publications” (INP - 10) and NP-10A

The Mariner’s Handbook And other Indian Publications

The Admiralty Mariner’s Handbook (NP 100) includes notes on the following:

The use of charts and the degree of reliance that may be placed on them; chart supply and correction; names; charted navigational aids; navigational hazards; traffic separation schemes; offshore oil and gas operations; tides and currents; general marine meteorology. A glossary of terms used on Charts is also given.

Information about features represented on charts can also be found in the following publications :

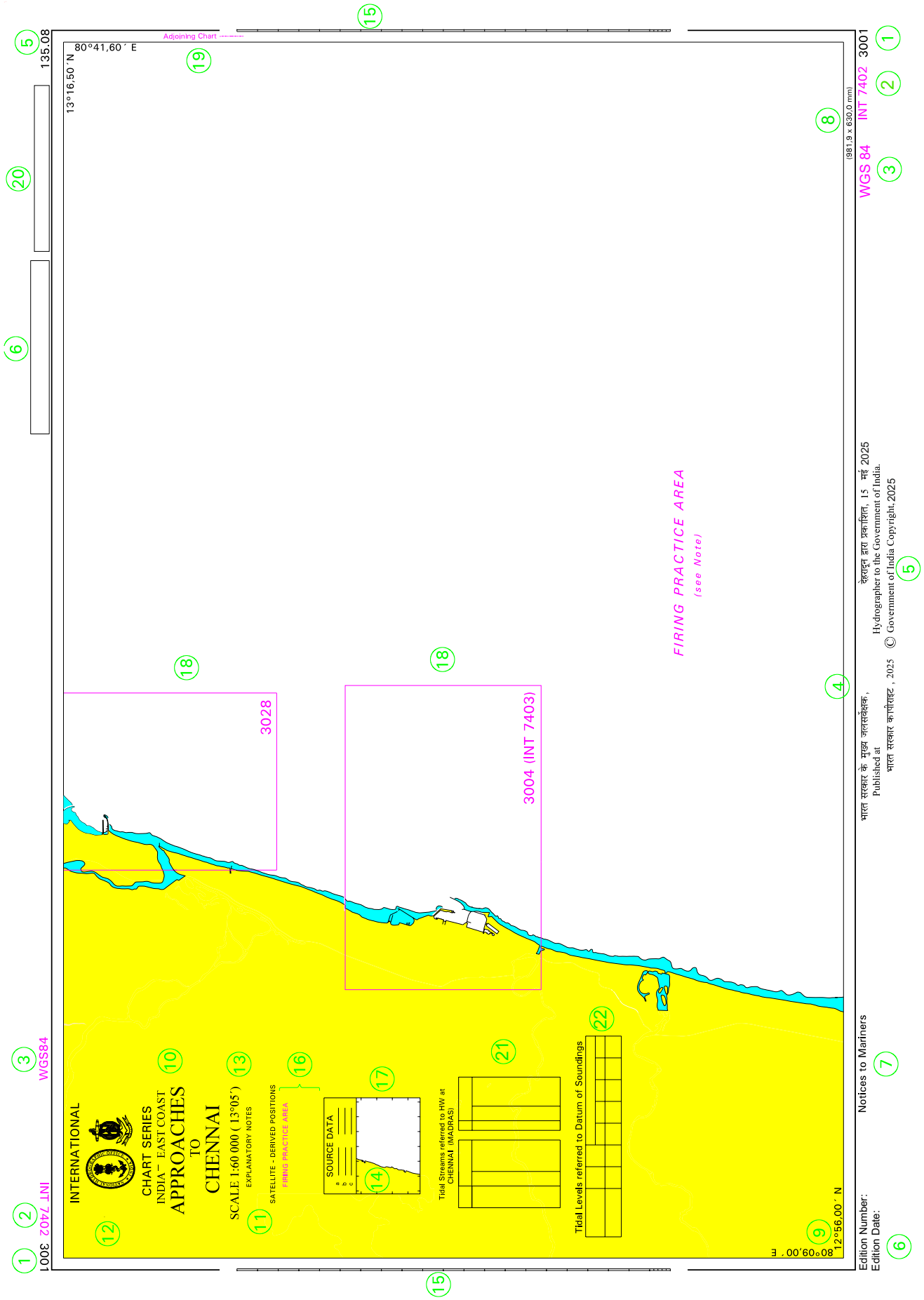
Sailing Directions (West Coast of India pilot and Bay of Bengal pilot); List of Lights and Fog Signals; Tide Tables; List of Radio Signals and Tidal Stream Atlases.

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IA Chart Number, T

Schematic Layout of an Indian INT Chart (reduced in size)

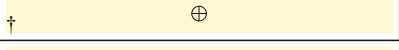
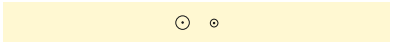
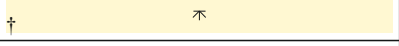
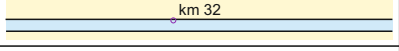


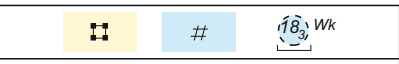
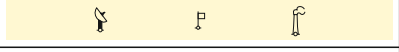
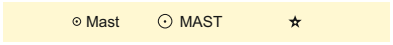
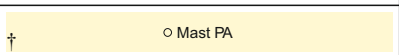
Magnetic Features ⟶ B *Tidal Data* ⟶ H *Satellite Navigation Systems* ⟶ S

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.*	253
6	*Customer Information: Edition Number and Date.*	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 origina l 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
21	*Reference to the Tidal Streams Information.*	280
22	*Reference to Tidals Levels from Chart Datum*	243.1

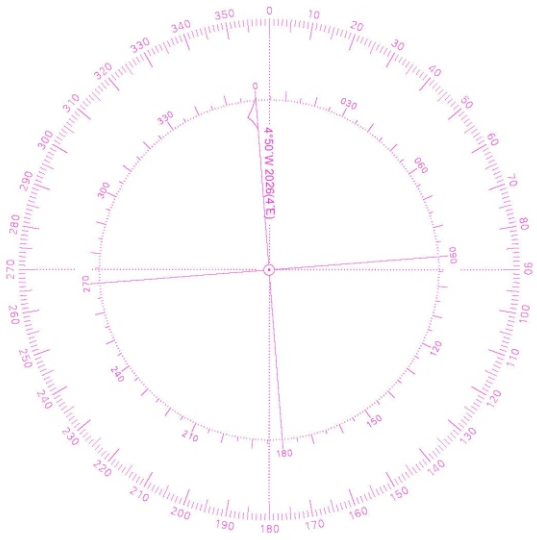
IB Positions, Distances, Directions, Compass

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*			

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



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

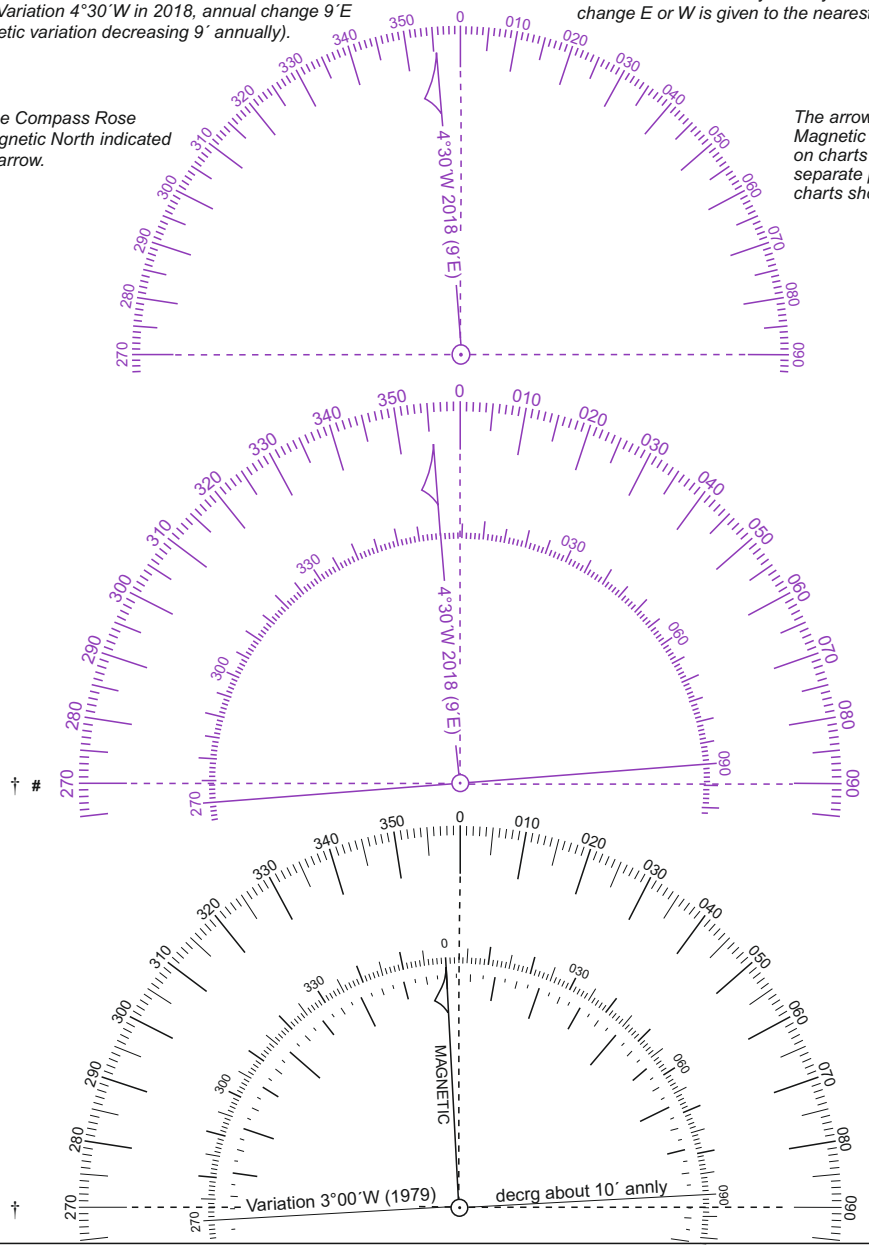
70

Compass Roses, True and Magnetic.
4°30´W 2018 (9´E) on magnetic north arrow means Magnetic Variation 4°30´W in 2018, annual change 9´E (i.e. magnetic variation decreasing 9´ annually).

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.

True Compass Rose Magnetic North indicated by arrow.

The arrow indicating Magnetic North is omitted on charts comprising separate plans and on charts showing isogonals.



† #

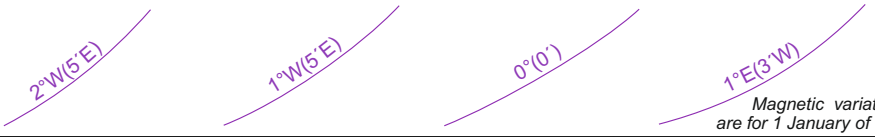
260-262.2 272.3

71

Magnetic Variation Lines, Isogonals (lines of equal magnetic variation)

MAGNETIC VARIATION LINES ARE FOR 2015

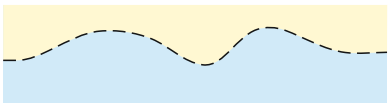
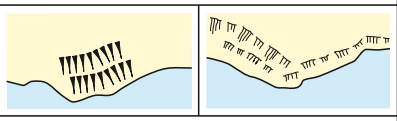
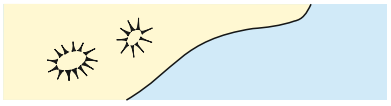
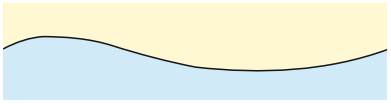
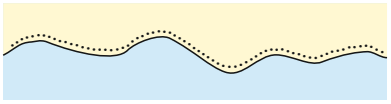
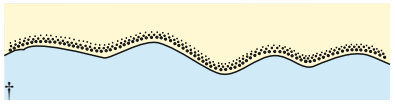
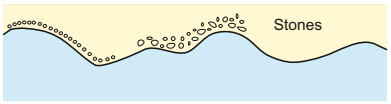
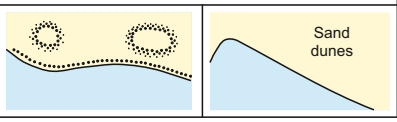
The magnetic variation is shown in degrees, followed by the letter E or W, as appropriate, at certain positions on the lines. The annual change is expressed in minutes with the letter E or W and is given in brackets, immediately following the variation.

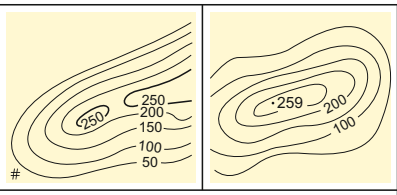
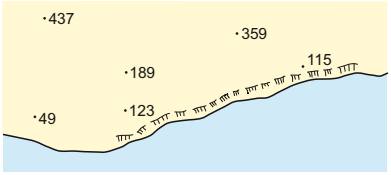
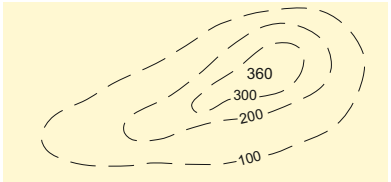


Magnetic variation values are for 1 January of the year stated

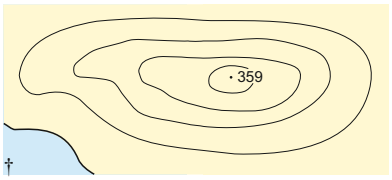
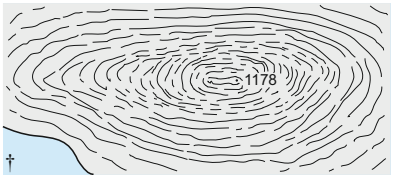
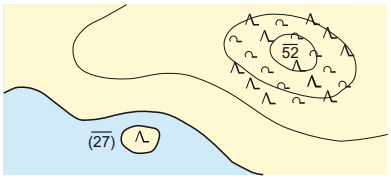
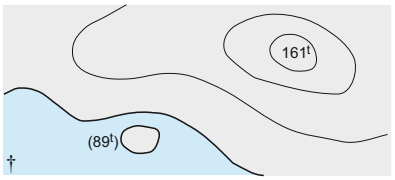
272.1

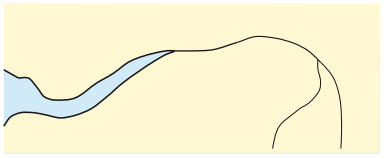
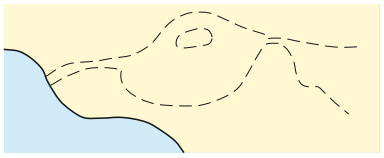
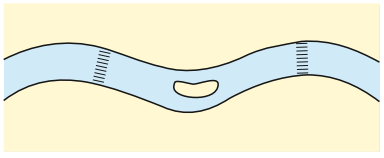
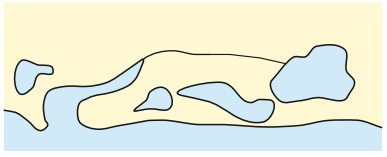
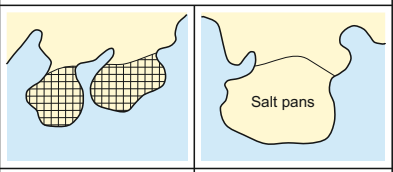
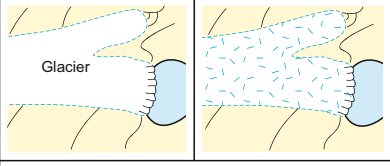
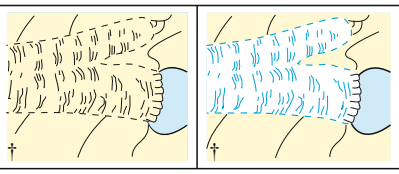
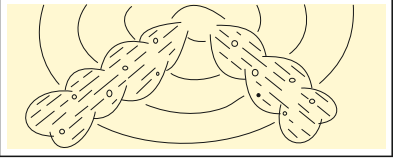
82.1	± 15°	*Local Magnetic Anomaly* *Within the enclosed area the magnetic variation may deviate from the normal by the value shown.*	± 15° †	274
82.2	Local Magnetic Anomaly (see Note)	*Where the area affected cannot be easily defined, a legend only is shown at the position.*	Local Magnetic Anomaly † (see Note)	

