Chart 5011
(INT 1 Format)
Edition 3 - May 2005
(Reprinted March 2007)

SYMBOLS and ABBREVIATIONS used on Admiralty Charts

CONTENTS

Published at Taunton, United Kingdom under the Superintendence of Rear Admiral J. A. L. Myres, FRICS, Hydrographer of the Navy, 1991.

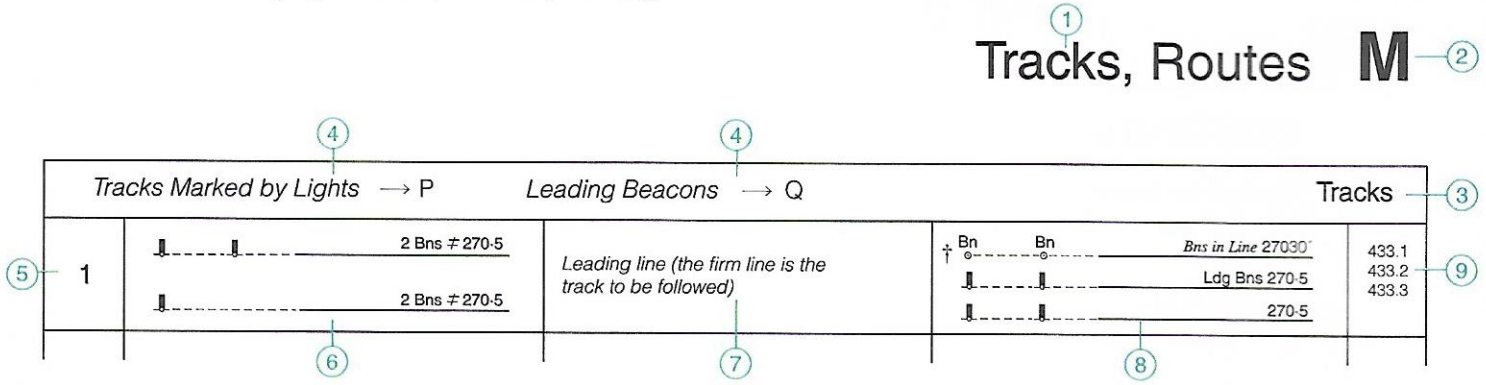
INTRODUCTION

General

Chart 5011 is primarily a key to symbols and abbreviations used on Admiralty and International Charts compiled by the UKHO (United Kingdom Hydrographic Office). Variations may occur on charts adopted into the Admiralty Series that were originally produced by another hydrographic office. Where these symbols and abbreviations are easily understood they will not be included as examples in this publication.

Schematic Layout of Chart 5011

This edition of Chart 5011 is based on the "Chart Specifications of the IHO" (International Hydrographic Organization) adopted in 1982, with later additions and corrections. The layout and numbering accords with the official IHO version of Chart INT 1 (English version produced by Germany).



(1) *Section.*

(2) *Section designation. (In some nautical publications, this reference is pre-fixed "I", for International.)*

(3) *Sub-section.*

(4) *Cross-reference to terms in other sections.*

(5) *Column 1: Numbering following the International "Chart Specifications of the IHO". A letter in this column, e.g.* a, *indicates a national symbol for which there is no International equivalent.*

(6) *Column 2: International (INT) symbols used on Admiralty charts.*

(7) *Column 3: Term and explanation in English.*

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

(9) *Column 5: Cross references to the "Chart Specifications of the IHO", M-4, Part B.*

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

Metric Charts & Fathoms Charts Metric units are introduced on Admiralty charts as they are modernised (except for charts of the waters around the United States of America, where fathoms or feet continue to be used). Fathom and/or feet charts can be distinguished from metric charts by the use of grey for land areas, a note in the title block and in some cases by a prominent legend in the margin.

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

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

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

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

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

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

Heights

Heights are given in metres or in feet above the charted height datum; details are given in the Explanatory Notes under the chart title. The position of a height is normally that of the dot alongside it, thus ·79. Parentheses are used when the figure expressing height is set apart from the object (eg when showing the height of a small islet). Clearance heights may be referred to a higher datum than other heights. In such cases this will be stated in the Explanatory Notes.

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 Admiralty charts. A cable is one-tenth of a sea mile.

Names

Names on Admiralty charts are spelt in accordance with the principles and systems approved by the Permanent Committee on Geographical Names for British Official Use.

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 Catalogues

Details of Admiralty charts are given in the "Catalogue of Admiralty Charts and Publications" (NP 131) and regional catalogues 'Caribbean' (NP105), 'Mediterranean' (NP106). 'Scandinavian' (NP107), 'North West Europe' (NP109), all published annually.

The Mariner's Handbook and other Publications

The Mariner's Handbook (NP 100) includes information 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 Admiralty charts is also given.

Information about features represented on charts can also be found in the following publications or their digital equivalents:

Admiralty Sailing Directions; Admiralty List of Lights and Fog Signals; Admiralty Tide Tables and Tidal Stream Atlases; Admiralty List of Radio Signals; Annual Notices to Mariners, IALA Maritime Buoyage System.

Copyright

A Chart Number, Title, Marginal Notes

Schematic Layout of an Admiralty INT chart (reduced in size)