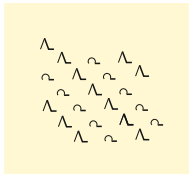
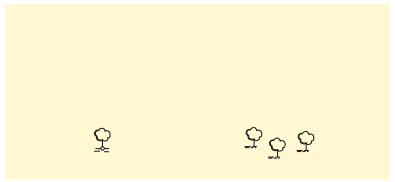
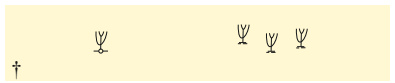
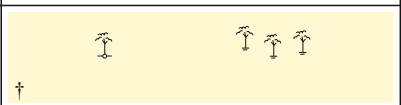
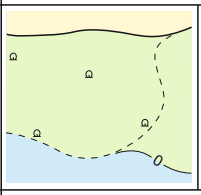
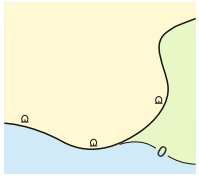
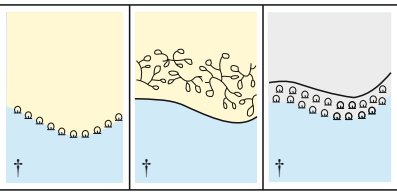
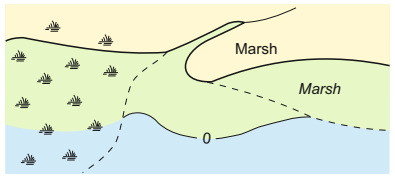
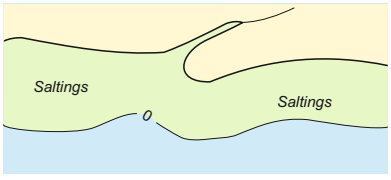
Foreshore ⟶ I, J				Coastline
1		*Coastline, surveyed*		310.1 310.2
2		*Coastline, unsurveyed*		311
3		*Steep coast, Cliffs*	 †	312.1
4		*Hillocks*		312.1
5		*Flat coast*		312.2
6		*Sandy shore*	 †	312.2
7		*Stony shore, Shingly shore*		312.2
8		*Sandhills, Dunes*	 †	312.3

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

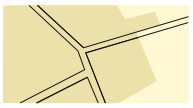
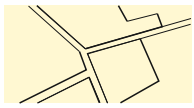
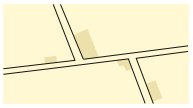
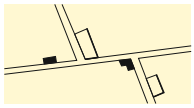
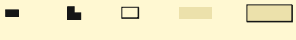
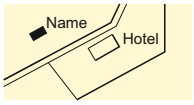
IC Natural Features

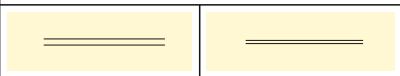
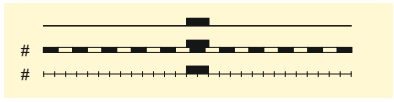
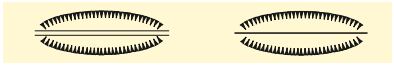
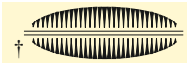
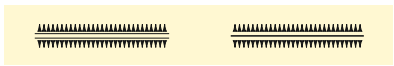
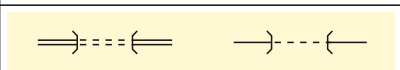
13		*Form lines with spot height*		351
14		*Approximate height of top of trees (above height datum)*		352.4

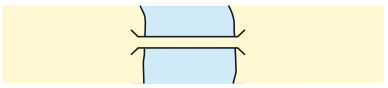
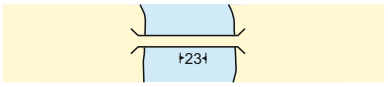
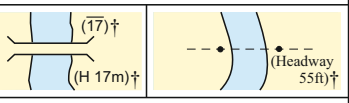
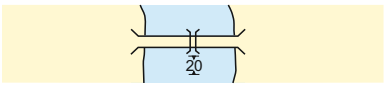
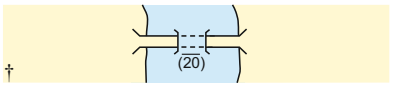
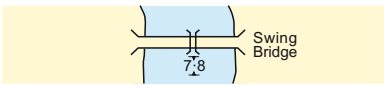
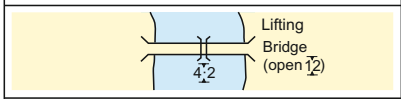
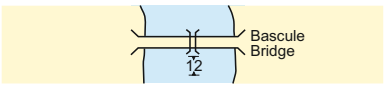
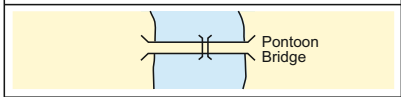
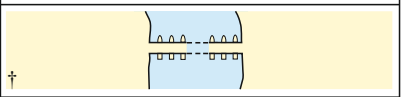
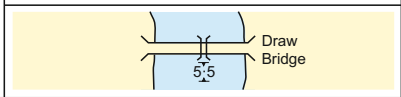
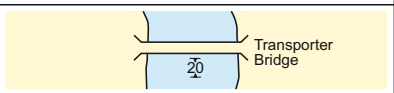
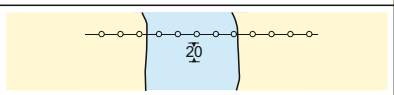
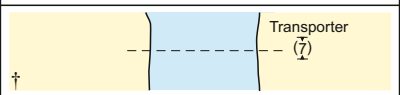
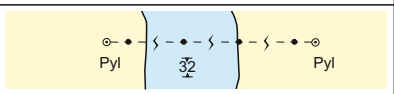
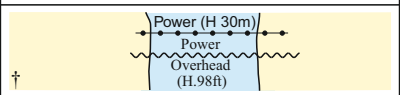
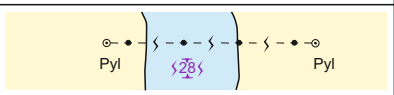
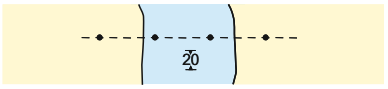
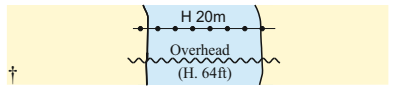
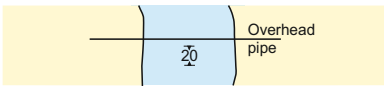
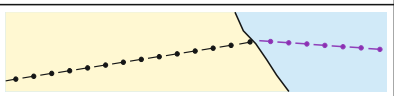
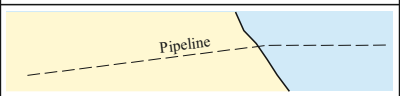
Water Features, Lava				
20		*River, Stream*		353.1 353.2
21		*Intermittent river, Intermittent lake*		353.3 353.6
22		*Rapids, Waterfalls*		353.5
23		*Lakes*		353.6
24		*Salt pans*		353.7
25		*Glacier*		353.8
26		*Lava flow*		355

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

ID 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			*Street name, Road name*			371
8			*Ruin, Ruined landmark*		†  (ru)	378 378.2

Roads, Railways, Airfields					
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*			

Plane of Reference for Heights ⟶ H			Other Cultural Features	
20.1		*Fixed bridge*		381.1
20.2		*Footbridge, fixed bridge on smaller scale charts*		
21		*Horizontal clearance*		380.3
22		*Vertical clearance (see 'Heights' in Introduction)*		380.2
23.1		*Opening bridge (in general) with vertical clearance*	 †	381.3
23.2		*Swing bridge with vertical clearance*		
23.3		*Lifting bridge with vertical clearance (closed and open)*		
23.4		*Bascule bridge with vertical clearance*		
23.5		*Pontoon bridge*	 †	
23.6		*Draw bridge with vertical clearance*		
24		*Transporter bridge with vertical clearance between Height Datum and lowest part of fixed structure*		381.2
25		*Overhead transporter, Aerial cableway with vertical clearance*	 †	382.3
26.1		*Overhead power cable with pylons and physical vertical clearance*	 †	382.1
26.2		*Overhead power cable with pylons and safe vertical clearance*		
Note: The safe vertical clearance above Height Datum to avoid risk of electrical discharge, as de fined by the responsible authority, is given in magenta where known (see H20); otherwise the physical vertical clearance is shown in black as in D22.				
27		*Overhead cable, Telephone line, with vertical clearance*	 †	382 382.2
28		*Overhead pipe with vertical clearance*		383
29		*Pipeline on land*		377

†

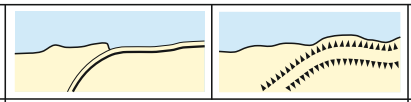
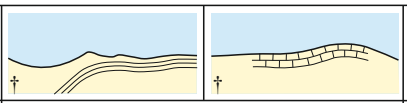
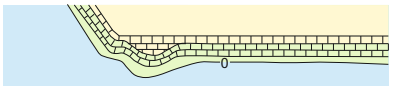
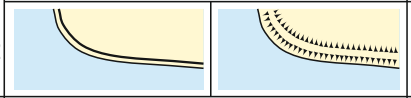
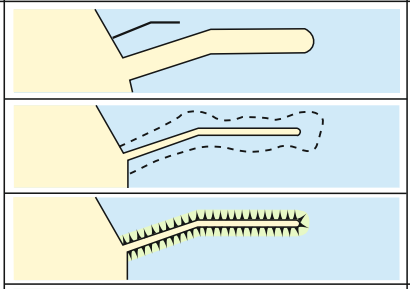
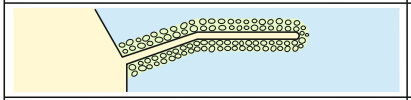
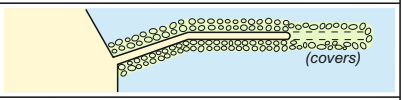
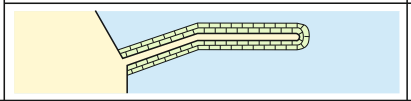
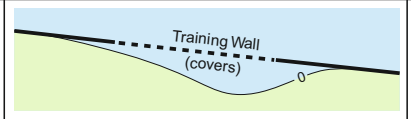
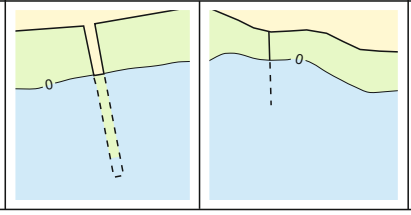
IE Landmarks

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*	† conspic	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

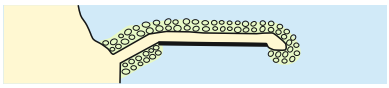
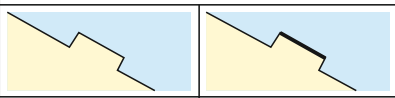
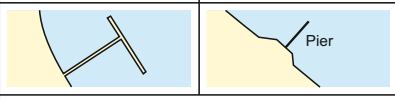
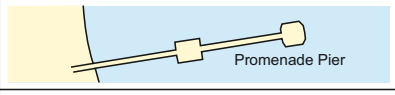
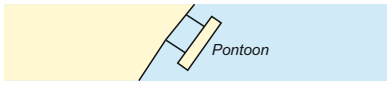
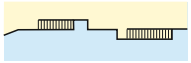
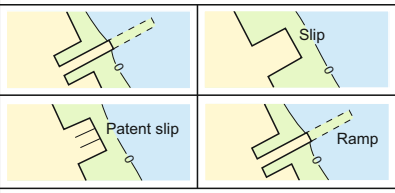
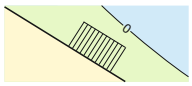
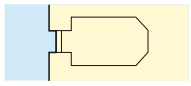
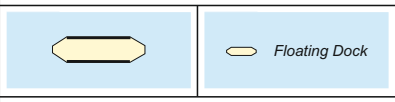
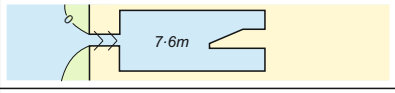
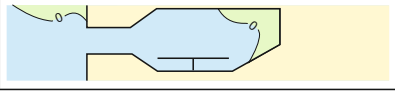
Landmarks				
10.1	Ch	*Church*	† Cath	373.1 373.2
10.2	Tr	*Church tower*		373.2
10.3	Sp	*Church spire*		
10.4	Cup	*Church cupola (dome)*		
13		*Temple, Pagoda, Shrine, Joss house*	† Pag	373.3
17		*Mosque, Minaret*	†	373.4
19		*Cemetery (all religions)*	† Cemy	373.6
20	Tr	*Tower*		374.3
21		*Water tower, 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

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

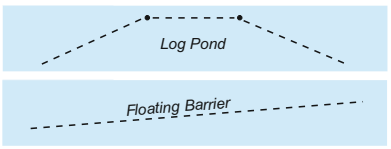
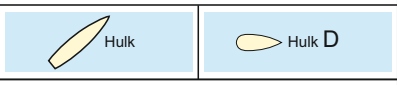
IF Ports

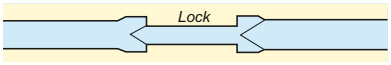
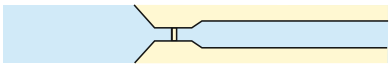
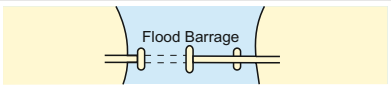
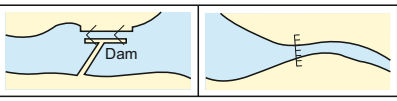
Protection Structures				
1		*Dyke, Levee, Berm*		313.1
2.1		*Seawall (on large-scale charts)*		313.2
2.2		*Seawall (on smaller scale charts)*		
3		*Causeway*		313.3
4.1		*Breakwater (in general)*		322.1
4.2		*Breakwater (loose boulders, tetrapods, etc)*		
4.3		*Breakwater (slope of concrete or masonry)*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

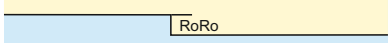
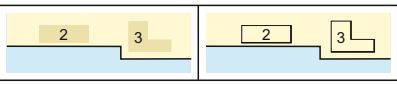
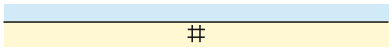
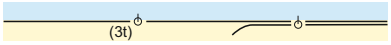
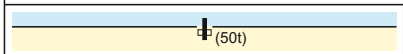
Harbour Installations *Depths* ⟶ I *Anchorages, Limits* ⟶ N *Beacons and other fixed marks* ⟶ Q				
10		*Fishing harbour*		320.1
11.1		*Boat Harbour, Marina*		320.2
11.2		*Yacht berth without facilities*		
11.3		*Yacht club, Sailing club*		

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

IF 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 † constrn. † 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* ⟶	*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

Transhipment 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		*Harbour Master's of*	† Hr Mr	325.1
61		*Custom office*		325.2
62.1		*Health office, Quarantine building*		325.3
62.2	*fig*  Hospital	*Hospital*	 Hosp † Hospl	
63	†	*Post office*	† PO	372.1

IH Tides, Currents

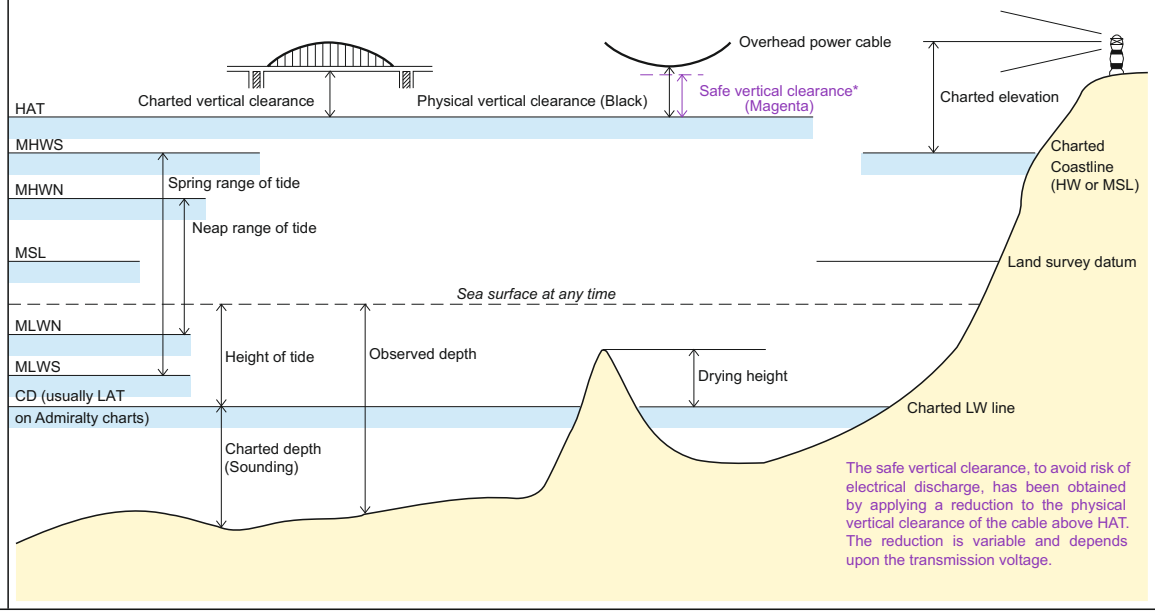
Terms Relating to Tidal Levels

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

Vertical clearance ⟶ D *Tide Gauge* ⟶ T **Tidal Levels and Charted Data**

NOTE: Planes of reference are not exactly as shown below for all charts. They are usually defined in notes under chart titles.

20



302.2
380.1
405

Tide Tables

30

Tabular statement of semi-diurnal or diurnal tides

406.2
406.3
406.4
406.5

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	

31

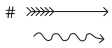
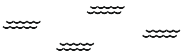
Tidal stream table

407.2
407.3

Tidal streams referred to....

Hours	Geographical Position			A		B		C		D		E
Before High Water 6 5 4 3 2 1	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)	-6								No
High Water				-5								Maximum Rates
After High Water 1 2 3 4 5 6				-4 -3 -2 -1 0 +1 +2 +3 +4 +5 +6								For predictions, use Admiralty Tide Tables

IH Tides, Currents

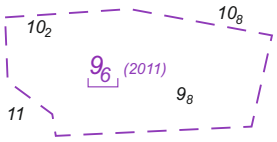
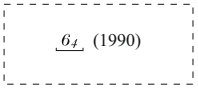
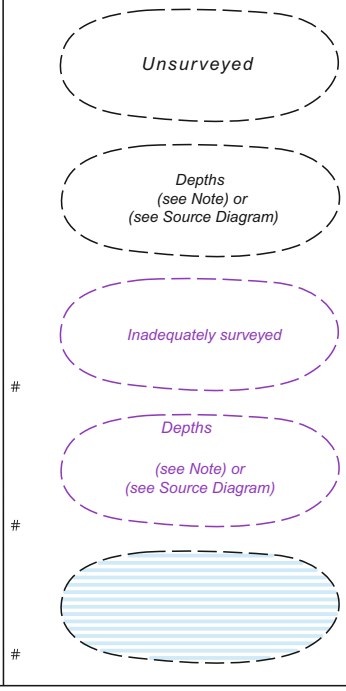
Tidal Streams and Currents			*Breakers* ⟶ K *Tide Gauge* ⟶ T	
40		*Flood tide stream (with mean spring rate)*	† *The number of black dots on the tidal stream arrows indicates the number of hours after High or Low Water at which the streams are running*	407.4 408.2
41		*Ebb tide stream (with mean spring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

			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	† (184) (212)	*Reported, but not confirmed, sounding or danger (on small-scale charts only)*		S-4 Part C 404.3
a		*Unexamined*	unexam †unexamd	

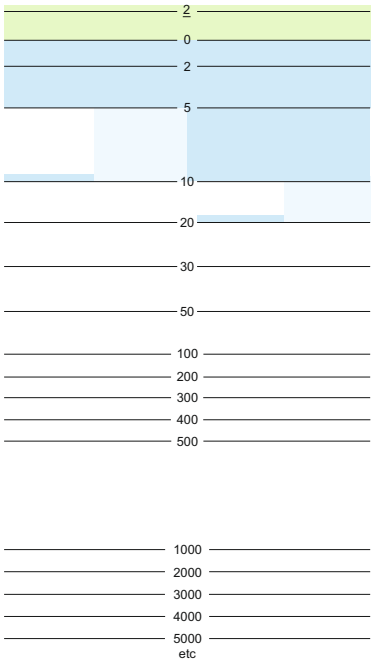
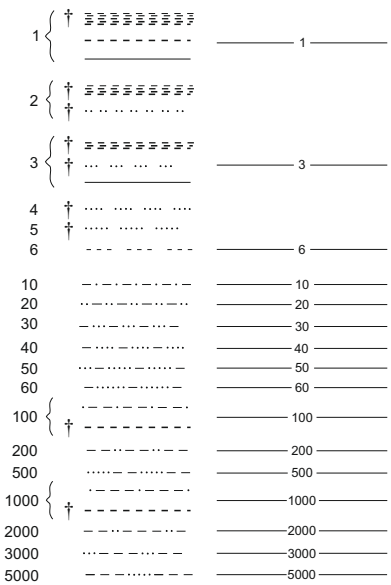
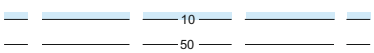
	Plane of Reference for Depths ⟶ H	*Plane of Reference for Heights* ⟶ H	Soundings and Drying Heights	
10	12 9_2 # $9{,}7$	*Sounding in true position*		403.1 410/412 412.1
11	•(4₈) + (12) 3349	*Alongside depth, Sounding out of position*	•(8₃) (10₄) # + 1_8 8_7 7_1	412 412.1 412.2
12	(14₇)	*Least depth in narrow channel*		412 412.1 412.2
13	$\dot{3}\overline{30}$	*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	4_9 4 2 0 0_9 3_4	*Drying heights and contours above chart datum*		413 413.1 413.2
16	1_4 2_5 0_6 1_7 2_7	*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	7·0m 3·5m	*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	17m (2011) 8·2m (2011)	*Dredged channel or area with minimum depth not regularly maintained and year of latest survey*		414.1

II Depths

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

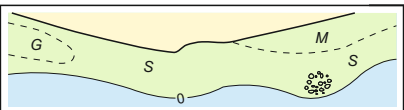
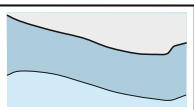
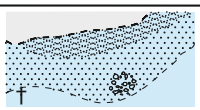
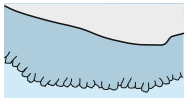
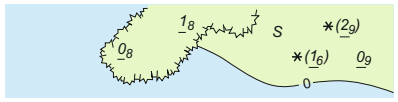
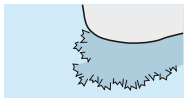
Depth Contours

30		*Dries 2m contour* *Low Water (LW) Line, Chart Datum (CD)* *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.* *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.* *On charts which are metric conversions of fathoms charts there will be a non-standard series of contours.* *On some charts, contours are printed in blue.*	*On charts showing depths in fathoms/feet, the following contours are used:*  *On some charts, contours may be shown by continuous lines.*	404.2 410 411
31		*Approximate depth contours (length of dashes may vary)*		411.2 417.5

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 †	
9.2	*Bo*	*Boulder(s)*		421.2 425-427
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*		425.6
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	

IJ 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	

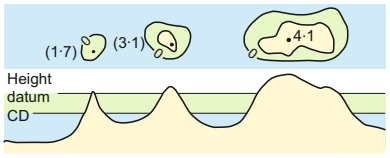
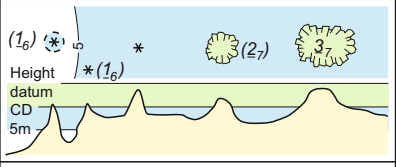
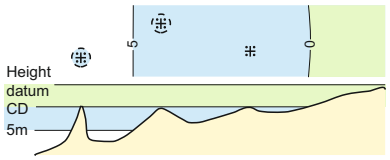
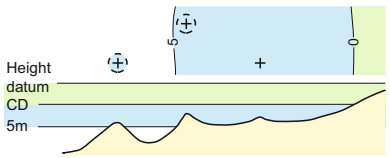
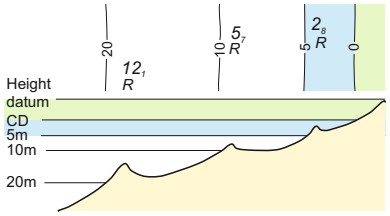
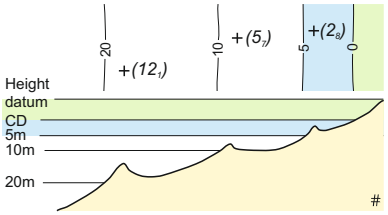
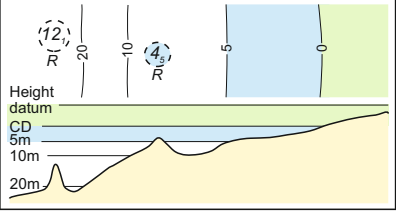
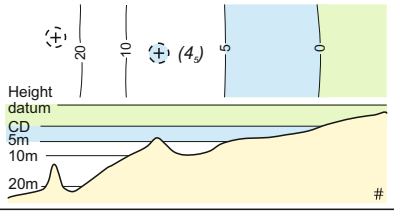
Intertidal Areas					
20		*Area of sand and mud with patches of stones or gravel*			426.1
21		*Rocky area*			426.2
22		*Coral reef*			426.3

Qualifying Terms				
30	*f*	*Fine*		425 427
31	*m*	*Medium* — *only used in relation to sand*		
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

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

IK Rocks, Wrecks, Obstructions, Aquaculture

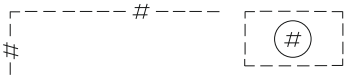
General				
1		*Dangerline: A danger line draws attention to a danger which would not stand out clearly enough if represented solely by its symbol (e.g. isolated rock) or delimits an area containing numerous dangers, through which it is unsafe to navigate*		411.4 420.1
2		*Depth swept by wire drag or 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*	

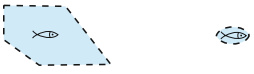
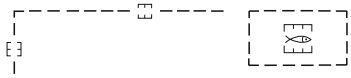
Rocks		*Plane of Reference for Heights* ⟶ H	*Plane of Reference for Depths* ⟶ H	
10		*Rock (islet) which does not cover, height above height datum*	(1,7) (3,1) (4,1) #	421.1
11		*Rock which covers and uncovers, height above Chart Datum, where known*	† *Dries 1·6m* † *Dr 1·6m*	421.2
12		*Rock awash at 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*		

15	35 R	*Underwater rock of known depth, not dangerous to surface navigation*		421.4
16	Co Co 5_8	*Coral reef which is always covered*		421.5
17	5_8 19 Br 18	*Breakers*		423.2
d		*Discoloured water*	*Discol* † *Discold*	424.6

	Hulk ⟶ F	*Plane of Reference for Depths* ⟶ H	Wrecks and Fouls	
20	Mast (1·2) Wk	*Wreck, hull never covers, on large-scale charts*		422.1
21	Mast (1_2) Wk	*Wreck, hull covers and uncovers, on large-scale charts*	† Wk 5_2 † Wk	
22	5_2 Wk 6_5 Wk	*Submerged wreck, depth known, on large-scale charts*	† Wk	422.1
23	Wk	*Submerged wreck, depth unknown, on large-scale charts*	† Wk	422.1
24		*Wreck showing any part of hull or superstructure at the level of Chart Datum*		422.2
25	Masts 4_6	*Wreck of which the mast(s) only are visible at Chart Datum*	Mast (1·2) Wk Funnel Mast (1_2)	422.2
26	Wk 25 Wk 4_6	*Wreck over which the depth has been obtained by sounding but not by wire drag*		422.4
27	Wk 25 Wk	*Wreck, depth swept by wire drag or confirmed by diver*		422.3
28		*Wreck, depth unknown, which is considered potentially dangerous to surface navigation*		422.6
29		*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*		422.6
e		*Submerged wreck, depth unknown*	† Wk	

IK 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		*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 *Underwater Installations* ⟶ L	*Kelp, Seaweed* ⟶ J	
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)*		

Combined symbols ⟶ K *(General)*	*Areas, Limits* ⟶ N		General
1	EKOFISK OILFIELD	*Name of oilfield or gasfield*	445.3
2	Z-44	*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	18	*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	Fla	*Flare stack (at sea)*	445.2
12	SPM	*Fixed Single Point Mooring, including Single Anchor Leg Mooring (SALM), Articulated Loading Column (ALC)*	445.2 445.4
14	Ru Z-44 (ru)	*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	15 Well Well	*Production well, with depth where known*	Prod Well 445.1
21.1	Well	*Suspended well (wellhead and pipes projecting from the seabed) over which the depth is unknown*	445.1
21.2	15 Well	*Suspended well over which the depth is known*	445.1

IL Offshore Installations

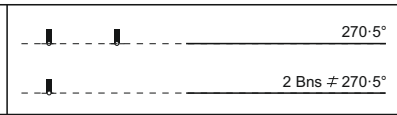
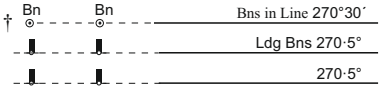
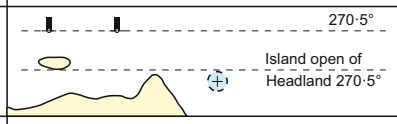
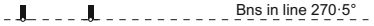
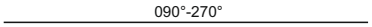
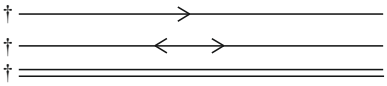
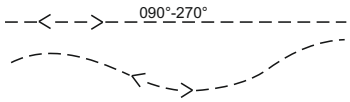
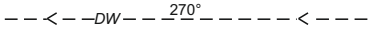
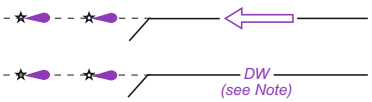
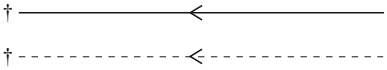
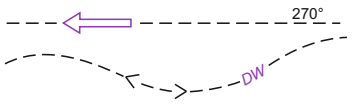
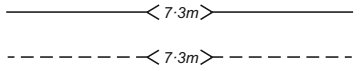
23	Pipe Pipe (18)	*Above-water wellhead (lit and unlit). The drying height or height above height datum is charted if known*		445.1
24	Turbine Fl(2) Underwater Turbine	*Underwater turbine*		445.10 445.11
25	ODAS	*Subsurface Ocean (or oceanographic) Data Acquisition System (ODAS)*		448.4

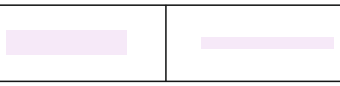
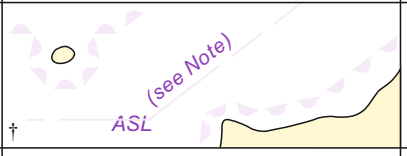
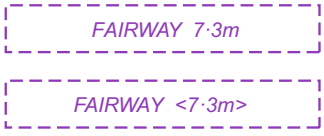
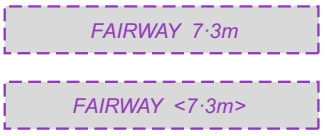
Submarine Cables

	Note: In complex areas, cables maybe shown in lighter print, to avoid obscuring other detail			142.3
30.1		*Submarine cable*	†	443.1 443.8
30.2		*Submarine cable area*	† Cable Area Power	439.3 443.3
31.1		*Submarine power cable*	† Power †	443.2
31.2		*Submarine power cable area*	† Power Cable Area	439.3 443.2
32		*Disused submarine cable*		443.7

Submarine Pipelines

	Note: In complex areas, cables maybe shown in lighter print, to avoid obscuring other detail			142.3
40.1	Oil Gas Chem Water	*Supply pipeline: unspecified, oil, gas, chemicals, water*	† Pipeline	444 444.1
40.2	Oil Gas Chem Water	*Supply pipeline area: unspecified, oil, gas, chemicals, water*	† Pipeline Area † Pipeline Area	439.3 444.3
41.1	Water Sewer Outfall Intake	*Outfall and intake: unspecified, water, sewer, outfall, intake*	† Sewer † Outfall	444 444.2
41.2	Water Sewer Outfall Intake	*Outfall and intake area: unspecified, water, sewer, outfall, intake*	† Pipeline Area † Pipeline Area	439.3 444.3
42.1	Buried 1·6m	*Buried pipeline / pipe (with nominal depth to which buried)*		444.5
42.2		*Pipeline tunnel*		
43	32 Obstn	*Diffuser, crib (nature of obstruction may be stated)*		444.8
44		*Disused pipeline / pipe*		444.7

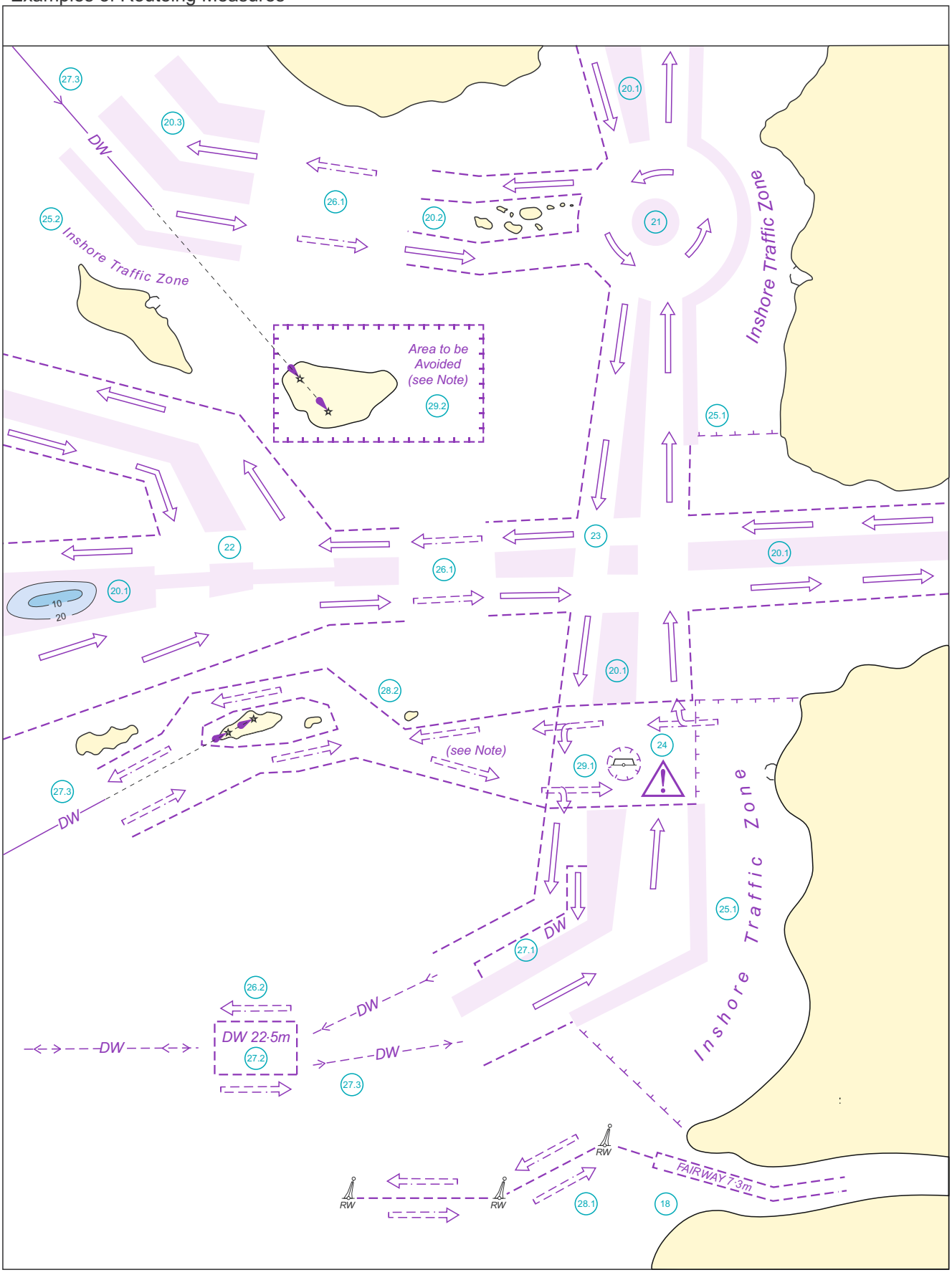
Tracks Marked by Lights ⟶ P	*Leading Beacons* ⟶ Q		Tracks
1		*Leading line (≠ means "in line", the continuous line is the track to be followed)*	† 	433.1 433.2 433.3
2		*Transit (other than leading line), Clearing line*		433.4 433.5
3		*Recommended track based on a system of fixed marks* ‡	† 	434.1 434.2
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