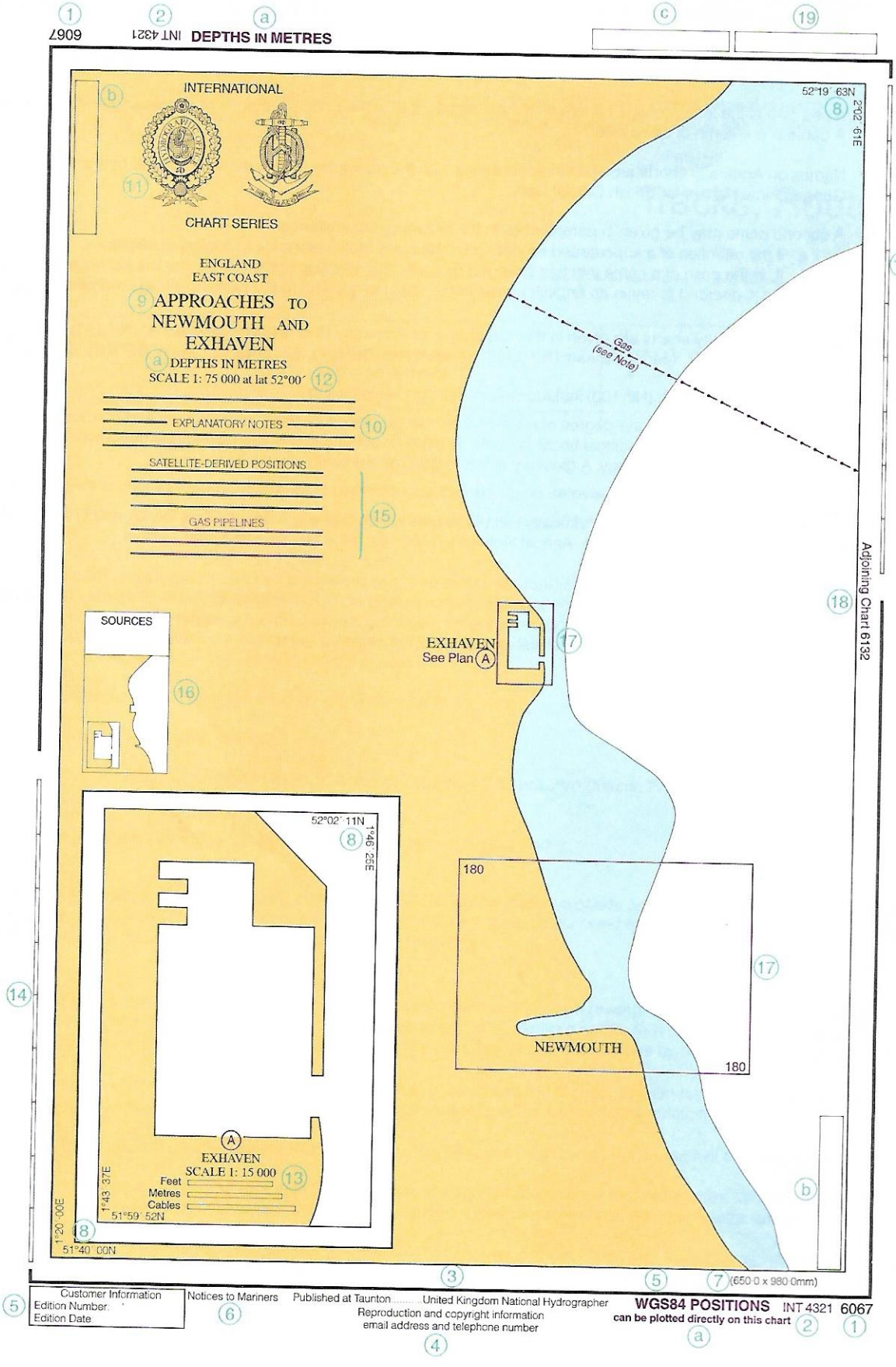


Chart Number, Title, Marginal Notes A

Magnetic Features → B | *Tidal Data* → H | *Satellite Navigation Systems* → S

(1)	*Chart number in the Admiralty series.*	251
(2)	*Chart number in the International (INT) Chart series.*	251.1
(3)	*Publication note (imprint) showing the date of publication as a New Chart.*	252.1 252.4
(4)	*Reproduction and Copyright acknowledgement note. All Admiralty charts are subject to Crown Copyright restrictions.*	253
(5)	*Customer Information, Edition Number, Edition Date, (charts revised prior to May 2000 have New Edition date at bottom right of chart)*	252.2
(6)	*Notices to Mariners: (a) the year dates and numbers of Notices to Mariners and (b) the dates (usually bracketed) of minor corrections included in reprints but not formally promulgated (abandoned as a method of correction in 1986), (charts revised prior to May 2000 have the legend 'Small corrections').*	252.3
(7)	*Dimensions of the inner neat-lines of the chart border. 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
(8)	*Corner co-ordinates.*	232
(9)	*Chart title. This should be quoted, in addition to the chart number, when ordering a chart.*	241.3
(10)	*Explanatory notes on chart content;* ***to be read before using the chart.***	242
(11)	*Seals. Where an Admiralty chart is in the International Chart series, the seal of the International Hydrographic Organization (IHO) is shown in addition to the national seal. Reproductions of international charts of other nations (facsimile) have the seals of the original producer (left), publisher (centre) and the IHO (right). Reproductions of other charts have the seals of original producer (left) and publisher (right); charts which are co-productions carry the seals of the nations involved in their production.*	241.1 241.2
(12)	*Scale of chart; on Mercator projection, at a stated latitude.*	211 241.4
(13)	*Linear scales on large-scale plan.*	221
(14)	*Linear border scales (metres). On smaller scale charts, the latitude border should be used to measure Sea miles and Cables.*	221.1
(15)	*Cautionary notes (if any) on charted detail;* ***to be read before using the chart.***	242
(16)	*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 10).* ***The Source Diagram or notes should be studied carefully before using the chart in order to assess the reliability of the sources.***	170-178 241.9
(17)	*Reference to a larger scale chart or plan (with reference letter if plan on same chart).*	254
(18)	*Reference to an adjoining chart of similar scale.*	254
(19)	*Note* 'IMPORTANT - THE USE OF ADMIRALTY CHARTS'.	243
(a)	*Reference to the units used for depths measurement or use of WGS84. The legend,* 'DEPTHS IN FATHOMS/FEET', *is shown on certain more recent fathoms charts where confusion might otherwise arise. The legend* 'WGS84 POSITIONS can be plotted directly on this chart' *is shown when applicable.*	201 241.5 255.2
(b)	*Conversion scales. To allow approximate conversions between metric and fathoms and feet units. On older charts, conversion tables are given instead.*	280
(c)	*Copyright Notice*	

B Positions, Distances, Directions, Compass

Geographical Positions					
1	Lat	*Latitude*			
2	Long	*Longitude*			
3		*International Meridian (Greenwich)*			
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					
20	△	*Triangulation point*			304.1
21	⊕	*Observation spot*	† + Obs Spot	† *+ Obsn. Spot*	304.2
22	⊙ ⊙	*Fixed point*			305.1 340.5
23	⏊	*Benchmark*	† ⏊ BM	† ⏊ B.M.	304.3
24		*Boundary mark*			306
a		*Viewpoint*	○ See View		390.2

Symbolised Positions (Examples)					
30	⠿	#	18 Wk	*Symbols in plan:* *position is centre of primary symbol*	305.1
31				*Symbols in profile:* *position is at bottom of symbol*	305.1
32	⊙ Mast	⊙ MAST	★	*Point symbols (accurate positions)*	305.1 340.5
33	○ Mast PA			*Approximate position*	† ⊙ Mast PA 305.1

Positions, Distances, Directions, Compass B

					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) or Sea Mile(s)*	n mile(s) M	130
46			*Cable*		130
47	ft		*Foot/feet*		
48			*Fathom(s)*	*fm., fms.*	
49	h		*Hour*		130
50	m #	min	*Minute(s) of time*		130
51	s	sec #	*Second(s) of time*	† sec	130
52	kn		*Knot(s)*		130
53	t		*Tonne(s) or Ton(s)*		
54	# cd		*Candela*		

				Magnetic Compass
60		*Variation*	Var	
61		*Magnetic*	Mag	
62		*Bearing*		132
63		*true*		
64		*decreasing*	decrg	
65		*increasing*	incrg	
66		*Annual change*		
67		*Deviation*		
68.1		*Note of magnetic variation, in position*		
68.2		*Note of magnetic variation, out of position*	Magnetic Variation: 4°30′W 2004 (10′E)	

B Positions, Distances, Directions, Compass

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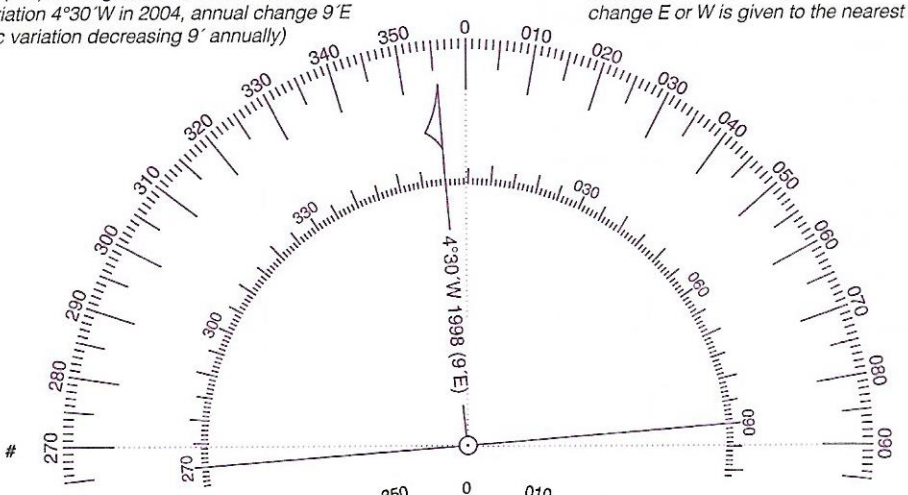
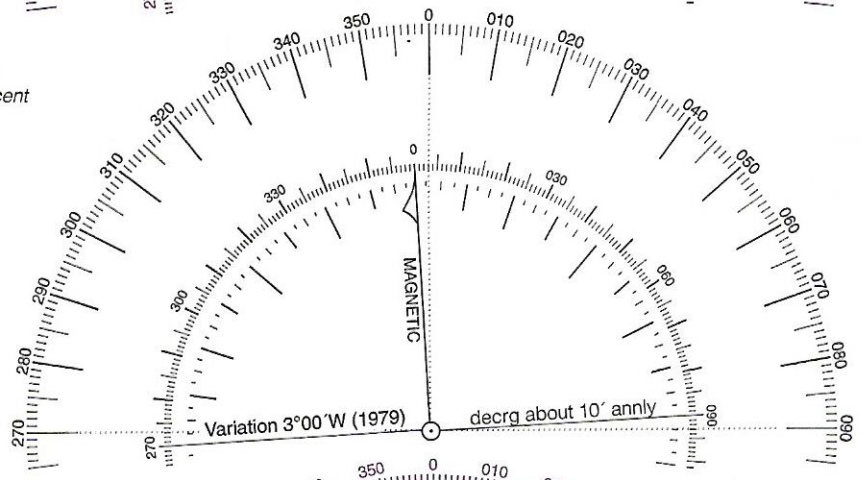
Compass Roses, True and Magnetic.
4°30′W 2004 (9′E) on magnetic north arrow means Magnetic Variation 4°30′W in 2004, annual change 9′E (i.e. magnetic variation decreasing 9′ annually)

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.

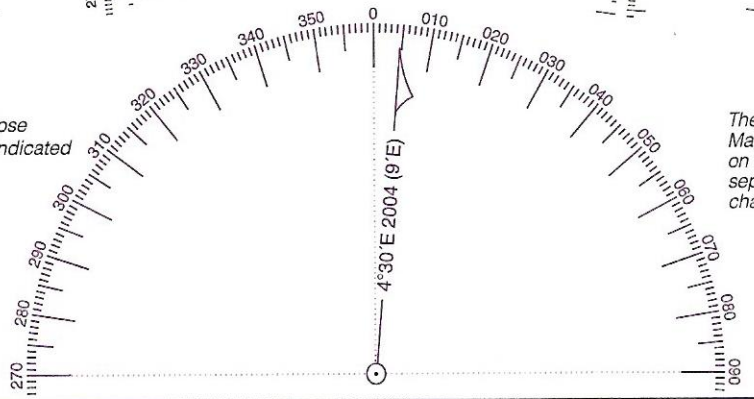
260-262.2 272.3



These styles are obsolescent



True Compass Rose Magnetic North indicated by arrow



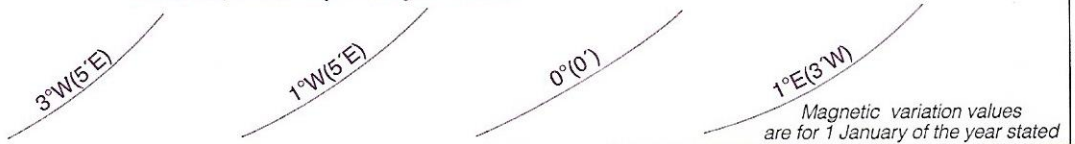
The arrow indicating Magnetic North is omitted on charts comprising separate plans and on charts showing isogonals.

71

Isogonals (lines of equal magnetic variation)

MAGNETIC VARIATION LINES ARE FOR 2000

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.

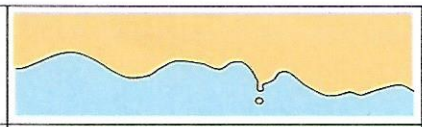
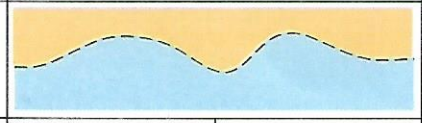
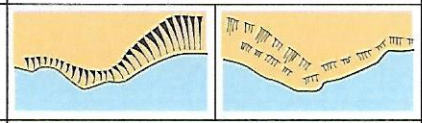
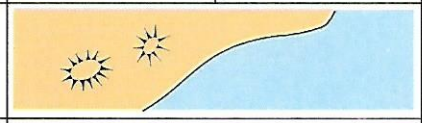
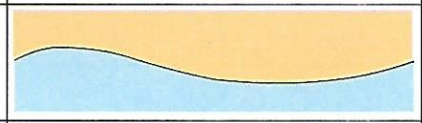
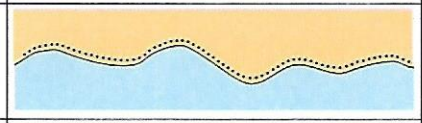
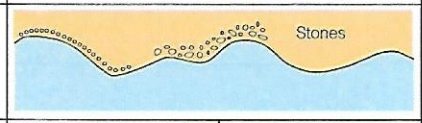
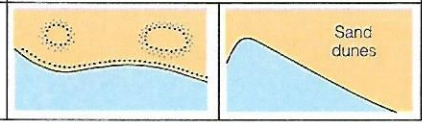


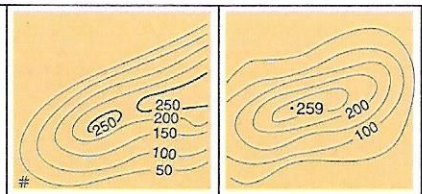
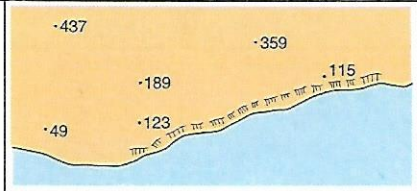
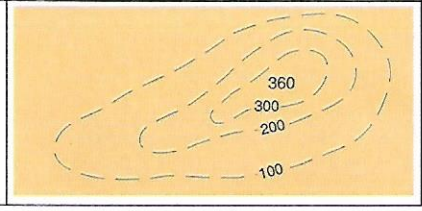
Magnetic variation values are for 1 January of the year stated

272.1

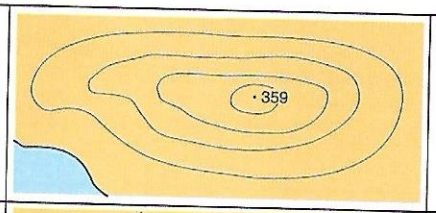
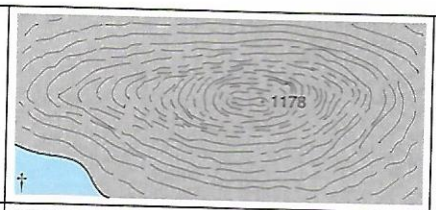
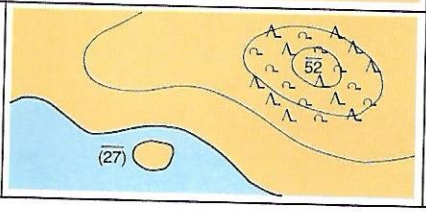
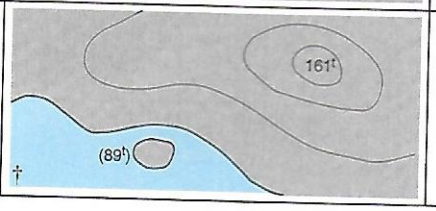
82.1	±15°	*Local Magnetic Anomaly Within the enclosed area the magnetic variation may deviate from the normal by the value shown.*		274
82.2	Local Magnetic Anomaly (see Note)	*Where the area affected cannot be easily defined, a legend only is shown at the position.*		

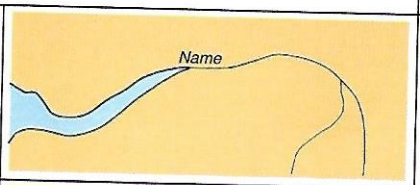
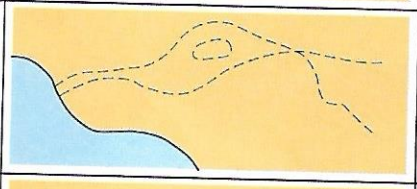
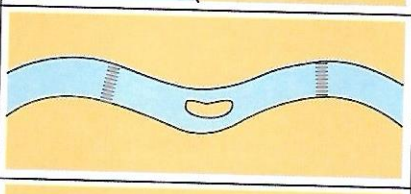
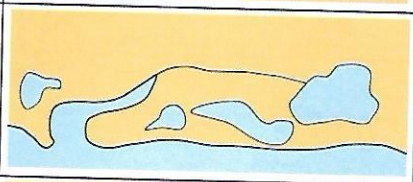
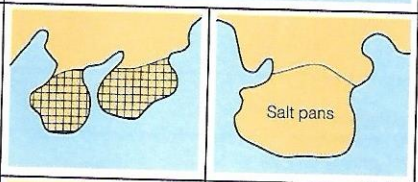
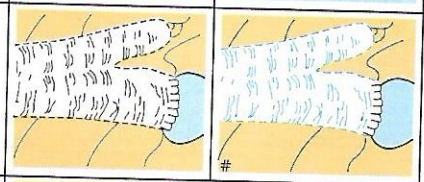
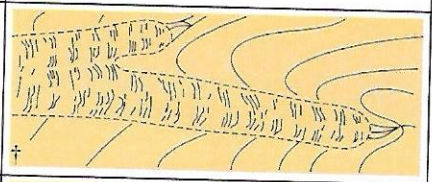
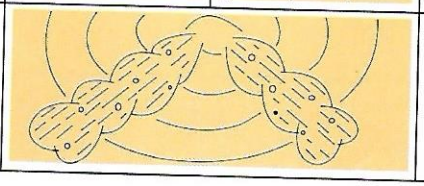
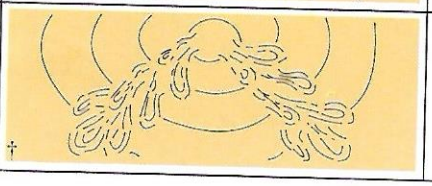
Natural Features C

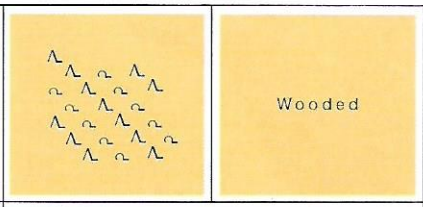
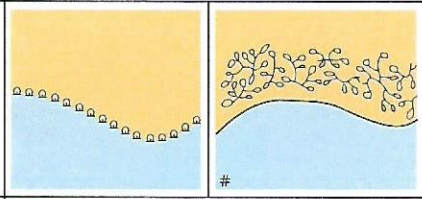
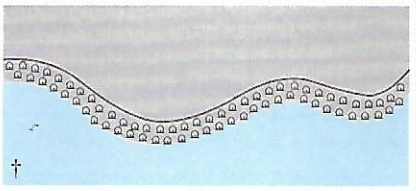
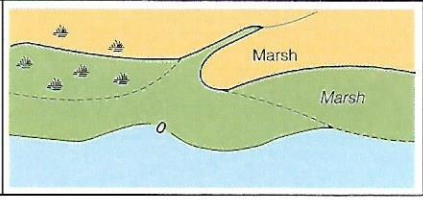
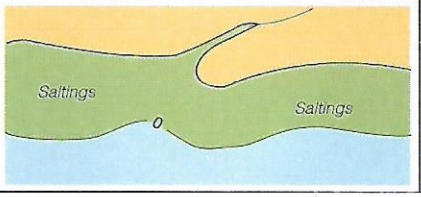
Foreshore → I, J			Coastline
1		*Coastline, surveyed*	310.1 310.2
2		*Coastline, unsurveyed*	311
3		*Steep coast, Cliffs*	312.1
4		*Coastal hillocks*	312.1
5		*Flat coast*	312.2
6		*Sandy shore*	312.2
7		*Stony shore, Shingly shore*	312.2
8		*Sandhills, Dunes*	312.3