Routeing 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 routeing measure (e.g. Inshore Traffic Zone, Area to be Avoided)*		435.1 436.3 439.2
15		*Limit of routeing 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 routeing measures does not imply recommendation by the UK Hydrographic Office It is usually by a regulatory authority, but may be established by precedent.*

IM Tracks, Routes

Examples of Routeing Measures



Examples of Routeing Measures (see diagram on page 34)

20.1	*Traffic separation scheme (TSS), traffic separated by separation zone*		435.1
20.2	*Traffic separation scheme, traffic separated by natural obstructions*		435.1
20.3	*Traffic separation scheme, with outer separation zone, separating traffic using scheme from traffic not using it*		435.1
21	*Traffic separation scheme, roundabout*		435.1
22	*Traffic separation scheme with "crossing gates"*		435.1
23	*Traffic separation schemes crossing, without designated precautionary area*		435.1
24	*Precautionary area*		435.2
25.1	*Inshore traffic zone (ITZ), with defined end limits*		435.1
25.2	*Inshore traffic zone, without defined end limits*		435.1
‡ 26.1	*Recommended direction of traffic flow, between traffic separation schemes*		435.5
‡ 26.2	*Recommended direction of traffic flow, for ships not needing a deep water route*		435.5
27.1	*Deep water route (DW), as part of one-way traffic lane*		435.3
27.2	*Two-way deep water route, with minimum depth stated*		435.3
27.3	*Deep water route, centre line shown as recommended one-way or two-way track*		435.3
‡ 28.1	*Recommended route (often marked by centre line buoys)*		435.4
28.2	*Two-way route with one-way sections*		435.6
29.1	*Area to be avoided (ATBA), around aid to navigation*		435.7
29.2	*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 National Hydrographic Office. It is usually by a regulatory authority, but may be established by precedent.*

Radar Surveillance System

30	⊙ Radar Surveillance Station	*Radar surveillance station*		487 487.3
31	Ra Cuxhaven	*Radar range*		487.1
32.1	Ra	*Radar reference line*		487.2
32.2	Ra 090° - 270°	*Radar reference line coinciding with a leading line*		

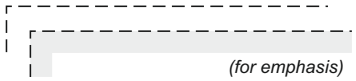
Radio Reporting

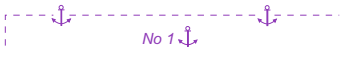
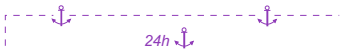
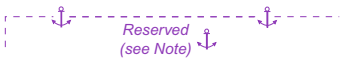
40.1	B 7 VHF 80	*Radio calling-in point, way point, or reporting point (with designation, if any) showing direction(s) of vessel movement and VHF-channel*	† B 7	488.1
40.2		*Radio reporting line (with designation, if any) showing direction(s) of vessel movement*	†	488.2

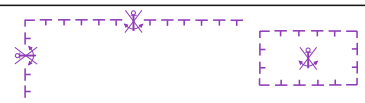
Ferries

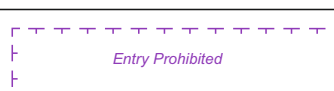
50		*Ferry Route*	† Ferry Ferry	438.1
51	Cable Ferry	*Cable Ferry Route*	†	438.2

IN Areas, Limits

General	*Dredged and Swept Areas* ⟶ I	*Submarine Cables, Submarine Pipelines* ⟶ L	*Tracks Routes* ⟶ 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

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

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

IN Areas, Limits

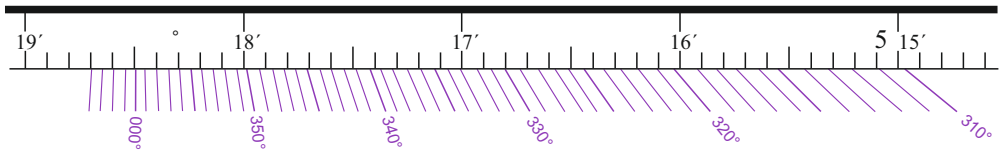
International Boundaries and National Limits

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*	Harbour Limit †	430.1

Various Limits

60.1	(2018) #	*Limit of fast ice, Ice front (with date)*	†	449.1
60.2	(2018) #	*Limit of sea ice (pack ice) seasonal (with date)*		
62.1	*Spoil Ground*	*Spoil ground*		446.1 446.2
62.2	*Spoil Ground (disused)*	*Spoil ground (disused)*		
63	*Extraction Area*	*Extraction (dredging) area*	*Dredging Area* †	446.4
64	*Cargo Transhipment Area*	*Cargo transhipment area*		449.4
65	*Incineration Area* †	*Incineration area*	*Area for burning refuse material* †	449.3

Beacons ⟶Q				Light Structures	
1.1	☆ ★	Lt LtHo	*Position of navigation light (size and style of 'star' may vary), light, lighthouse*	#	470.4 470.5
1.2	☆		*Light on standard charts*		
1.3	☆		*Significant all-round light on multicoloured charts (generally for offshore navigation)*		
Note:	*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.*				
2.1	⊡		*Lighted offshore platform*		445.2
2.2	⊡ ⊡		*Lighted offshore platform on multicoloured charts*		
3	BY	☆ BnTr	*Lighted beacon tower* ‡	† Bn Tower † Bn Tr	456.4 457.1 457.2
4	R BRB	☆ Bn	*Lighted beacon* ‡ *On smaller scale charts, where navigation within recognition range of the daymark is unlikely, lighted beacons are charted solely as lights*	# R BRB G R	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
‡ *Minor lights, fixed and floating, usually conform to IALA Maritime Buoyage System characteristics*					

	Bearings of Light Off Chart Limits	
8	 True Bearings of Sgat Mór Light Fl.5s12m23M	470.8

IP 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	*Occulting (total duration of light longer than total duration of darkness)*			
	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	*Isophase (duration of light and darkness equal)*			
	Iso		*Isophase*	
10.4	*Flashing (total duration of light shorter than total duration of darkness)*			
	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	*Quick (repetition rate of 50 to 79 - usually either 50 or 60 - flashes per minute)*			
	Q	† QkFl	*Continuous quick*	
	Q(3) *Example*	† QkFl(3) *Example*	*Group quick*	
†	IQ	† IntQkFl	*Interrupted quick*	
10.7	*Very quick (repetition rate of 80 to 159 - usually either 100 or 120 - flashes per minute)*			
	VQ	† VQkFl	*Continuous very quick*	
	VQ(3) *Example*	† VQkFl(3) *Example*	*Group very quick*	
	† IVQ	† IntVQkFl	*Interrupted very quick*	
10.8	*Ultra quick (repetition rate of 160 or more - usually 240 to 300 - flashes per minute)*			
	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)*		450.2 450.3 470.4 470.6 471.3 471.4 475.1
11.2	R	*Red*		
11.3	G	*Green*		
11.4	Bu	*Blue*	† Bl	
11.5	Vi	*Violet*		
11.6	Y	*Yellow*		
11.7	Y # Or	*Orange*	† Or	
11.8	Y # Am	*Amber*		
		*Colours of lights shown on:* *standard charts* *on multicoloured charts* *on multicoloured charts at sector lights*		

Period

12	90s 2·5s *Examples*	*Period in seconds and tenths of a second*	† 90sec	471.5

Elevation

Plane of Reference for Heights ⟶ H *Tidal Levels* ⟶ H

13	12m *Example*	*Elevation of light given in metres*	*On fathoms charts, the elevation of a light is given in feet e.g.* 40ft	471.6

Range

Note: Charted ranges are nominal ranges given in sea miles

14	15M *Example*	*Light with single range*		471.7 471.9 475.5
	15/10M *Example*	*Light with two different ranges*	† 15,10M	
	15-7M *Example*	*Light with three or more ranges*	† 15,10,7M	

Disposition

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

Example of a full Light Description 471.9

16

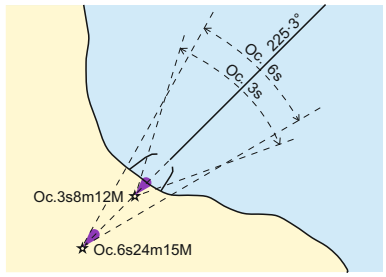
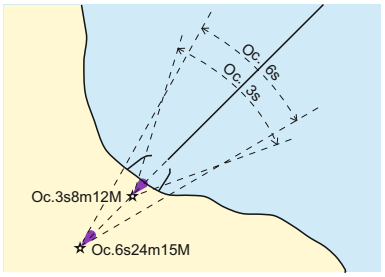
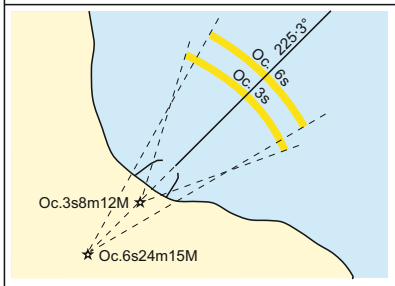
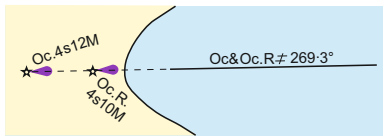
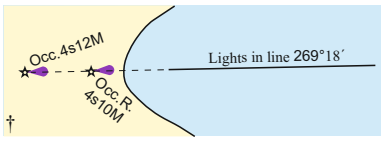
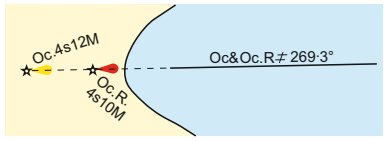
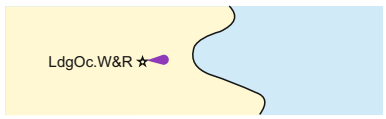
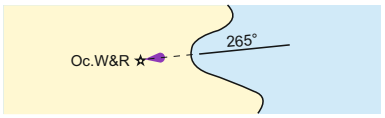
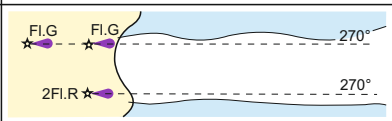
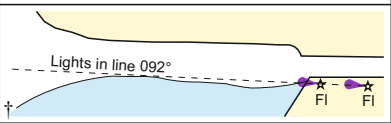
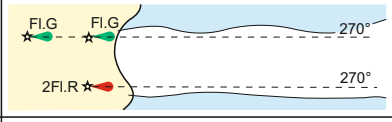
Example *of a light description on a* metric *chart using international abbreviations:* ✯Fl(3)WRG.15s13m7-5M

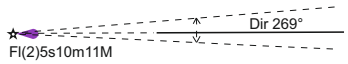
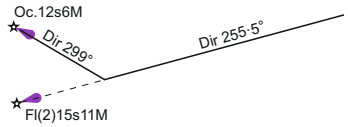
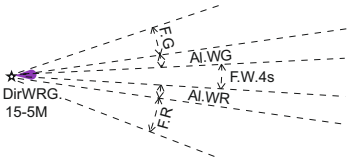
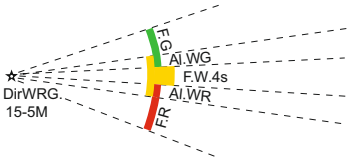
- Fl(3) Class *or* character *of light: in this example a group-flashing light, regularly repeating a group of three flashes.*
- WRG. Colours *of light: white, red and green, exhibiting the different colours in defined sectors.*
- 15s Period *of light in seconds, i.e., the time taken to exhibit one full sequence of 3 flashes and eclipses: 15 seconds.*
- 13m Elevation *of focal plane above height datum: 13 metres.*
- 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.*

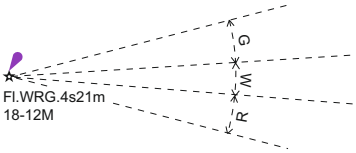
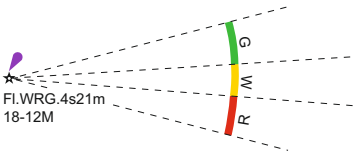
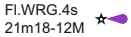
Example *of a light description on a* fathoms *chart using international abbreviations:* ✯Al.Fl.WR.30s110ft23/22M

- Al.Fl. Class or character *of light: in this example exhibiting single flashes of differing colours alternately.*
- WR. Colours *of light shown alternately: white and red all-round (i.e. not a sector light).*
- 30s Period *of light in seconds, i.e. the time taken to exhibit the sequence of two flashes and two eclipses: 30 seconds.*
- 110ft Elevation *of focal plane above height datum: 110 feet.*
- 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 INDIAN List of Lights (for the elevation of 110 feet, it would be 16 miles).*

Lights marking Fairways	*Note: Quoted bearings are always from seaward*

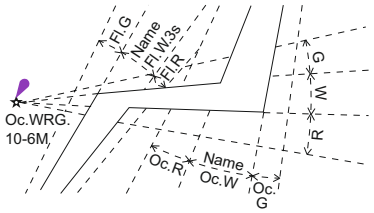
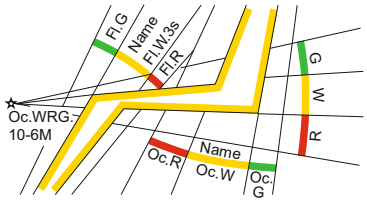
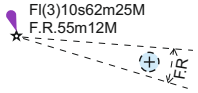
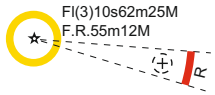
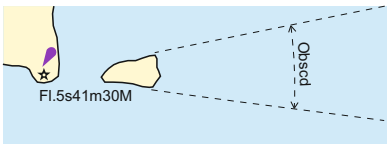
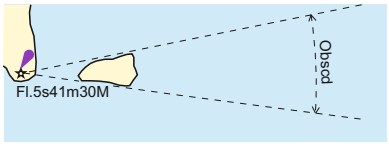
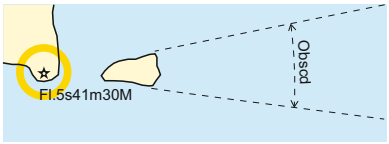
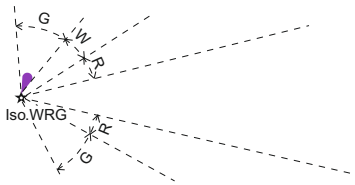
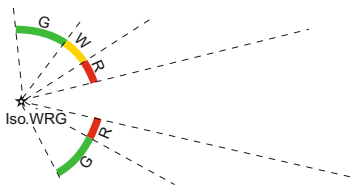
Leading Lights and Lights in line				
20.1		*Leading lights with leading line (the fi rm line is the track to be followed) and arcs of visibility on standard charts*		433 433.1 433.2 433.3 475.1 475.6
20.2		*Leading lights with leading line (the firm line is the track to be followed) and arcs of visibility 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)*	 †	
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

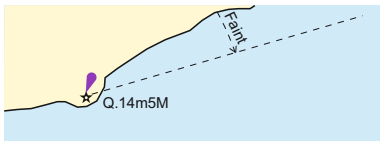
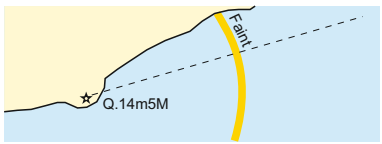
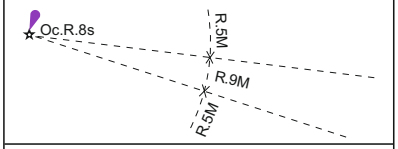
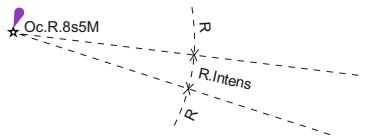
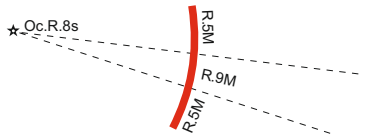
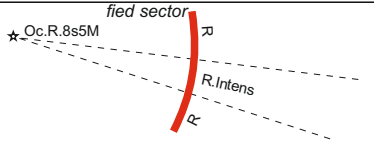
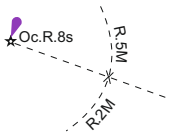
				Direction Lights
30.1		*Direction light with narrow sector and course to be followed, flanked by darkness or unintensified light*	DirLt †	471.3 471.9 475 475.1 475.5 475.7
30.2		*Direction light with course to be followed. Sector(s) uncharted*	DirLt †	
30.3		*Direction light with narrow fairway sector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

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

IP 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		*Light with faint sector on standard charts*		475.3
45.2		*Light with faint sector on multicoloured charts*		
46.1	 	*Light with intensi on standard charts*		475.2
46.2	 *fied sector* 	*Light with intensi on multicoloured charts*		
a	*fied sector*	*Light with unintensified sector*		

IP 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
50.2	 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*	 Fl.10s40m27M (F.37m11M by Day) †	473.4
51.2	 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*	 Q.WRG.5m10-3M Fl.5s (in Fog)	473.5
52.2	 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

Flare Stack (at Sea) ⟶ L	*Flare Stack (on Land)* ⟶ E	*Signal Stations* ⟶ T	Special Lights

60	AeroAl.Fl.WG.7·5s11M	*Aeronautical light (may be unreliable)*		476.1
61.1	† AeroF.R.353m11M RADIO MAST (353)	*Air obstruction light of high intensity*		476.2
61.2	(89) ® Lts)	*Air obstruction lights (e.g. on radio mast)*	† (Red Lt.)	
62	Fog Det Lt	*Fog detector light*		477
63	(illum)	*Floodlit, floodlighting of a structure*	† (lit)	478.2
64	F Iso F.R	*Strip light*		478.5
Note: On multicoloured charts, P63 and P64 may be in any appropriate colour				
65	# (priv)	*Private light other than one exhibited occasionally*	# ⊙ Y.Lt # ⊙ R.Lt † (Priv)	473.2
66	*(sync) or (sync)*	*Synchronized (synchronous or sequential)*		478.3

IQ Buoys, Beacons

Buoys and Beacons	*IALA Maritime Buoyage System, which includes Beacons* ⟶ Q 130

General

1	–o–	*Position of buoy or beacon*		455.3 460.1 462.1

Note: 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.