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

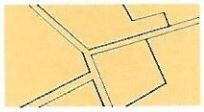
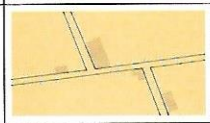
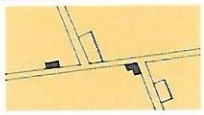
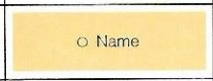
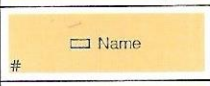
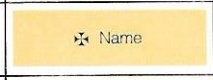
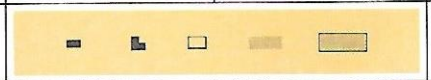
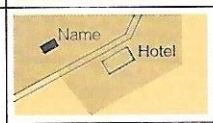
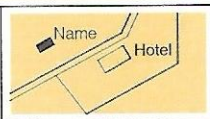
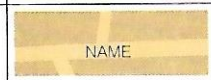
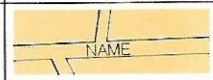
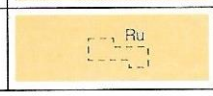
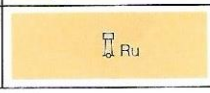
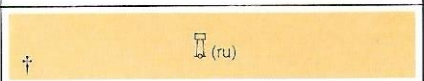
C Natural Features

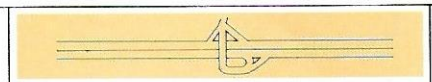
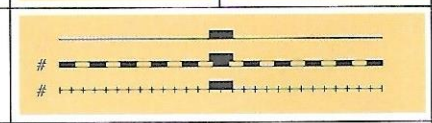
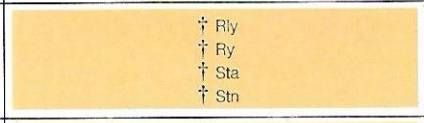
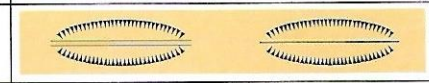
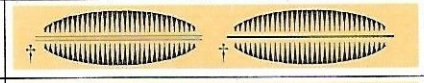
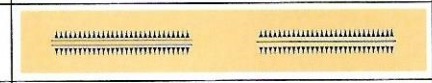
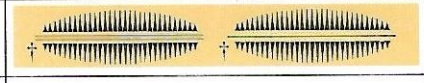
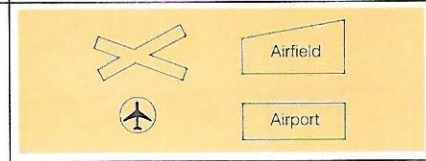
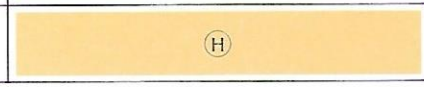
13		*Form lines with spot height*		351.2 351.3 351.7 352.2
14		*Approximate height of top of trees (above height datum)*		352.4

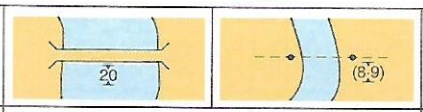
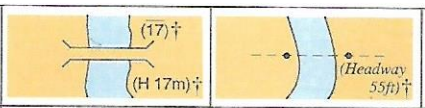
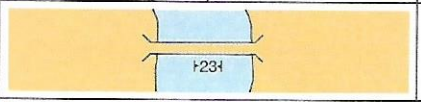
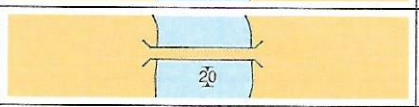
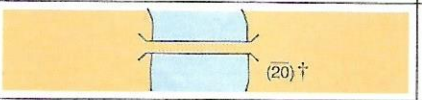
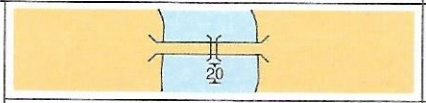
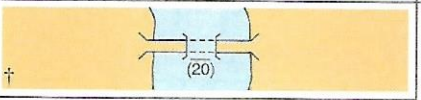
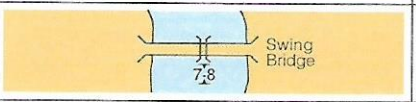
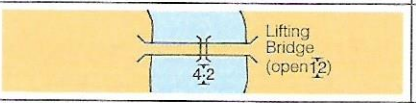
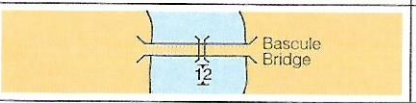
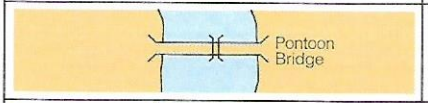
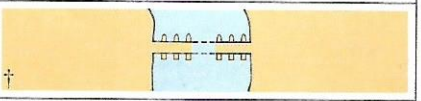
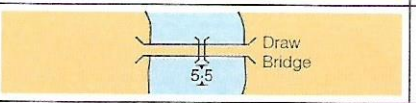
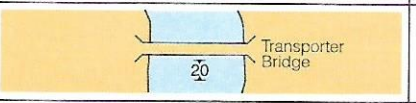
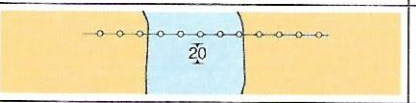
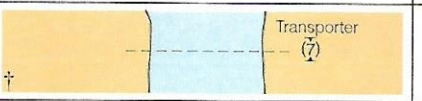
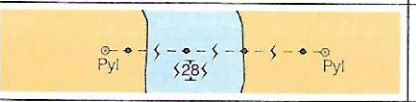
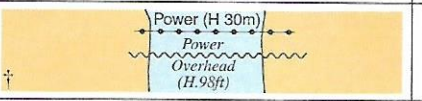
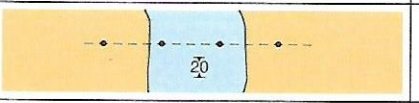
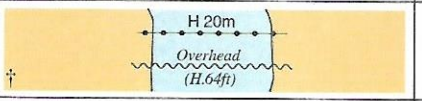
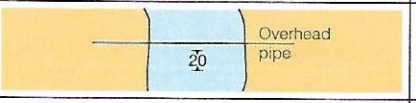
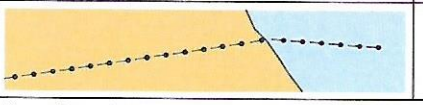
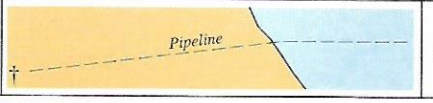
Water Features, Lava				
20		*River, Stream*		353.1 353.2 353.4
21		*Intermittent river*		353.3
22		*Rapids, Waterfalls*		353.5
23		*Lakes*		353.6
24		*Salt pans*		353.7
25		*Glacier*		353.8
26		*Lava flow*		355

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

D Cultural Features

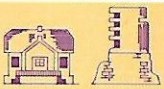
Settlements, Buildings			*Height of objects* → E	*Landmarks* → E	
1			*Urban area*		370.3 370.4
2			*Settlement with scattered buildings*		370.5
3			*Settlement (on medium and small-scale charts)*		370.7
4			*Inland village*		370.6
5			*Building*		370.5
6			*Important building in built-up area*		370.3
7			*Street name, Road name*		371
8			*Ruin, Ruined landmark*		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*		328.4 362.1 362.2
14		*Cutting*		363.2
15		*Embankment*		364.1
16		*Tunnel*		363.1
17		*Airport, Airfield* *Large-scale charts* *Small-scale charts*		366.1 366.2
a		*Tramway*		
b		*Helicopter landing site, Heliport*		

Plane of Reference for Heights → H			Other Cultural Features	
20		*Vertical clearance above Height Datum (in parentheses when displaced for clarity)*		380.1 380.2
21		*Horizontal clearance*		380.3
22		*Fixed bridge with vertical clearance*		381.1
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 structure*		381.2
25		*Overhead transporter, Aerial cableway with vertical clearance*		382.3
26		*Power transmission line with pylons and safe vertical clearance (see **Note** below D29)*		382.1
27		*Overhead cable, Telephone line, Telegraph line with vertical clearance*		382 382.2
28		*Overhead pipe with vertical clearance*		383
29		*Pipeline on land*		377

Note: The safe vertical clearance above Height Datum, as defined by the responsible authority, is given in magenta where known (see H20); otherwise the physical vertical clearance is shown in black as in D20.

E Landmarks

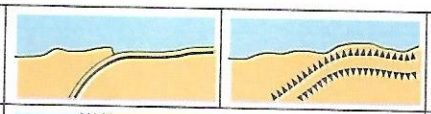
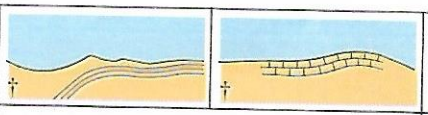
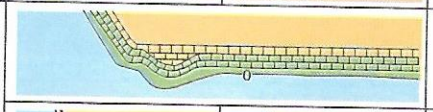
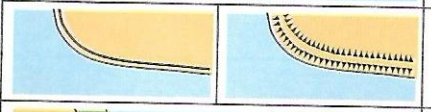
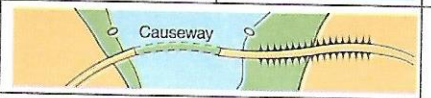
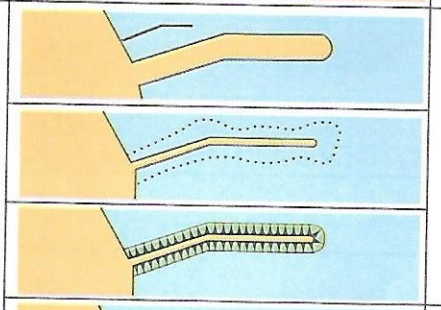
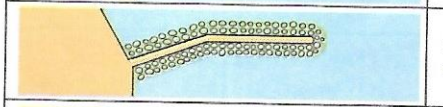
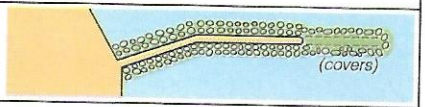
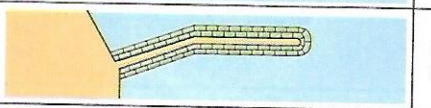
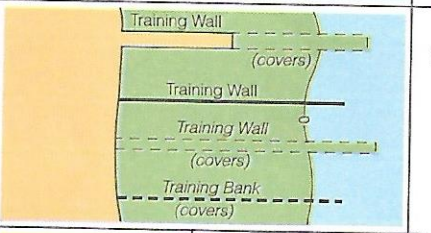
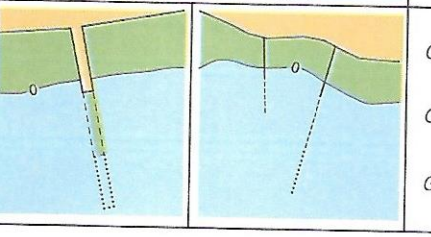
General		*Plane of Reference for Heights* → H	*Lighthouses* → P	*Beacons* → Q	
1	Factory ⊙ Hotel	*Examples of landmarks*			340.1 340.2 340.5
2	FACTORY ⊙ HOTEL WATER TOWER	*Examples of conspicuous landmarks. A legend in capital letters indicates that a feature is conspicuous*	†	conspic	340.1 340.2 340.3 340.5
3.1		*Pictorial symbols (in true position)*			340.7 373.1 390 456.5 457.3
3.2		*Sketches, Views (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

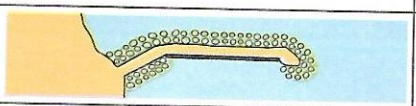
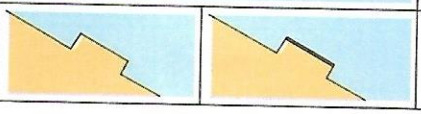
Landmarks					
10.1	✠	Ch	*Church, Cathedral*	† Cath	373.1 373.2
10.2	Tr ✠ Tr		*Church tower*		373.2
10.3	Sp ✠ Sp		*Church spire*		373.2
10.4	Cup ✠ Cup		*Church cupola*		373.2
11			*Chapel*	✠ Ch	
12			*Cross, Calvary*	# ‡	
13	⌧		*Temple*	† ⌯	373.3
14	⌧		*Pagoda*	Pag	373.3
15	⌧		*Shinto shrine, Josshouse*		373.3
16	⌧	# 卐	*Buddhist temple*	† 卐	373.3
17	☾		*Mosque, Minaret*	† ⛪	373.4
18	# ⊙ Marabout		*Marabout*	⊙ Tomb	† ☾	373.5
19			*Cemetery (all religions)*	†  Cemy	373.6

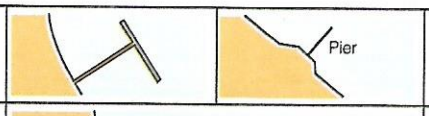
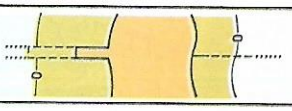
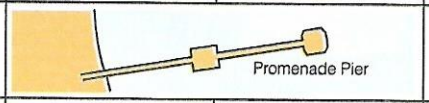
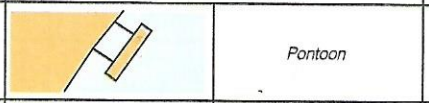
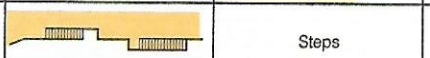
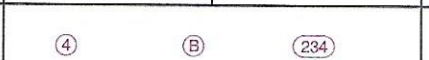
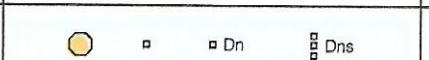
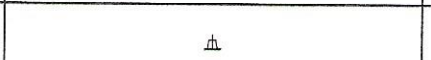
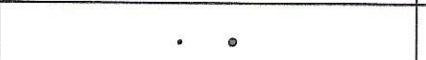
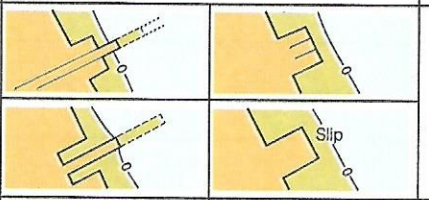
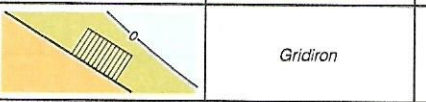
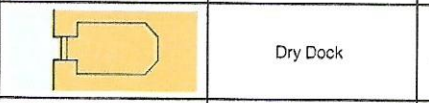
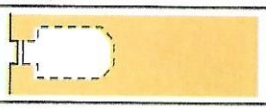
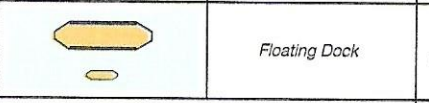
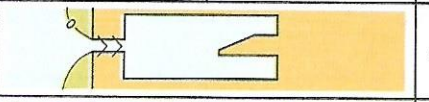
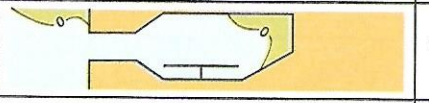
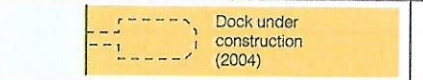
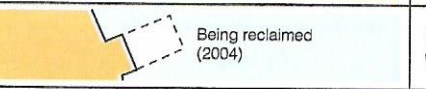
Landmarks E

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)*	† 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		*Wind farm*		374.6
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 mast*		487.3
30.2	⊙ Radar Tr	*Radar tower*		
30.3	⊙ Radar Sc	*Radar scanner*		
30.4	⊙ Radome	*Radar dome*		
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	379.2
35.1		*Quarry (on large-scale charts)*	†	367.1
35.2		*Quarry (on smaller scale charts)*		367.2
36		*Mine*		374.6

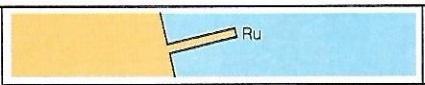
F Ports

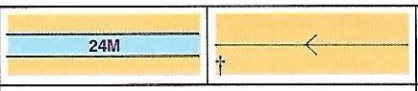
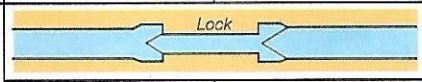
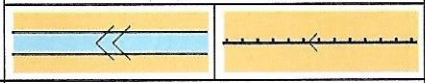
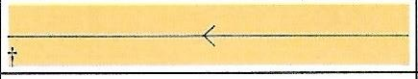
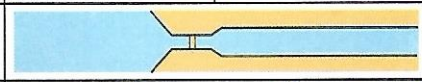
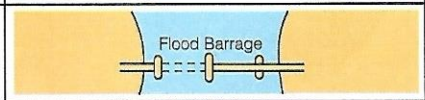
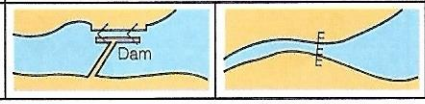
Artificial Features				
1		*Dyke, Levee, Berm*		313.1
2.1		*Seawall (on large-scale charts)*		313.2
2.2		*Seawall (on smaller scale charts)*		
3		*Causeway*		313.3
4.1		*Breakwater (in general)*		322.1
4.2		*Breakwater (loose boulders, tetrapods, etc)*		
4.3		*Breakwater (slope of concrete or masonry)*		
5		*Training wall*		322.2
6.1 6.2 6.3		*Groyne (always dry)* *Groyne (intertidal)* *Groyne (always underwater)*		313.4 324