Colour of Buoys and Beacons

Abbreviations for colours (lights) ⟶ P 11

2	G B G G G	*Single colour; green (G) and black (B)*	† B G	450 450.1 450.2 450.3 464 464.1 464.2 464.3
3	R R Y Y Or R fl	*Single colour other than green and black: red (R), yellow (Y), orange (Or)*	† R Y Or	
4	BY GRG BRB	*Multiple colours in horizontal bands: the colour sequence is from top to bottom*	† BW RW BR BW	
5	RW RW BuY RW	*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)*	† RW BR BW BW	
a		*Single colour other than green and black (non-IALA system: white (W) grey (Gy), blue (Bu))*	† W Gy Bu W (non-IALA) Gy (non-IALA) Bu (non-IALA)	464
b		*Wreck buoy (not used in the IALA System)*	† G G G G	
c		*Chequered*	† BR BW RW BW	

Lighted Marks

Marks with Fog Signals ⟶ R

7	Fl.G G Fl.R R	*Lighted marks on standard charts (examples)*	†	457.1 466 466.1
8	Fl.R R Iso RW Fl.G G	*Lighted marks on multicoloured charts (examples)*		

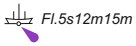
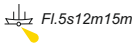
Topmarks and Radar Reflectors

For Application of Topmarks within the IALA System ⟶ Q 130 *Radar reflector* ⟶ S

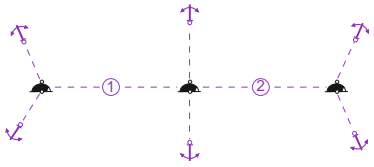
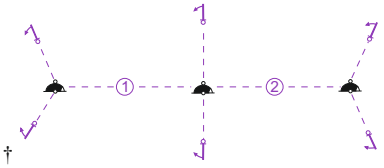
9		*IALA System buoy topmarks (beacon topmarks shown upright)*	*Non-IALA System* # etc.		463 463.1
10	Name 2 R	*Beacon with topmark, colour, radar reflector and designation (example)*	´2´ R No.2 R	Ra.Re "2" R †	450 455.2 455.7 455.8
11	Name 3 G	*Buoy with topmark, colour, radar reflector and designation (example). Radar reflectors are not generally charted on IALA System buoys*	´3´ G *No.3*	*Ra.Refl "No.3"* †	460.3 460.6 465.1 465.2

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

Shapes				
20		*Conical buoy, nun buoy, ogival buoy*	†  *etc.*	462.2
21		*Can buoy, cylindrical buoy*	† *etc.*	462.3
22		*Spherical buoy*	†  *etc.*	462.4
23		*Pillar buoy, buoy with no distinctive shape*	† 	462.5
24		*Spar buoy, spindle buoy*	† 	462.6
25		*Barrel buoy, tun buoy*		462.7
26		*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)*	† 	445.4 460.4 462.9 474

Light Vessels and Minor Light Floats				
30.1		*Light float (example) on standard charts*		462.8
30.2		*Light float (example) on multicoloured charts*		
31	† 	*Light float not part of IALA System*	† 	462.8
32.1		*Light vessel on standard charts*	† 	474
32.2		*Light vessel on multicoloured charts*		

IQ 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	*Small Craft Moorings*	*Numerous moorings (example)*		431.7
45	V	*Visitors' mooring*		431.5

Special Purpose Buoys		*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.*		
50	DZ	*Firing danger area (Danger Zone) buoy*		441.2
54	DG	*Degaussing Range buoy*		448.2
58	ODAS ODAS	*Ocean (or Oceanographic) Data Acquisition System (ODAS) buoy, Data collection buoy*	ODAS †	448.3 460.4 462.9
70	(priv)	*Buoy privately maintained (example)*		
71	(Apr-Oct)	*Seasonal buoy (the example shows a yellow spherical buoy on station between April and October)*	# (1.4 -15.10) (occas)	460.5
d		*Racing mark*	#	

Lighted Beacons ⟶ P | *Features Common to Beacons and Buoys* ⟶ Q 1-11 | Beacons

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

Minor Pile ⟶ F | Minor Impermanent Marks usually in Drying Areas (Lateral Mark for Minor Channel)

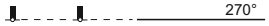
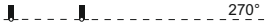
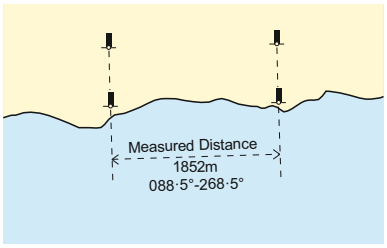
90			*Pole*	†	456.1
91	PORT HAND	STARBOARD HAND	*Perch, withy*	†	456.1
92	†	†	*Withy*		

Landmarks ⟶ E | Minor Marks, usually on Land

100		*Cairn*	⊙ Cairn †	456.2
101	▫ Mk	*Coloured or white mark (the colour may be indicated)*		456.2
102.1	† RW	*Coloured topmark (colour known or unknown) with function of a beacon*	R G	
102.2	† RW RW	*Painted boards with function of leading beacons*		

IQ Buoys, Beacons

Beacon Towers				
110		*Beacon towers without and with topmarks and colours (examples)*	† Bn Tower † Bn Tr *etc.*	456.4
111 #		*Lattice beacon*		456.4

Special Purpose Beacons			*Leading Lines, Clearing Lines* ⟶ M	
Note: Topmarks and colours are shown where scale permits				
120		*Leading beacons (the firm line is the track to be followed)*	† Bn Bn Ldg Bns 270°	458
121		*Beacons marking a clearing line or transit*	† Bn Bn Bns in line 270°	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

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.

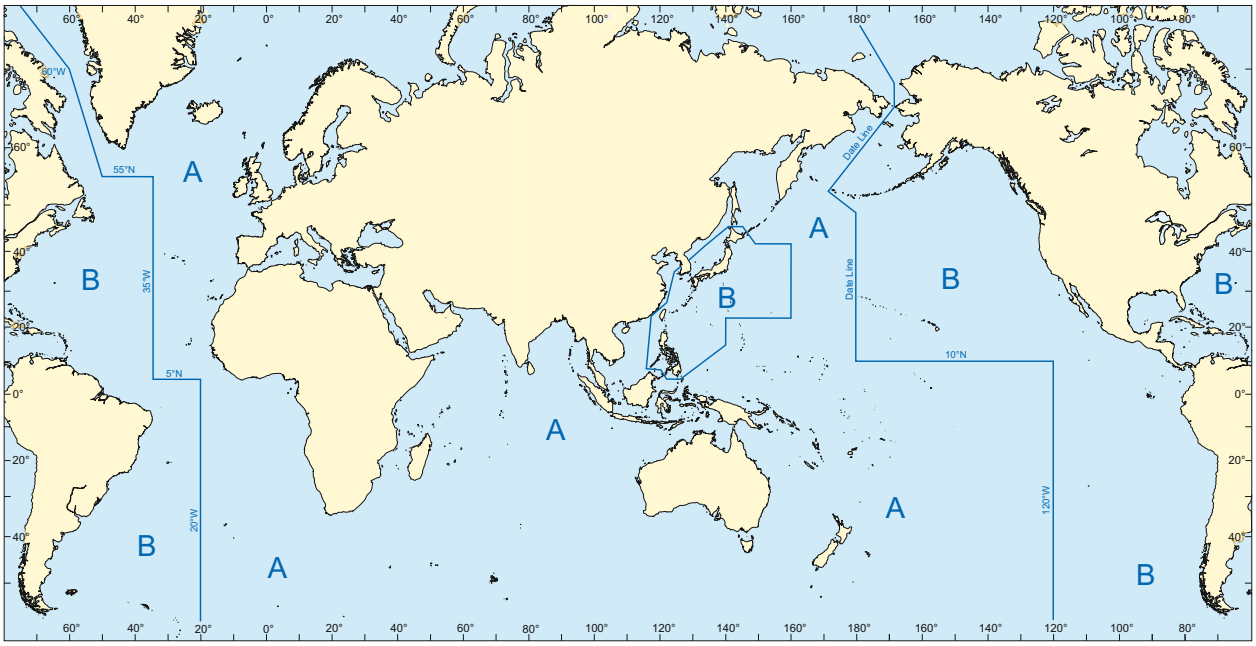
The standard buoy shapes are cylindrical (can) conical spherical pillar and spar but variations may occur, for example: minor light floats In the illustrations on the next page, only the standard buoy shapes are used. In the case of fixed beacons (lit or unlit) only the shape of the topmark is of navigational significance.

IALA Buoyage Regions A and B

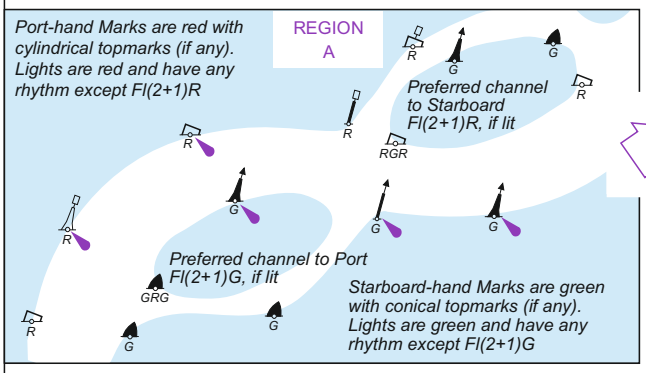
There are two international buoyage regions where lateral marks differ

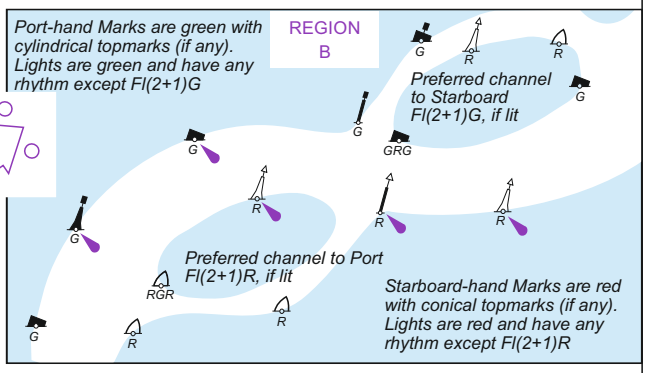
Region A is primarily comprised of the waters surrounding Greenland, Europe, Africa, Australia and Asia (except for Japan, the Republic of Korea and the Philippines).

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.*





Buoy shape may be cylindrical or coinical (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 Fl(2+1)

130.2

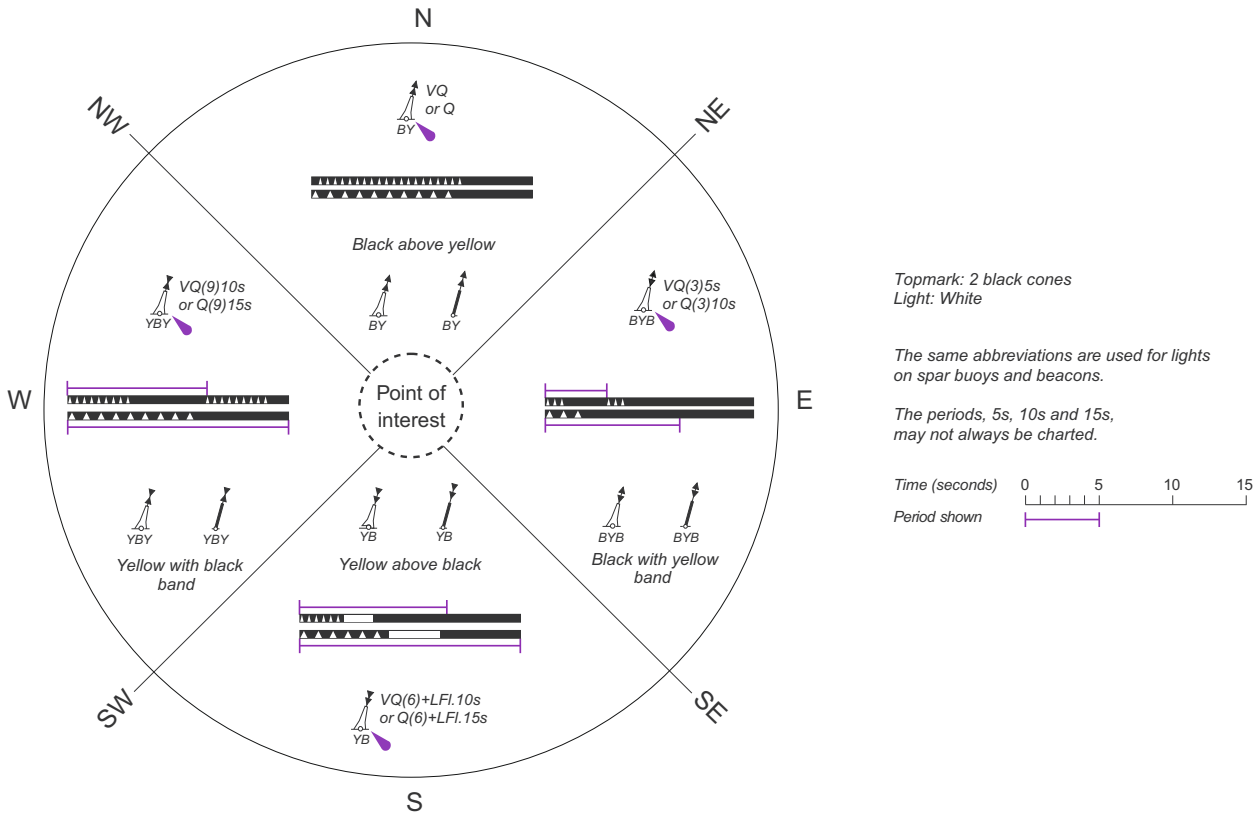


Symbol showing direction of buoyage where not obvious.