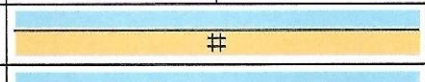
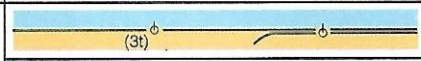
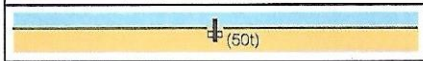
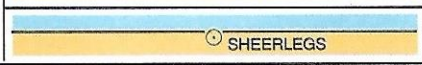
Harbour Installations *Depths → I* *Anchorages, Limits → N* *Beacons and other fixed marks → Q* *Marina → U*				
10		*Fishing harbour*		320.1
12		*Mole (with berthing facility)*		321.3
13		*Quay, Wharf*	Whf	321.1

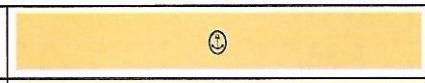
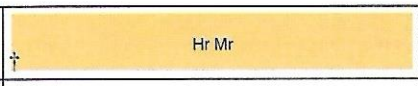
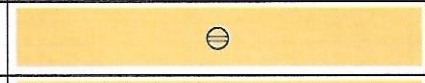
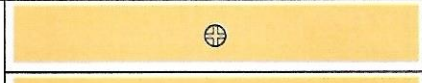
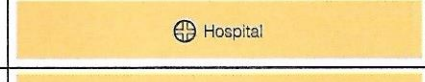
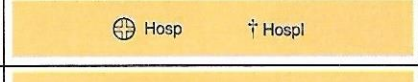
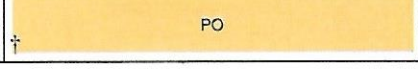
14		*Pier, Jetty*		321.2 321.4
15		*Promenade pier*		321.2
16		*Pontoon*		326.9
17		*Landing for boats*	†Ldg	324.2
18		*Steps, Landing stairs*		
19		*Designation of berth*	†④	323.1
20		*Dolphin*		327.1
21		*Deviation dolphin*		327.2
22		*Minor post or pile*		327.3
23		*Slipway, Patent slip, Ramp*		324.1
24		*Gridiron, Scrubbing 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
29.1		*Floating oil barrier*		
29.2		*Oil retention barrier (high pressure pipe)*		
30		*Works on land, with year date*		329.1
31		*Works at sea, Area under reclamation, with year date*		329.2
32	Under construction (2004) Works in progress (2004)	*Works under construction, with year date*	const †*constrn.* †constn	329 329.4

F Ports

33.1		*Ruin*		378.1
33.2		*Ruined pier, partly submerged at high water*		
34		*Hulk*		
a		*Bollard*	∘ Bol	

Rivers, Canals, Barrages	*Clearances* → D	*Signal Stations* → T	*Cultural Features* → D	
40		*Canal, with distance mark. Distance shown in black indicates a physical structure e.g. a notice board*		361.3 361.6 307
41.1		*Lock (on large-scale charts)*		326.6 361.6
41.2		*Lock (on smaller scale charts)*		
42		*Caisson*		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 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)*		
53.3		*Sheerlegs (conspicuous)*		

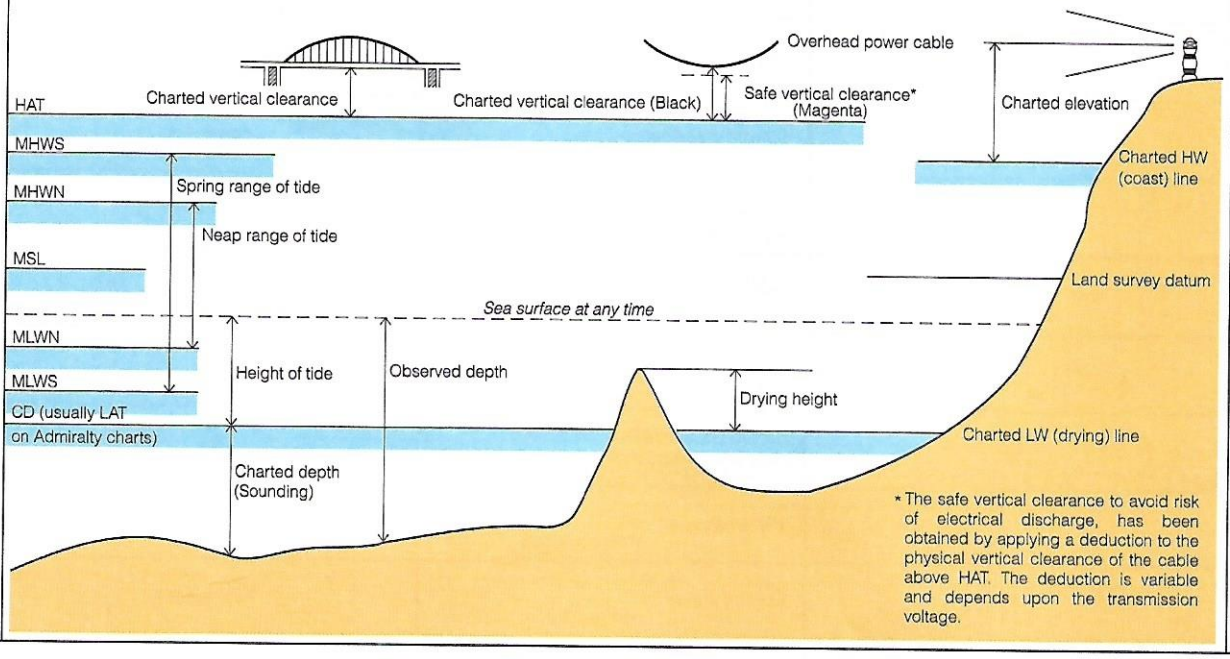
Public Buildings				
60		*Harbour Master's office*		325.1
61		*Custom office*		325.2
62.1		*Health office, Quarantine building*		325.3
62.2		*Hospital*		
63		*Post office*		372.1

Vertical clearance ⟶ D *Tide Gauge* ⟶ T

Tidal Levels and Charted Data

20

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



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	

Offshore position for which tidal levels are tabulated

a

31

Tidal stream table

407.2
407.3

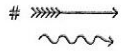
Tidal streams referred to....

Hours	◇ Geographical Position		
Before High Water 6			
Before High Water 5			
Before High Water 4			
Before High Water 3			
Before High Water 2			
Before High Water 1			
High Water			
After High Water 1			
After High Water 2			
After High Water 3			
After High Water 4			
After High Water 5			
After High Water 6			
	Directions of streams (degrees)	Rates at spring tides (knots)	Rates at neap tides (knots)

	Ⓐ	Ⓑ	Ⓒ	Ⓓ
-6				
-5				
-4				
-3				
-2				
-1				
0				
+1				
+2				
+3				
+4				
+5				
+6				

Ⓔ
No
Maximum Rates
For predictions, use Admiralty Tide Tables

H Tides, Currents

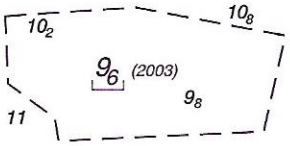
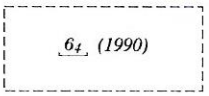
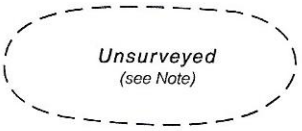
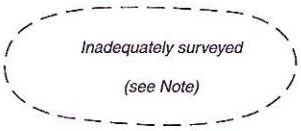
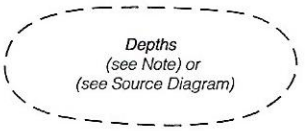
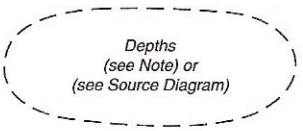
Tidal Streams and Currents			Breakers →K Tide Gauge →T	
40		*Flood tide stream (with mean spring rate)*	† *The number of black dots on the tidal stream arrows indicates the number of hours after High or Low Water at which the streams are running*	407.4 408.2
41		*Ebb tide stream (with mean spring rate)*	†	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
e		*Wave recorder*	⊙ *Wave recorder*	
f		*Current meter*	⊙ *Current meter*	

			General	
1	ED	*Existence doubtful*	† (ED)	417 424.3
2	40 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)*		M-4 Part C 404.3
a		*Unexamined*	unexam †unexamd	