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

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*



130.4 Isolated Danger Marks, stationed over dangers with navigable water around them.

Body: black with red horizontal band(s)
Topmark: 2 black spheres





Fl(2) *†GpFl(2)* *White light*

130.5 Safe Water Marks, including mid-channel and landfall marks.

Body: red and white vertical stripes
Topmark (if any): red sphere





Iso, or Oc, or LFl.10s, Mo(A) *or* *†Occ* *White light*

130.6 Special Marks, not primarily to assist navigation but to indicate special features.

Body: (shape optional): yellow
Topmark (if any): yellow X





Yellow light

130.7 New Danger Marks, until the information is sufficiently promulgated.

Body: pillar or spar, blue and yellow vertical stripes
Topmark: yellow upright cross

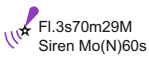
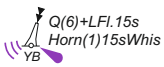
Emergency Wreck Marking Buoy



Blue and Yellow light

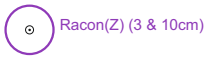
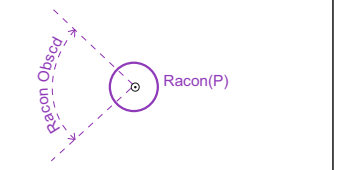
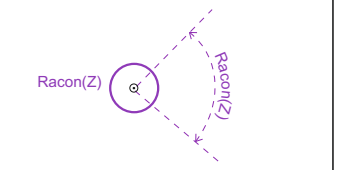
Fog Detector Light ⟶ P	*Fog Light* ⟶ P	General		
1		*Position of fog signal. Type of fog signal not stated*	† Fog Sig	451 451.2 452.8
2	(man)	*Manually activated*		452.9

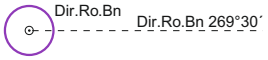
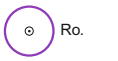
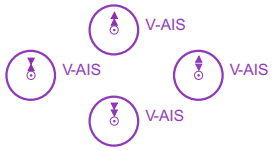
Types of Fog Signals, Abbreviations				
10	Explos	*Explosive*	† Gun	452.1
11	Dia	*Diaphone*		452.2
12	Siren	*Siren*		452.3
13	Horn	*Horn (nautophone, reed, tyfon)*	† Nauto † E.F. Horn † Tyfon † Reed	452.4
14	Bell	*Bell*		452.5
15	Whis	*Whistle*		452.6
16	Gong	*Gong*		452.7

Examples of Fog Signal Descriptions				
20	 ‡	*Siren at a lighthouse, giving a long blast followed by a short one (N), repeated every 60 seconds*		452.3 453.3
21	 ‡	*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*		452.5 453 454.1
22	 ‡	*Light buoy, with horn giving a single blast every 15 seconds, in conjunction with a wave-actuated whistle*	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*

IS Radar, Radio, Satellite Navigation Systems

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

	Radio Structures Forming Landmarks ⟶ E	*Radio Reporting (Calling-in or Way) Points* ⟶ M		Radio
10	† 	*Non-directional marine or aeromarine radiobeacon*		480 481.1 480.1
11	† 	*Directional radiobeacon with bearing line*	† 	480 481.2
	† 	*Directional radiobeacon coincident with leading lights (‡ means "in line")*		
12	† 	*Rotating pattern radiobeacon*		480 481.1
13	† 	*Consol beacon*		480
14		*Radio direction-finding station*	† 	483
15	† 	*Coast radio station providing QTG service*	† 	480 484
16	† 	*Aeronautical radiobeacon*		480 482
17.1		*Automatic Identification System transmitter*		489.1
17.2		*Automatic Identification System transmitters on floating marks (examples)*		489.1
18.1		*Virtual AIS aid to navigation with no known IALA-defined function. Other carriers may be used*		489.2
18.2		*Virtual AIS aid to navigation with IALA cardinal mark function*		
18.3		*Virtual AIS aid to navigation with IALA lateral mark function*		
18.4		*Virtual AIS aid to navigation with IALA isolated danger mark function*		
18.5		*Virtual AIS aid to navigation with IALA safe water mark function*		
18.6		*Virtual AIS aid to navigation with IALA special mark function*		
18.7		*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
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.				202
51	# 	*Station providing Differential Global Positioning System corrections*		481.4

IT Services

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

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

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

IU 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*	†	

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*	†	

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 INP5020 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 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 o ffshore 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. % ensonification is important.
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,

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 INP 5020, 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. $\overline{(20)}$ 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	OBSOLESCENT FORM(S	TERM	REFERENCES MEANING
ALBANIAN			
	K	Kodër, Kodra	*Hill*
ARABIC			
	Djeb, Dj	Djebel	*Mountain, Hill*
Geb.	G	Gebel	*Mountain, Hill*
J.	Jab, J^{l}	Jabal, Jib^{o}l, Jebel	*Mountain(s), Hill(s)*
Jaz.	Jazt	JazØat, Jaz^{o}'ir JazØeh	*Island(s), Peninsula*
Jeb.	J, J^{l}	Jebel	*Mountain, Hill*
Jez.	Jez^{t}	JezØat	*Island, Peninsula*
Kh.	K	Khawr, Khër	*Inlet, Channel*
	Si, S^{i}	Sidi	*Tomb*
W.		W^{o}d, W^{o}di	*Valley, River, River bed*
CHINESE			
Chg.	Ch^{g}	Chiang	*River, Shoal, Harbour, Inlet, Channel, Sound*
DANISH			
B.		Bugt	*Bay, Bight*
Bk.	B^{k}	Banke	*Bank*
Fj.	F^{d}	Fjord	*Inlet*
Gr.	Grd, Gr^{d}, G^{d}	Grund	*Shoal*
H.	Hm, H^{m}, Hne, H^{ne}	Holm, Holmene	*Islet(s)*
Hd.	H^{d}	Hoved	*Headland*
Hn.	H^{n}	Havn, Havnen	*Harbour*
Ll.		Lille	*Little*
N.		Nord, Nordre	*North, Northern*
Ø.		Øst, Østre	*East, Eastern*
Øy.	Øne, Ø^{ne}, Öne, Ö^{ne}	Øyane, Øyene, Öyane Öyene	*Islands*
Pt.	P^{t}	Pynt	*Point*
S.		Sønder, Søndre	*South, Southern*
Sd.	S^{d}	Sund, Sundet	*Sound*
Sk.	Skr, Sk^{r}	Skær, Skjær	*Rock above water*
St.		Stor	*Great*
V.		Vest, Vestre	*West*
DUTCH			
B.	B^{i}	Baai	*Bay*
Bg.	B^{g}	Berg	*Mountain*
Bk.	B^{k}	Bank	*Bank*
Eil.	Eiln, Eil^{n}	Eiland, Eilanden	*Island(s)*
G.		Golf	*Gulf*
	Gt, Grt, G^{t}, G^{rt}	Groot, Groote	*Great*
H.		Hoek	*Cape, Hook*
Pt.	P^{t}	Punt	*Point*
R.		Rivier	*River*
Rf.	R^{f}	Rif	*Reef*
Str.	Stn, St^{r}, St^{n}	Straat, Straten	*Strait(s)*
FINNISH			
K.		Kari, Kallio, Kivi	*Rock, Reef*
Lu.		Luoto, Luodet	*Rock(s)*
Ma.		Matala	*Shoal*
	P	Pieni, Pikku	*Small*
Sa.	S^{a}	Saari, Saaret	*Island(s)*
Tr.	T^{r}	Torni	*Tower*
FRENCH			
A.	A^{e}	Anse	*Inlet*
B.	B^{e}	Baie	*Bay*
	Bas. Bsse	Basse	*Shoal*
Bc.	B^{c}	Banc	*Bank*
	Bssn, Bn, B^{n}	Bassin	*Basin*
C.		Cap	*Cape*
Cal.	Ch^{al}, Chen	Chenal	*Channel*
Ch.	Chap, Chap^{e}	Chapelle	*Chapel*
Chât.	Chât^{u}, Ch^{au}	Château	*Castle*

CURRENT FORM	OBSOLESCENT FORM(S)	TERM	REFERENCES MEANING
FRENCH *(continued)*			
F.	Fl	Fleuve	*Large river*
Ft.	F^{t}	Fort	*Fort*
G.		Golfe	*Gulf*
	Gd, G^{d}, Gde, G^{de}	Grand, Grande	*Great*
Ht.Fd.	H.F., Ht fd, H^{t}f^{d}, H^{t} fond	Haut-fond	*Shoal*
Î.	I, I^{t}	Île, Îles, Îlot	*Island(s), Islet*
L.		Lac	*Lake*
	Mn, M^{in}	Moulin	*Mill*
Mlg.	Mge, M^{age}, Mou	Mouillage	*Anchorage*
Mt.	M^{t}	Mont	*Mount, Mountain*
	N.D.	Notre Dame	*Our Lady*
P.		Port	*Port*
	Pet, P^{it}, P^{ite}, P^{t}	Petit, Petite	*Small*
Pit.	Pn, P^{on}	Piton	*Peak*
Pl.		Plage	*Beach*
Plat.	Pla, Plat^{u}	Plateau	*Tableland, Sunken flat*
Pte.	P^{te}	Pointe	*Point*
Qu.	Q	Quai	*Quay*
R.	Rau, Riv, R^{au}	Rivière, Ruisseau	*River, Stream*
	Rav, R^{ne}	Ravine	*Ravine*
Rf.		Récif	*Reef*
Roc.	Re, R^{e}, Rer, R^{er}	Roche, Rocher	*Rock*
S.	St, S^{t}, Ste, S^{te}	Saint, Sainte	*Saint, Holy*
	Som.	Sommet	*Summit*
Tr.	T^{r}	Tour	*Tower*
	Vi, V^{x}	Vieux, Vieil, Vielle	*Old*
GAELIC			
Bo.		Bogha	*Below water rock*
Eil.	E, En, E^{n}	Eilean, Eileanan	*Island(s), Islet(s)*
Ru.	R^{u}	Rubha	*Point*
Sg.	Sgr, Sg^{r}	Sgeir	*Rock*
GERMAN			
B.		Bucht	*Bay*
Bg.	B^{g}	Berg	*Mountain*
Gr.	Grd, Grd, G^{d}	Grund	*Shoal*
Hn.	H^{n}	Hafen	*Harbour*
K.		Kap	*Cape*
Rf.	R^{f}	Riff	*Reef*
	Schl	Schloss	*Castle*
GREEK			
Ág., Ag.	Áy., Ay.	Ágios, Ágia	*Saint, Holy*
Ágk.	Ang.	Agkáli	*Bight, Open bay*
Ágky.	Angir., Ang	Agkyrovólio	*Anchorage*
Ák., Ak.		Ákra, Akrotírio	*Cape*
Kól.	Kol	Kólpos	*Gulf*
Lim.		Limín, Liménas	*Harbour*
N.		Nísos, Nísoi	*Island(s)*
N.	N	Nisída, Nisídes	*Islet(s)*
Ó.	O	Órmos	*Bay*
Or.		Ormískos	*Cove*
Ór.	Or	Óros, Óroi	*Mountain(s)*
Pot.		Potamós	*River*
	Prof	Profítis	*Prophet*
Sk.		Skópelos, Skópeloi	*Reef(s), Drying rock(s)*
Vrach.	Vrak	Vrachonisída, Vrachonisídes	*Rocky islets*
Vrach.	Vrák	Vráchos, Vráchol	*Rock(s)*
µf.	Íf.	µfalos, µfaloi	*Reef(s)*
ICELANDIC			
Fj.	Fjr, F^{dr}	FjörÉur	*Fjord*
Gr.		Grunn	*Shoal*

Index of Abbreviations of Principal Non-English Terms

CURRENT FOR	OBSOLESCENT FORM(S)	TERM	REFERENCES MEANING
INDONESIAN and MALAY			
A.		Air, Ajer, Ayer	*Stream*
B.	Bu, B^{u}	Batu	*Rock*
Bat.	Btg, B^{tg}	Batang	*River*
	Bdr, B^{dr}	Bandar, Bendar	*Port*
	Br, B^{r}	Besar	*Great*
Buk.	Bt, B^{t}	Bukit	*Hill*
G.	Gg, G^{g}	Gosong, Gosung, Gusong, Gusung	*Shoal, Reef, Islet*
Gun.	Gg, G^{g}	Gunong, Gunung	*Mountain*
K.	Ki, K^{i}	Kali	*River*
K.	Kr	Kroeng, Krueng	*River*
Kam.	Kg, K^{g}	Kampong, Kampung	*Village*
Kar.	Kg, K^{g}	Karang	*Coral reef, Reef*
Kep.	Kpn, K^{pn}	Kepulauan	*Archipelago*
Kl.	K^{l}	Kachil, Kechil, Ketjil, Kecil	*Small*
Ku.	Kla, K^{la}	Kuala	*River mouth*
Lab.	Labn, Lab^{n}	Labuan, Labuhan	*Anchorage, Harbour*
Mu.	Ma, M^{a}	Muara	*River mouth*
P.	Pu, P^{u}, P^{o}	Pulau, Pulu, Pulo	*Island*
Peg.		Pegunungan	*Mountain range*
Pel.	Pln, P^{ln}	Pelabuan, Pelabuhan	*Roadstead, Anchorage*
P.–P.	PP.	Pulau–pulau	*Group ofislands*
	Prt, P^{rt}	Parit	*Stream, Canal, Ditch*
S.	Si, S^{i}	Sungai, Sungei	*River*
Sel.	Slt, S^{lt}	Selat	*Strait*
T.	Tg, T^{g}	Tandjong, Tandjung, Tanjong, Tanjung Tanjing	*Cape*
Tel.	Tal, Tk, T^{k}	Taluk, Telok, Teluk	*Bay*
U.	Ug, U^{g}	Udjung, Ujung	*Cape*
W.		Wai	*River*
ITALIAN			
Anc.		Ancoraggio	*Anchorage*
B.		Baia	*Bay*
Banch.	Bna, B^{na}	Banchina	*Quay*
Bco.	B^{co}	Banco	*Bank*
C.		Capo	*Cape*
Cal.		Calata	*Wharf*
Can.		Canale	*Channel*
Cas.		Castello	*Castle*
F.		Fiume	*River*
Fte.	F^{te}	Forte	*Fort*
G.		Golfo	*Gulf*
	Gde, G^{de}	Grande	*Great*
I.	I^{a}, I^{e}	Isola, Isole	*Island(s)*
I.	I^{to}, I^{ti}	Isolotto, Isolotti	*Islet(s)*
L.		Lago	*Lake*
Lag.	La, L^{e}	Laguna	*Lagoon*
	Mda, Mad, Mad^{a}, Mad^{na}	Madonna	*Our Lady*
Mte.	M^{te}	Monte	*Mount, Mountain*
P.	Pto, P^{to}	Porto	*Port*
P.	Portlo, Port^{lo}	Porticciolo	*Small port*
Pco.	P^{co}	Picco	*Peak*
Pog.	Pgio, P^{gio}	Poggio	*Mound, Small hill*
Pta.	P^{ta}	Punta	*Point, Summit*
	Pte, P^{te}	Ponte	*Bridge*
	Pzo, P^{zo}	Pizzo	*Peak*
S.	Sto, S^{to}, Sta, S^{ta}	San, Santo, Santa	*Saint, Ho/y*
S.	SS, S.S.	Santi	*Saints*
Scog.	Sco, Sci, Sc, Sc^{i}	Scoglio, Scogli	*Rock(s), Reef(s)*
Scog.	Sc, Scra	Scogliera	*Ridge of rocks, Breakwater*
Sec.	Se	Secca, Secche	*Shoal(s)*
	T, T^{te}	Torrente	*Intermittent stream*
Tr.	Tre, T^{re}	Torre	*Tower*
	Va, V^{la}	Villa	*Villa*
JAPANESE			
B.	B^{a}	Bana	*Cape, Point*
By.	Bi, B^{i}	Byëchi	*Anchorage*
	D^{e}	Dake	*Mountain, Hill*
G.	G^{a}	Gawa	*River*
H.	Ha, H^{a}	Hana	*Cape, Point*
Hak.	Hi, H^{i}	Hakuchi	*Roadstead*

CURRENT FOR	OBSOLESCENT FORM(S)	TERM	REFERENCES MEANING
JAPANESE *(continued)*			
J.	J^{a}	Jima	*Island*
K.	Ka, K^{a}	Kawa	*River*
	Kaik, Ko, K^{o}	Kaikyë	*Strait*
M.	Mki, M^{ki}, M^{i}	Misaki	*Cape*
	Ma, M^{a}	Mura	*Village*
	Mi, M^{i}	Machi	*Town*
S.	Si, S^{i}	Saki	*Cape, Point*
Sh.	Sa, S^{a}	Shima	*Island*
	Sn, S^{n}	San	*Mountain*
	So, S^{o}	Seto	*Strait*
Su.	Sdo, S^{do}	Suidë	*Channel*
	Te, T^{e}	Take	*Hill, Mountain*
	Ya, Y^{a}	Yama	*Mountain*
Z.	Z^{i}	Zaki	*Cape, Point*
	Z^{n}	Zan	*Mountain*
MALAY (see INDONESIAN)			
NORWEGIAN			
B.	B, B^{kt}	Bukt, Bukta	*Bay, Bight*
Bg.	B^{g}	Berg, Bierg, Bjerg	*Mountain, Hill*
Fd.	F^{d}, Fj	Fjord, Fjorden	*Fjord*
Fjel.	Fj	Fjell, Fjellet, Fjeld, Fjeldet	*Mountain*
Fl.	Flne, Fl^{ne}	Flu, Flua, Fluen, Fluane, Fluene	*Below water rock(s)*
Gr.	Grne, Gr^{ne}	Grunn, Grunnen, Grunnane	*Shoal(s)*
H.	Hm, H^{m}, Hne, H^{ne}	Holm, Holmen, Holmane	*Islet(s)*
Hn.	H^{n}	Hamn, Havn	*Harbour*
in.	In^{r}, I	Indre, Inre, Inste	*Inner*
L.		Lille, Liten, Litla, Litle	*Little*
Lag.	La, L^{a}	Laguna	*Lagoon*
N.		Nord, Nordre	*North, Northern*
Ø.	Ö	Øst, Østre, Öst, Östre	*East, Eastern*
Od.	O	Odde, Odden	*Point*
Øy.	Ø, Ö, O	Øy, Øya, Öy, Öya	*Island*
Øy.	Øne, Ø^{ne}, Öne, Ö^{ne}	Øyane, Øyene, Öyane, Öyene	*Islands*
Pt.	P^{t}	Pynt, Pynten	*Point*
S.		Syd, Søre, Søndre	*South, Southern*
Sd.	S^{d}	Sund, Sundet	*Sound*
Sk.	Skr, Sk^{r}	Skjær, Skjer, Skjeret	*Rock above water*
Sk.	Skne, Sk^{ne}	Skjerane, Skjærane	*Rocks above water*
St.		Stor, Stora, Store	*Great*
Tar.	Tn, T^{n}	Taren	*Below water rock*
V.		Vest, Vestre	*West*
Vag.	Vg, V^{g}	Våg, Vågen	*Bay,* Cove
	Vd, V^{d}	Vand	*Lake*
Vik.	Vk, V^{k}	Vik, Vika, Viken	*Bay, Inlet*
	Vn, V^{n}	Vann, Vatn	*Lake*
Y.	Y^{t}	Ytre, Ytter, Yttre	*Outer*
PERSIAN			
B.		Bandar	*Harbour*
Jab.		Jabal	*Mountain, Hill*
Jaz.	Jazh, Jaz^{h}	JazØeh	*Island, Peninsula*
Kh.	K	Khowr	*Inlet, Channel*
R.		Rød	*River*
POLISH			
Jez.		Jezioro	*Lake*
Kan.		Kanal	*Channel*
Miel.		Mielizna	*Shoal*
R.		Rzeka	*River*
W.	Wys, Wa, W^{a}	Wyspa	*Island*
Zat.		Zatoka	*Gulf, Bay*
PORTUGUESE			
	Anc.	Ancoradouro	*Anchorage*
Arq.	Arqu^{o}	Arquipélago	*Archipelago*
B.		Baía	*Bay*
Bco.	B^{co}	Banco	*Bank*
Bxo.	Ba, B^{xo}, Bxa, B^{xa}	Baixo, Baixa, Baixia, Baixio	*Shoal*
Co.	C.	Cabo	*Cape*

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CURRENT FORM	OBSOLESCENT FORM(S)	TERM	REFERENCES MEANING
PORTUGUESE *(continued)*			
Can.		Canal	*Channel*
Ens.	Ens^{a}	Enseada	*Bay, Creek*
Est.	Est^{o}	Esteiro	*Creek, Inlet*
Estr.		Estreito	*Strait*
Estu.	Est, Est^{o}	Estuario	*Estuary*
	Fte, F^{te}	Forte	*Fort*
	Fte, Ftza, F^{tza}	Fortaleza	*Fortress*
Fund.		Fundeadouro	*Anchorage*
G.		Golfo	*Gulf*
	Gde, G^{de}	Grande	*Great*
I.		Ilhéu, Ilhéus, Ilhota	*Islet(s)*
I.		Ilha, Ilhas	*Island(s)*
	L.	Lago	*Lake*
	L.	Lagoa	*Small lake, Marsh*
La.	Le, L^{e}	Laje	*Flat-topped rock*
Lag.	La, L^{a}	Laguna	*Lagoon*
	Mol, Me, M^{e}	Molhe	*Mole*
	Mor, Mo, M^{o}	Morro	*Headland, Hill*
Mt.	M^{te}, Mte	Monte, Montanha	*Mount, Mountain*
NS.	Na.Sa, N^{a}S^{a}	Nosso Senhor, Nossa Senhora	*Our Lord, Our Lady*
P.	Pto, P^{to}	Porto	*Port*
	Pal, Pals, Pal^{s}	Palheiros	*Fishing village*
	Par, Pel, P^{el}	Parcel	*Shoal, Reef*
Pass.	Pas	Passagem, Passo	*Passage, Pass*
	Pco, P^{co}, P^{o}	Pico	*Peak*
	Pda, P^{da}	Pedra	*Rock*
	Peq	Pequeno, Pequena	*Small*
	Pr, Pa, P^{a}	Praia	*Beach*
Pta.	P^{ta}	Ponta	*Point*
	Queb.	Quebrada, Quebrado	*Cut, Ravine*
Rch.		Riacho, Ribeira, Ribeirão	*Creek, Stream, River*
Rf.		Recife	*Reef*
Ro.	R	Rio	*River*
Roc.	Ra, R^{a}	Rocha, Rochedo	*Rock*
S.	Sto, S^{to}, Sta, S^{ta}	São, Santo, Santa	*Saint, Holy*
Sa.	Sa, S^{a}, Sr	Serra, Cordilheira	*Mountain range*
	Va, V^{a}	Vila	*Town, Village, Villa*
ROMANIAN			
A.		Ans` , Ansa	*Cove*
B.		Baie, Baia	*Bay*
Br.		Braò Braòul, Braòu	*Branch, Arm (of the sea)*
C.		Cap, Capul, Capu	*Cape*
Di., D-le.		Deal, Dealul, Dealuri, Dealurile	*Hill(s)*
Fd.mic		Fund mic	*Shoal*
I.		Insul` , Insula	*Island*
L.		Lac, Lacul, Lacu	*Lake*
Mt., M-òi.		Munte, Muntele, Munò, Muntii	*Mountain, Mounts*
O.		Ostrov, Ostrovul, Ostrovu	*Island*
S.		Stînca, Stînca	*Rock*
Sf.		Sfînt, Sfîntu, Sfîntul, Sfînta	*Saint, Holy*
Str.		Strîmtoare, Strîmtoarea	*Pass, Strait*
RUSSIAN			
B		Bukhta	*Bay, Inlet*
b-ka.	Bka, B^{ka}, Bki, B^{ki}, Bk	Banka, Banki	*Bank(s)*
Bol.		Bol'shoy, Bol'shaya, Bol'shoye	*Great, Large*
Gb.	G, Ga, G^{a}	Guba	*Gulf, Bay, Inlet*
G.		Gora	*Mountain, Hill*
Gav.	G	Gavan'	*Harbour, Basin*
Kam.		Kamen'	*Rock*
M.		Mys	*Cape, Headland*
	Mal	Malyy, Malaya, Maloye	*Little*
O.	O^{va}	Ostrov, Ostrova	*Island(s)*
Oz.		Ozero	*Lake*
P-ov.	Pol^{ov}, P^{ov}, Pol	Poluostrov	*Peninsula*
Pr.	Prv, Pr^{v}	Proliv	*Channel, Strait*
R.		Reka	*River*
Zal.		Zaliv	*Gulf, Bay*

CURRENT FORM	OBSOLESCENT FORM(S)	TERM	REFERENCES MEANING
SPANISH			
	A, Arro, Arr^{o}	Arroyo	*Stream*
Arch.	Arch^{o}	Archipiélago	*Archipelago*
Arrf.	Arr^{e}, Arr^{fe}, Arr	Arrecife	*Reef*
Ba.	B^{a}	Bahía	*Bay*
	Bo, B^{o}	Bajo	*Shoal*
	Bco, B^{co}	Banco	*Bank*
Br.	Bzo, B^{zo}	Rompientes	Breakers
C.		Cabo	*Cape*
	Cal, Cta	Caleta	*Cove*
	Can.	Canal	*Channel*
	Cer, Co, C^{o}	Cerro	*Hill*
	Cre.	Cumbre, Cima	*Summit*
	Cy	Cayo	*Cay, Key*
	Ens, Ens^{a}	Ensenada	*Cove*
	Est, Est^{o}	Estero	*Creek, Inlet*
	Estr.	Estrecho	*Strait*
	Estu, Est, Est^{o}	Estuario	*Estuary*
	Fond, Fond^{o}	Fondeadero	*Anchorage*
	Fte, F^{te}	Fuerte	*Fort*
G.		Golfo	*Gulf*
	Gde, G^{de}	Grande	*Great*
I, Is	I^{a}	Isla, Islas	*Island(s)*
	I, I^{te}	Islote, Isleta	*Islet*
	L.	Lago	*Lake*
	Lag, La, L^{a}	Laguna	*Lagoon*
	Mor, Mo, M^{o}	Morro	*Headland, Hill*
	Mte, M^{te}	Monte	*Mount, Mountain*
	Mu, Me, M^{e}, M^{lle}	Muelle	*Mole*
	Na. Sa, N^{a}S^{a}	Nuestra Señora	*Our Lady*
	P, Pto, P^{to}	Puerto	*Port*
	Pco, P^{co}, P^{o}	Pico	*Peak*
	Pda, P^{da}	Piedra	*Rock*
Pen.	Pen^{la}	Península	*Peninsula*
	Peq	Pequeño, Pequeña	*Small*
	Pl, Pa, P^{a}	Playa	*Beach*
Prom.	Prom^{to}	Promontorio	*Promontory*
	Pta, P^{ta}	Punta	*Point*
	Queb.	Quebrada	*Cut, Ravine*
	R.	Río	*River*
	Rga.	Restinga	*Shoal, Sandbank*
	Roc, Ra, R^{a}	Roca	*Rock*
S.	Sn, S^{n}, Sto, S^{to}, Sta, S^{ta}	San, Santo, Santa	*Saint, Holy*
	Sr, Sa, S^{a}	Sierra	*Mountain range*
	Surg, Surgo, Surg^{o}	Surgidero	*Anchorage, Roadstead*
Tr.	Te, T^{re}	Torre	*Tower*
	Va, V^{a}	Villa	*Villa, Small town*
SWEDISH			
	B.	Bukt	*Bay, Bight*
Bg.	Bgt, B^{g}	Berg, Berget	*Mountain*
	Bk, B^{k}	Bank	*Bank*
Fj.	F^{d}	Fjärd, Fjord	*Fjord*
	Gla, G^{la}	Gamla	*Old*
Gr.	Grn, Grd, Grd, G^{d}	Grund	*Shoal*
H.	Hm, H^{m}	Holme, Holmarna	*Islet*
	Hd, H^{d}	Huvud	*Headland*
	Hn, H^{n}	Hamn, Hamnen	*Harbour*
I.		Inre	*Inner*
L.		Lilla, Liten	*Little, Small*
N.		Nord, Norra	*North, Northern*
Ö.		Öst, Östra	*East, Eastern*
S.		Syd, Södra	*South, Southern*
Sk.	Sk^{r}	Skär, Skäret, Skären	*Rock above water*
St.		Stor	*Great, Large*
V.		Väst, Västra	*West, Western*
Y.	Y^{t}	Yttre	*Outer*
THAI			
Kh.		Khao	*Hill, Mountain*
L.	Lm, L^{m}	Laem	*Cape, Point*
M.N.		Mae Nam	*River*
TURKISH			
Ad.		Ada, AdasÝ	*Island*
Aî p		Takimadalar	*Archipelago*
Adc.	Ad	AdacÝk	*Islet*
BoÛ		BoÛaz, BoÛazÝ	*Strait*
Br.	Bn, Bu	Burun, Burnu	*Point, Cape*
Ç.	Ça	Çay, ÇayÝ	*Stream, River*

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CURRENT FOR	OBSOLESCENT FORM(S)	TERM	REFERENCES MEANING
TURKISH *(continued)*			
	Da	DaÛ DaÔÝ	*Mountain*
D.	De	Dere, Deresi	*Valley, Stream*
Dz.		Deniz	*Sea*
G.		Göl, Gölü	*Lake*
Isk.		Iskele, Iskelesi	*Jetty*
Kf. Krf.		Körfez, Körfezi	*Gulf*
Ky.	Kyl.	Kaya, KayasÝ	*Rock*
Lim. Lm.	Li	Liman, LimanÝ	*Harbour*
N.		Nehir, Nehri, Irmak, IrmaÔÝ	*River*
T.	Te, T[e]	Tepe, Tepesi	*Hill, Peak*
Yad.		YarÝmada, YarÝmadasÝ	*Peninsula*
Languages of the former YUGOSLAVIA			
Br.		Brdo, Brda	*Mountain(s)*
Gr.		Greben, Grebeni	*Rock, Reef, Cliff, Ridge*
Hr.		Hrid, Hridi	*Rock*
L.		Luka	*Harbour, Port*
M.		Mali, Mala, Malo, Malen	*Small*
O.		Otocic, Otocici	*Islet(s)*
O.		Otok, Otoci	*Island(s)*
Pl.		PliÄina	*Shoal*
Pr.		Prolaz	*Passage*
S.	Sv	Sveti, Sveta, Sveto	*Saint, Holy*
−k.		Skolj, Skoljic	*Island, Reef*
U.		Uvala, Uvalica	*Inlet*
V.		Veli, Vela, Velo, Velik, Veliki, Velika, Veliko	*Great*
Z.	Zal	Zaliv, Zaljev, Zaton	*Gulf, Bay*

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(Note: INT abbreviations are in bold type)

CURRENT FORM	OBSOLESCENT FORM(S)	TERM	REFERENCES
abt	ab^{t}	About	—
Accom		Accommodation Vessel	L17
Aero		Aeronautical	P 60, 61
AIS		Automatic Identification System	S 17, 18
	Al	Algae	J s
Al.	Alt	Alternating light	P 10.11
ALC		Articulated Loading Column	L 12
ALL		ADMIRALTY List of Lights and Fog Signals	—
ALRS		ADMIRALTY List of Radio Signals	—
Am		Amber	P 11.8
Anch.	Anch^{e}	Anchorage	—
	Anct, Anc^{t}	Ancient	—
ANM		Annual Summary of ADMIRALTY Notices to Mariners	—
Annly	Ann^{ly}	Annually	—
Appr.	Apprs, Appr^{s}	Approaches	—
approx	Approx	Approximate	—
Apr		April	—
Arch.	Archo, Arch^{o}	Archipelago	—
ASD		ADMIRALTY Sailing Directions	—
ASL		Archipelagic Sea Lane	M17
	Astr, Astrl, Astr^{l}	Astronomical	—
ATBA		Area to be Avoided	M14, 29
ATT		ADMIRALTY Tide Tables	—
Aug		August	—
Aus		Australia	—
Ave	Av^{e}	Avenue	—
B.		Bay	—
B	bl, blk	Black	J af, Q 2
	Ba	Basalt	J h
	Batt, Baty, Bat^{y}	Battery	E 34.3
Bk.	B^{k}	Bank	—
bk	brk	Broken	J 33
Bldg	B^{ldg}	Building	D 5
	BM, B.M.	Bench Mark	B 23
Bn, Bns		Beacon(s)	M 1–2, P 4–5, Q 80–81
BnTr	Bn Tower	Beacon Tower	P 3, Q 110
Bo		Boulders	J 9.2
Bol	Boll.	Bollard	F a
Br		Breakers	K 17
	br	Brown	J ak
Bu	Bl, Bl., b	Blue	J ag, P 11.4, Q a
C.		Cape	—
c		Coarse	J 32
ca	cal	Calcareous	J 38
CALM		Catenary Anchor Leg Mooring	L 16
Cas	Cas.	Castle	E 34.2
	Cath, Cath.	Cathedral	E 10.1
Cb		Cobbles	J 8
cd		Candela	B 54
CD		Chart Datum	H 1
	Cemy, Cem^{y}	Cemetery	E 19
CG	C.G.	Coastguard station	T 10–11
Ch	Ch.	Church, chapel	E 10.1
	ch, choc	Chocolate	J al
Chan.		Channel	—
Chem		Chemical	L 40
	chk, Ck	Chalk	J e
Chy	Ch^{y}	Chimney	E 22
	cin, Cn	Cinders	J m
cm	cm.	Centimetre(s)	B 43
Co	crl	Coral	J 10, K 16
	Col	Column, pillar, obelisk	E 24
	conspic	Conspicuous	E 2
const	constn, constr^{n}	Construction	F 32
cov	cov.	Covers	K b
Cr.		Creek	—
Cup	Cup.	Cupola	E 10.4
Cy	cl	Clay	J 3
	(D)	Doubtful	—
	d	Dark	J ao
Dec		December	—
decrg	decr^{g}	Decreasing	—
dest	destd, Dest^{d}	Destroyed	—
Det		(see Fog Det Lt)	—
DG	D. G.	Degaussing	N 25, Q 54