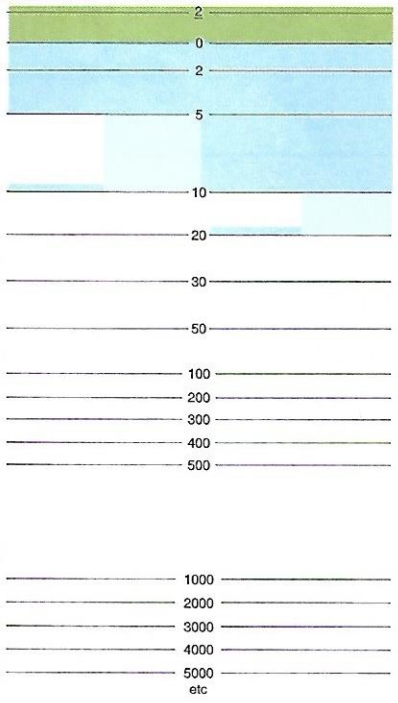
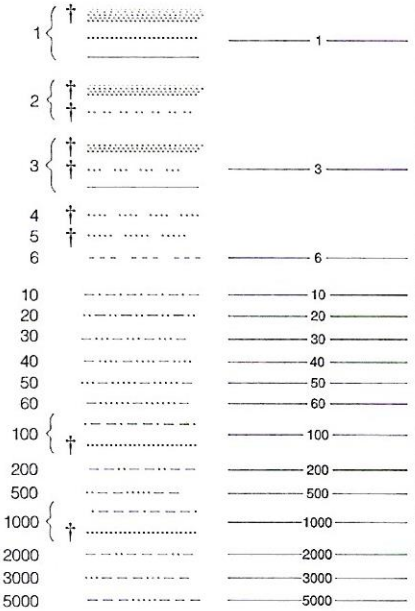
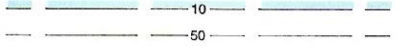
	Plane of Reference for Depths ⟶ H	*Plane of Reference for Heights* ⟶ H	Soundings and Drying Heights	
10	12 9_2 # 9,7	*Sounding in true position*		403.1 410/412 412.1
11	+ (12) 3349	*Sounding out of position*	• (8_3) (10_4) # $+1_8$ 8_7 7_1	412 412.1 412.2
12	(14_7)	*Least depth in narrow channel*		412 412.1 412.2
13	$\dot{3}\overline{30}$	*No bottom found at depth shown*		412.3
14	12 9_1	*Soundings taken from old or smaller scale sources shown in upright, hairline 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
b		*Half-tide channel (in intertidal area)*	2_3 1_3 0_4 1_7 0_8	

	Plane of Reference for Depths ⟶ H		Depths in Fairways and Areas	
20		*Limit of dredged channel or area (major and minor)*	#	414.3
21	7·0m Dredged to 3·5m	*Dredged channel or area with depth of dredging in metres and decimetres*	*Depths may be shown as 3,5 or 3_5 on some adopted charts*	414
22	7·0m (1991) Dredged to 3·5m (1991)	*Dredged channel or area with depth of dredging and year of the latest control survey*		414.1
23	7·0m Maintained depth 3·5m	*Dredged channel or area with depth regularly maintained*		414.2

I Depths

24		*Depth, at chart datum, to which an area has been swept by wire drag. 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

Depth Contours

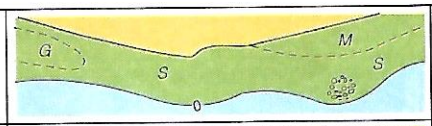
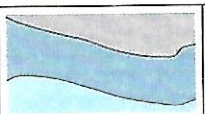
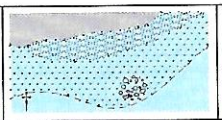
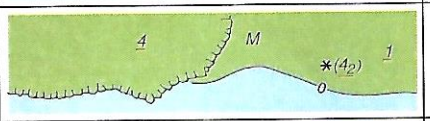
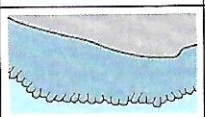
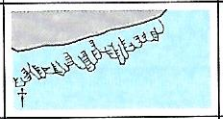
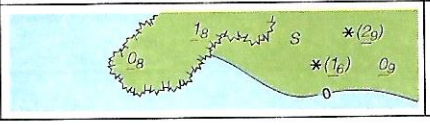
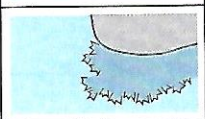
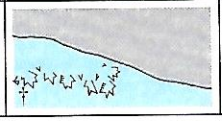
30		*Drying contour* *Low Water (LW) Line, Chart Datum (CD)* *Blue tint, in one or more shades, and tint ribbons, are shown to different limits according to the scale and purpose of the chart and the nature of the bathymetry.* *On some charts, the standard set of contours is augmented by additional contours 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 some charts, contours and labels are printed in blue.*	*On charts showing depths in fathoms/feet, the following contours are used:*  *On some recently-corrected charts, contours may be shown by continuous lines.*	404.2 410 411
31		*Approximate depth contours*		411.2 417.5

Nature of the Seabed J

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	R	Rock, Rocky	† r	
10	Co	Coral	† crl	
11	Sh	Shells	† sh	
12.1	S/M	Two layers e.g. Sand over Mud		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		Kelp		428.2
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		Boulders	# Bo	
f		Chalk	† Ck chk	
g		Quartz	† Qz qrtz	
h		Madrepore	† Md mad	
i		Basalt	† Ba	
j		Lava	† Lv	
k		Pumice	† Pm pum	
l		Tufa	† T	
m		Scoriæ	† Sc	
n		Cinders	† Cn cin	

J Nature of the Seabed

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

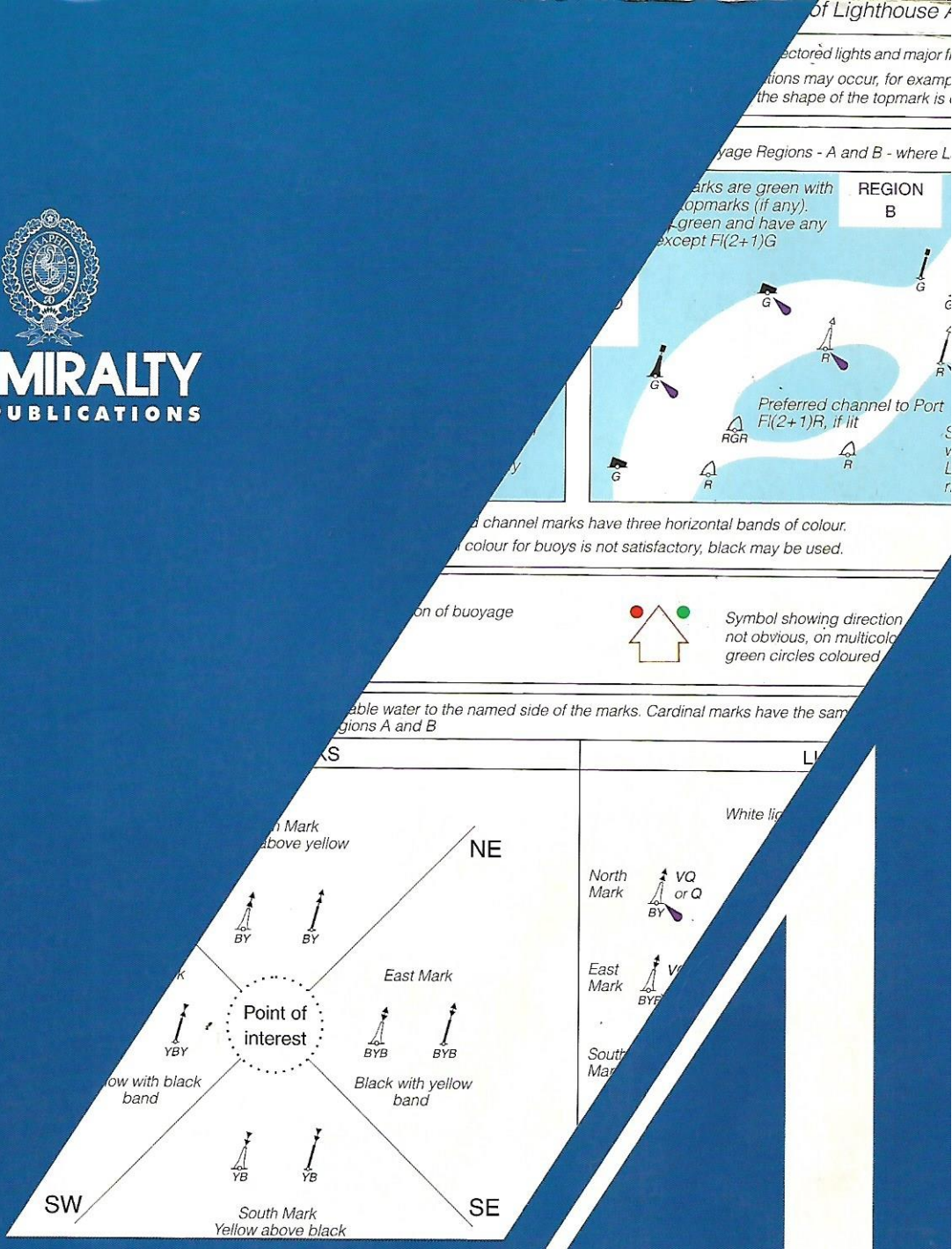
Intertidal Areas					
20		*Area of sand and mud with patches of stones or gravel*			426.1
21		*Rocky area*			426.2
22		*Coral reef*			426.3