CURRENT FORM	OBSOLESCENT FORM(S)	TERM	REFERENCES
DGPS		Differential Global Positioning System	S 51
	Di, di	Diatoms	J v
Dia		Diaphone	R 11
Dir	Dir^{n}	Direction	—
Dir	Dir Lt	Direction light	P 30–31
Discol	Discol^{d}	Discoloured water	K d
discont	discontd, discont^{d}	Discontinued	—
dist	Dist	Distant	—
Dk	D^{k}	Dock	—
dm	dm.	Decimetre(s)	B 42
Dn, Dns	D^{n}	Dolphin(s)	F 20
dr	dr., Dr.	Dries	K a
DW		Deep-water, Deep-draught	M 27, N 12.4
dwt		Deadweight tonnage	—
DZ		Danger Zone	Q 50
E	E.	East	B 10
ED	(ED), (E.D.)	Existence doubtful	I 1
EEZ		Exclusive Economic Zone	N 47
	E.F. Horn	Electric fog horn	R 13
Ent.	Entce, Ent^{ce}	Entrance	—
	Equin^{l}	Equinoctial	—
ESSA		Environmentally Sensitive Sea Area	N 22
Est.	Est^{y}	Estuary	—
	Estab^{t}	Establishment	—
	ev.	Every	—
exper	experl, Exper^{l}	Experimental	—
explos	explos.	Explosive	R 10
(exting)	(exting^{d})	Extinguished	P 55
f		Fine	J 30
F		Fixed	P 10.1
FAD		Fish Aggregating Device	—
F Racon		Fixed frequency radar transponder beacon	S 3.4
Feb		February	—
FFL		Fixed and flashing light	P 10.10
Fj.	Fd, F^{d}	Fjord	—
	(fish^{g})	Fishing light	P 50
Fl	fl.	Flashing	P 10.4
	Fl., fl	Flood	—
Fla		Flare stack (at sea)	L 11
	Fm, F^{m}	Farm	—
fm, fms	f^{m}, f^{ms}	Fathom, fathoms	B 48
Fog Det Lt		Fog detector light	P 62
	Fog Sig.	Fog signal station	R 1
	Fog W/T	Radio fog signal	—
FPSO		Floating Production and Storage Offtake Vessel	L17
	Fr, for	Foraminifera	J t
FS	F.S.	Flagstaff, Flagpole	E 27
FSO		Floating Storage and Offtake Vessel	L17
FSU		Floating Support Unit	L17
	Ft, F^{t}	Fort	E 34.2
ft	f^{t}	Foot, feet	B 47, P 13
G	g	Gravel	J 6
G	gn	Green	J ah, P 11.3, Q 2
G.		Gulf	—
	ga, glac	Glacial	J ac
	Gc	Glauconite	J o
	Gd, grd	Ground	J a
	Gl, gl	Globigerina	J u
	Govt Ho, Gov^{t} Ho	Government House	—
GNSS		Global Navigation Satellite System	—
Gp.		Group (of islands)	—
	GpFl, Gp.Fl.	Group-flashing	P 10.4
	GpOcc, Gp.Occ.	Group-occulting	P 10.2
GPS	g	Global Positioning System	
	rt	Gross Register Tonnage	—
	Gt, Grt, G^{t}, Gr^{t}	Great	—
	G.T.S.	Great Trigonometrical Survey Station (India)	—
	Gy, gy	Grey	J am, Q a
GT		Gross Tonnage	—
h		Hard	J 39
	H, H.	Headway	D 20, D 26-27
H		Helicopter transfer (Pilots)	T 1.4
h	h., H.	Hour	B 49
HAT		Highest Astronomical Tide	H 3
Hd.	H^{d}	Headland	—
Hn.	H^{n}	Haven	—

Index of Abbreviations of Principal English Terms

(Note: INT abbreviations are in bold type)

CURRENT FORM	OBSOLESCENT FORM(S)	TERM	REFERENCES
Ho		House	—
(hor)	(hor^{l})	Horizontally disposed	P 15
Hosp	Hospl, Hosp^{l}	Hospital	F 62.2
Hr.	H^{r}	Harbour	—
	Hr, H^{r}	Higher	—
Hr Mr		Harbour Master	F 60
	Ht, H^{t}	Height	—
HW	H.W.	High Water	H a
	H.W.F. & C.	High Water Full and Change	—
	H.W.O.S.	High Water Ordinary Springs	—
I.	It	Island, islet	—
IALA		International Association of Lighthouse Authorities	Q 130
IHO		International Hydrographic Organization	—
(illum)	Illum., (lit)	Illuminated	P 63
IMO		International Maritime Organization	—
	in., ins.	Inch, inches	—
incrg	incr^{g}	Increasing	—
INT		International	A 2, T 21
Intens	(intens)	Intensified	P 46
IQ	IntQkFl, Int.Qk.Fl.	Interrupted quick-flashing	P 10.6
	(irreg.)	Irregular	—
	ISLW, I.S.L.W.	Indian Spring Low Water	—
Iso		Isophase	P 10.3
	It	Islet	—
ITZ		Inshore Traffic Zone	—
IUQ		Interrupted ultra quick-flashing	P 10.8
IVQ	IntVQkFl, Int.V.Qk.Fl	Interrupted very quick-flashing	P 10.7
Jan		January	—
Jul		July	—
km	km.	Kilometre(s)	B 40
kn	kn.	Knot(s)	B 52, H 40–41
L.		Lake, Loch, Lough	—
	l	Large	J ab
Lag.	Lagn, Lag^{n}	Lagoon	—
	LANBY	Large Automatic Navigational Buoy	
LASH		Lighter Aboard Ship	—
LAT		Lowest Astronomical Tide	H 2
Lat	Lat.	Latitude	B 1
	LB, L.B.	Lifeboat station	T 12
Ldg	L^{dg}	Leading	P 20.3
Le.	L^{e}	Ledge	—
LFl		Long-flashing	P 10.5
	Lit, Lit.	Little	—
	(lit)	Floodlit	P 63
LL	L.L.	List of Lights	—
Lndg	L^{dg}	Landing place	F 17
LNG		Liquefied Natural Gas	—
LOA		Length overall	—
LoLo		Load-on, Load-off	—
Long	Long.	Longitude	B 2
LPG		Liquefied Petroleum Gas	—
	Lr, L^{r}	Lower	P 23
	L.S.S.	Lifesaving station	—
Lt	L^{t}, lt	Light	J an, P 1
Lts		Lights	P 61.2
LtHo	L^{t} Ho	Lighthouse	P 1
Lt V	L^{t} V	Light-vessel	Q 32
	Lv, lv	Lava	J i
LW	L.W.	Low Water	H b
	L.W.F. & C.	Low Water Full and Change	—
	L.W.O.S.	Low Water Ordinary Springs	—
M	m	Mud	J 2
M	M.	Sea or Nautical Mile(s)	B 45, P 14
m		Medium	J 31
m	m.	Metre(s)	B 41, P 13
	mad, Md	Madrepore	J g
Mag	Mag.	Magnetic	—
	Magz, Mag^{z}	Magazine	—
	man, Mn	Manganese	J n
Man		Manually Activated	P 56, R 2
Mar		March	—
MHLW	M.H.L.W.	Mean Higher Low Water	H 14
MHW		Mean High Water	H 5
MHWN	M.H.W.N.	Mean High Water Neaps	H 11
MHWS	M.H.W.S.	Mean High Water Springs	H 9
	Mid, Mid.	Middle	—
min	min., m.	Minute(s) of time	B 50
Mk		Mark	Q 101
	Ml, ml	Marl	J c
MLHW	M.L.H.W.	Mean Lower High Water	H 15
MLLW	M.L.L.W.	Mean Lower Low Water	H 12
MLW		Mean Low Water	H 4
MLWN	M.L.W.N.	Mean Low Water Neaps	H 10
MLWS	M.L.W.S.	Mean Low Water Springs	H 8
mm	mm.	Millimetre(s)	B 44
Mo		Morse code	P 10.9, R 20
Mon	Mont, Mon^{t}	Monument	E 24
	Mony, Mon^{y}	Monastery	—
	Ms, mus	Mussels	J q
MR		Marine reserve	N 22
MRCC		Maritime Rescue and Coordination Centre	—
MSL	M.S.L.	Mean Sea Level	H 6
Mt.	M^{t}	Mountain, mount	—
Mth.	Mth	Mouth	—
MTL	M.T.L.	Mean Tide Level	H c
N	N.	North	B 9
	Nauto	Nautophone	R 13
NB	N.B.	Notice Board	Q 126
NE	N.E.	North-east	B 13
NM	N.M.	Notice(s) to Mariners	—
n mile		International Nautical Mile	B 45
No	N^{o}	Number	N 12.2
Nov		November	—
Np	Np.	Neap Tides	H 17
nrt		Nett register tonnage	—
NT		Net Tonnage	—
NW	N.W	North-west	B 15
NZ		New Zealand	—
	Obs Spot, Obsn Spot, Obs^{n} Spot	Observation Spot	B 21
Obscd	Obsc^{d}	Obscured	P 43
Obstn	Obst^{n}	Obstruction	K 40–43, L 43
	Obsy, Obs^{y}	Observatory	—
Oc	Occ, Occ.	Occulting	P 10.2
(occas)	(occas^{l})	Occasional	P 50
Oct		October	—
OD	O.D.	Ordnance Datum	H d
ODAS		Ocean Data Acquisition System	Q 58
	Off, Off.	Office	—
Or	Or.	Orange	P 11.7, Q 3
	ord.	Ordinary	—
	Oy, oys	Oysters	J p
	Oz, oz	Ooze	J b
P	peb	Pebbles	J 7
P.		Port	—
(P)		Preliminary (NM)	—
PA	(PA), (P.A.)	Position approximate	B 7
Pag	Pag.	Pagoda	E 13
Pass.		Passage	
PD	(PD), (P.D.)	Position doubtful	B 8
Pen.	Penla, Peri^{a}	Peninsula	—
Pk.	P^{k}	Peak	—
	Pm, pum	Pumice	J j
PO	P.O.	Post Office	F 63
	Po, pol	Polyzoa	J y
pos	posn, pos^{n}	Position	—
(priv)	priv., (Priv.)	Private	P 65, Q 70
	Prod Well	Production Well	L 20
prohib	Prohib^{d}	Prohibited	—
proj	projd, Proj^{d}	Projected	—
prom	promt, Prom^{t}	Prominent	—
Prom.	Promy, Prom^{y}	Promontory	—
	(prov), (prov^{l})	Provisional	—
PSSA		Particularly Sensitive Sea Area	N 22
Pt.	P^{t}	Point	—
	Pt, pt	Pteropods	J x
Pyl		Pylon	D 26

Index of Abbreviations of Principal English Terms

(Note: INT abbreviations are in bold type)

CURRENT FORM	OBSOLESCENT FORM(S)	TERM	REFERENCES
Q	QkFl, Qk.Fl.	Quick-flashing	P 10.6
	Q^{r}	Quarter	—
	Qz, qrtz	Quartz	J f
R	rd	Red	J aj, P 11.2, Q 3
R.		River	—
R	r	Rock	J 9.1, K 15
	R, R^{o}	Coast Radio Station providing QTG service	S 15
Ra		Radar, Coast Radar Station	M 31–32, S 1
	Ra (conspic), Ra. (conspic)	Radar conspicuous object	S 5
	Ra. Refl.	Radar Reflector	Q 10–11, S 4
Racon		Radar Transponder Beacon	S 3.1–3.6
	rad, Rd	Radiolaria	J w
Ramark		Radar Beacon	S 2
	RC	Non-directional Radio-beacon	S 10
	RD, Dir.Ro.Bn	Directional Radiobeacon	S 11
Rds.	R^{ds}	Roads, Roadstead	
Ref		Refuge	Q 124, T 14
Refl	Refl.	Retroreflecting material	—
	Rem^{ble}	Remarkable	—
Rep	Repd, Rep^{d}	Reported	I 3
Rf.	R^{f}	Reef	—
RG	R^{o} D.F.	Radio Direction-Finding Station	S 14
Rk.	R^{k}	Rock	—
(R Lts)	(Red Lts)	Air Obstruction Lights (low intensity)	P 61.2
	Rly, Ry, R^{y}	Railway	D 13
	R^{o} B^{n}	Radiobeacon in general	S 10
RoRo	Ro-Ro	Roll-on Roll-off ferry terminal	F 50
	R.S.	Rocket station	—
Ru, (ru)	Ru.	Ruins, (ruined)	D 8, E 25.2, F 33
	RW	Rotating Pattern Radiobeacon	S 12
S.	St, S^{t}	Saint	—
S	s	Sand	J 1
S	S.	South	B 11
s	sec, sec.	Second(s) of time	B 51, P 12
SALM		Single Anchor Leg Mooring	L 12
SBM		Single Buoy Mooring	L 16
SC	S.C.	Sailing Club	—
	Sc, sc	Scoriæ	J l
Sc	Sc.	Scanner	E 30.3
Sch	Sch.	School	—
SD	S.D.	Sailing Directions	—
SD		Sounding of doubtful depth	I 2
Sd.	S^{d}	Sound	—
SE	S.E.	South-east	B 14
	Sem, Sem.	Semaphore	—
Sep		September	—
sf	stf	Stiff	J 36
sg		Seagrass	J 13.3
Sh	sh	Shells	J 11
Sh.		Shoal	—
Si		Silt	J 4
	Sig, Sig.	Signal	R 1, T 25.2
	sk, spk	Speckled	J ad
	sm	Small	J aa
SMt	SM^{t}	Seamount	—
	Sn, shin	Shingle	J d
so	sft	Soft	J 35
Sp	Sp.	Spire	E 10.3
	Sp, sp	Sponge	J r
Sp	Sp, Spr.	Spring Tides	H 16
SPM		Single Point Mooring	L 12
SS	Sig Sta, Sig Stn	Signal Station	T 20–36
St	st	Stones	J 5
St	St.	Street	—
Sta	Sta., Stn, St^{n}	Station	D 13
	Stm.Sig.Stn.	Storm Signal Station	T 28
Str.		Strait	—
subm	submd, $Subm^{d}$	Submerged	—
SW	S.W.	South-west	B 16
SWOPS		Single Well Oil Production System	—
sy	stk	Sticky	J 34
sync		Synchronized or Sequential	P 66

CURRENT FORM	OBSOLESCENT FORM(S)	TERM	REFERENCES
	T, t	Tufa	J k
(T)		Temporary (NM)	—
t		Ton, tonne, tonnage	B 53, F 53
	t	Elevation of top of trees	C 14
Tel	Tel.	Telephone, Telegraph	—
(temp)	(tempy), ($temp^{y}$)	Temporary	P 54
Tr	T^{r}	Tower	E 10.2, E 20
TSS		Traffic Separation Scheme	—
TV Tr	T.V. T^{r}	Television Tower	E 28–29
	(U)	Unwatched, unmanned (light)	P 53
ULCC		Ultra Large Crude Carrier	—
uncov	uncov.	Uncovers	K c
unexam	unexamd. $unexam^{d}$	Unexamined	I a
Unintens		Unintensified	P a
	Up^{r}	Upper	P 22
UQ		Ultra quick-flashing	P 10.8
UTC		Co-ordinated Universal Time	—
UTM		Universal Transverse Mercator	—
v	vol	Volcanic	J 37
V-AIS		Virtual AIS aid to navigation	S18
	Va, V^{a}	Villa	—
Var	Var^{n}	Variation	—
	var	Varying	—
Vel	Vel.	Velocity	—
(vert)	($vert^{l}$)	Vertically disposed	P 15
Vi		Violet	P 11.5
	vis.	Visible	—
VLCC		Very Large Crude Carrier	—
Vol.		Volcano	—
VQ	VQkFl, V.Qk.Fl	Very quick-flashing	P 10.7
VTS		Vessel Traffic Service	—
W	W.	West	B 12
W	w	White	J ae, P 11.1, Q 130.5
Water Tr	Water T^{r}	Water tower	E 21
Wd	wd	Weed	J 13.1
Well		Wellhead	L 20, L 21
WGS		World Geodetic System	S 50
Whf	Wh^{f}	Wharf	F 13
Whis	Whis.	Whistle	R 15
Wk, Wks	W^{k}	Wreck(s)	K 20–30
	W/T	Radio (Wireless/Telegraphy)	—
Y	y	Yellow, amber, orange	J ai, P 11.8 Q 3
YC	Y.C.	Yacht Club	—
	y^{d}, y^{ds}	Yard(s)	—

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Board, painted ..... Q 102.2
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  harbour ..... F 11.1
  park ..... U o
Bollard ..... F a
Boom ..... F 29.1
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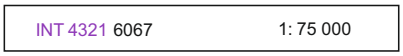
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IB Positions, Distances, Directions, Compass



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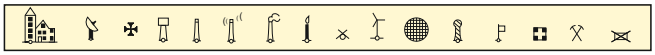
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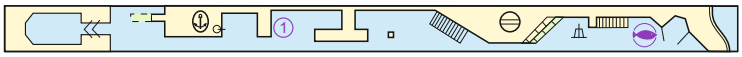
ID Cultural Features



IE Landmarks



IF Ports

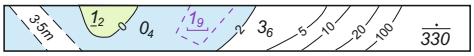


HYDROGRAPHY

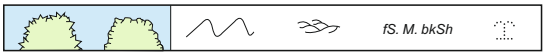
IH Tides, Currents



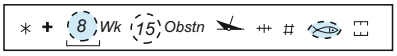
II Depths



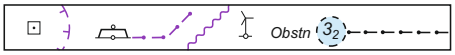
IJ Nature of the Seabed



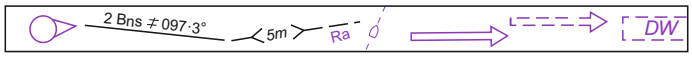
IK Rocks, Wrecks, Obstructions, Aquaculture



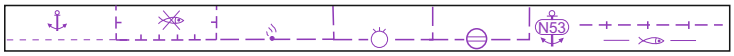
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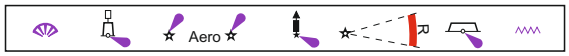


IN Areas, Limits

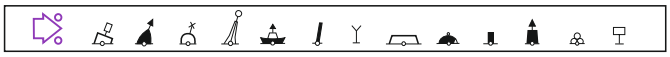


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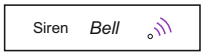
IP Lights



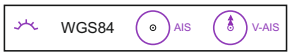
IQ Buoys, Beacons



IR Fog Signals



IS Radar, Radio, Satellite Navigation Systems



IT Services



IU Small Craft (Leisure) Facilities



V Data Quality Indicators - Supplementary National Guidance

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ALPHABETICAL INDEXES

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