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

Nature of the Seabed J

aa		*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	

ADMIRALTY
CHARTS AND PUBLICATIONS

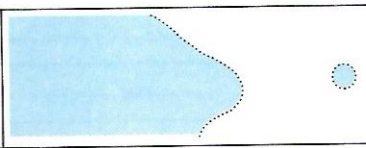


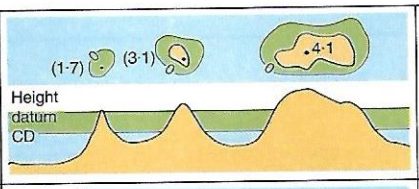
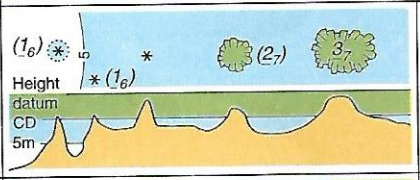
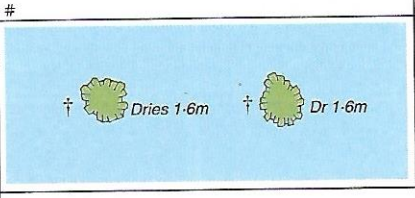
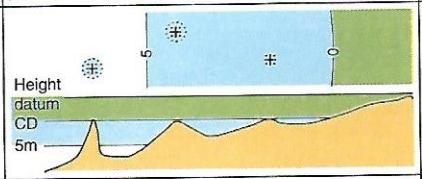
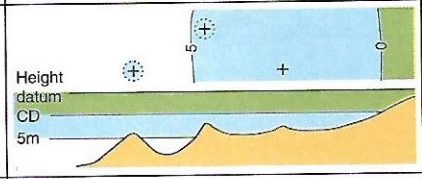
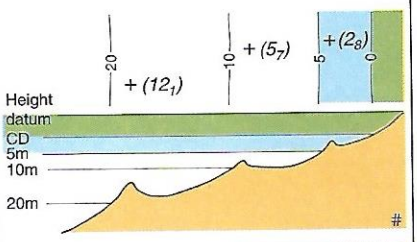
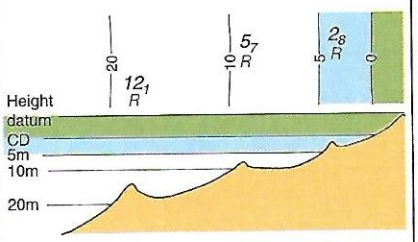
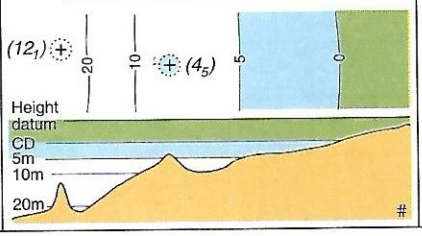
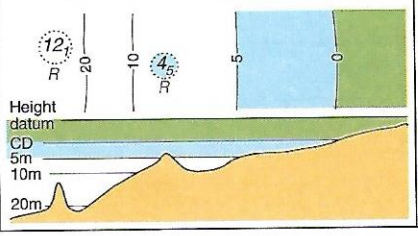
SYMBOLS AND ABBREVIATIONS USED ON ADMIRALTY CHARTS

Part-2
Pages 26 to 54

CHART 5011
(INT 1)
Edition 3

K Rocks, Wrecks, Obstructions

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 cleared by wire drag sweep. The symbol may be used with other symbols, e.g. wrecks, obstructions, wells*		415 422.3 422.9
a		*Safe clearance depth. Obstruction over which the exact depth is unknown, but which is considered to have a safe clearance at the depth shown. The symbol may be used with other symbols, e.g. wrecks, wells, turbines*		422.7
b		*Dries*	†Dr †dr	
c		*Covers*	†cov	
d		*Uncovers*	†uncov	

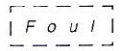
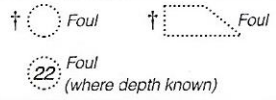
Rocks		*Plane of Reference for Heights* → H	*Plane of Reference for Depths* → H	
10		*Rock which does not cover, height above height datum*	(1,7) (3,1) (4,1) #	421.1
11		*Rock which covers and uncovers, height above Chart Datum, where known*		421.2
12		*Rock awash at the level of Chart Datum*		421.3
13		*Underwater rock over which the depth is unknown, but which is considered dangerous to surface navigation*		421.4
14		*Dangerous underwater rock of known depth:*		421.4
14.1		*inside the corresponding depth area*		
14.2		*outside the corresponding depth area*		

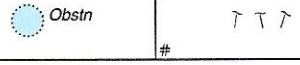
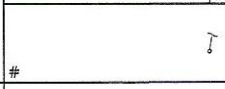
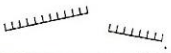
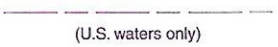
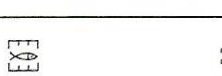
Rocks, Wrecks, Obstructions **K**

15	30 R	*Underwater rock not dangerous to surface navigation*		421.4
16	Co Co 5_8	*Coral reef which is always covered*		421.5
17	5_8 19 18 Br	*Breakers*		423.2
e		*Discoloured water*	*Discol* † *Discold*	424.6

	Hulk → F	*Plane of Reference for Depths* → H	*Historic Wreck* → N	**Wrecks**
20	Mast (1·2) Wk	*On large-scale charts, wreck which does not cover, height above height datum*		422.1
21	Mast (1_2) Wk	*On large-scale charts, wreck which covers and uncovers, height above Chart Datum*	† Wk † Wk	
22	5_2 Wk	*On large-scale charts, submerged wreck, depth known*	† 5_2 Wk	422.1
23	Wk	*On large-scale charts, submerged wreck, depth unknown*	† Wk	422.1
24		*Wreck showing any part of hull or superstructure at the level of Chart Datum*		422.2
25	Masts	*Wreck of which the mast(s) only are visible at Chart Datum*	Mast (1·2) Wk Funnel Mast (1_2)	422.2
26	4_6 Wk 25 Wk	*Wreck over which the depth has been obtained by sounding but not by wire sweep*		422.4
27	4_6 Wk 25 Wk	*Wreck which has been swept by wire to the depth shown*		422.3
28		*Wreck, depth unknown, which is considered dangerous to surface navigation*		422.5
29		*Wreck, in over 200m or depth unknown, which is not considered dangerous to surface navigation*	*For information about depth criteria, see NP100, The Mariner's Handbook*	422.6
f		*On small-scale charts, submerged wreck, depth unknown*	Wk	

K Rocks, Wrecks, Obstructions

Plane of Reference for Depths ⟶ H	*Historic Wreck* ⟶ N		Wrecks
30		*Wreck over which the exact depth is unknown, but which is considered to have a safe clearance at the depth shown*		422.7
31		*Remains of a wreck, or other foul area, no longer dangerous to surface navigation, but to be avoided by vessels anchoring, trawling, etc*		422.8
g		*Navigation light on stranded wreck*		

Obstructions	*Plane of Reference for Depths* ⟶ H	*Kelp, Seaweed* ⟶ J	*Underwater Installations* ⟶ L	
40		*Obstruction or danger to navigation the exact nature of which is not specified or has not been determined, depth unknown*		422.9
41		*Obstruction, depth known*		422.9
42		*Obstruction, which has been swept by wire to the depth shown*		422.9
43.1		*Stumps of posts or piles, wholly submerged*		327.5
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*	 (U.S. waters only)	447.3
46.1		*Fish haven*		447.5
46.2		*Fish haven, depth known*		
47		*Shellfish beds, with no obstruction to navigation*		447.4
48.1		*Marine farm (on large-scale charts)*		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	439.2 445.2
4		Limit of development area	
5.1	Fl.Y 18	Wind turbine, lit wind turbine and wind turbine with vertical clearance	445.8
5.2		Wind farm, wind farm with restricted area	445.9
a		Limit of oilfield or gasfield	

Mooring Buoys → Q			Platforms and Moorings
10		Production platform, Platform, Oil derrick	445.2
11	Fla	Flare stack (at sea)	445.6
12	SPM	Fixed Single Point Mooring, including Single Anchor Leg Mooring (SALM), Articulated Loading Column (ALC)	445.2 445.4
13		Observation / research platform (with name)	Name
14		Disused platform	(disused)
15		Artificial Island	Name
16		Floating Single Point Mooring, including Catenary Anchor Leg Mooring (CALM), Single Buoy Mooring (SBM)	445.4
17		Moored storage tanker including FSU and FPSO	
b		Anchoring system for floating production platform	

Plane of Reference for Depths → H	Obstructions → K		Underwater Installations
20	15 Prod Well Prod Well	Production well, with depth where known	Well 445.5
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
21.3	Well (5.7) #	Suspended well with height of wellhead above the seabed	
22	#	Site of cleared platform	422.8

L Offshore Installations

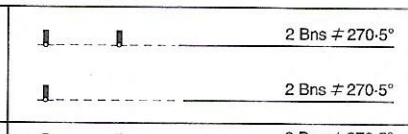
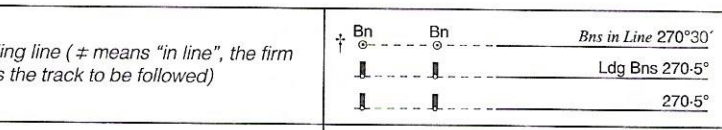
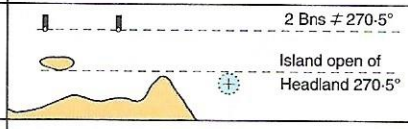
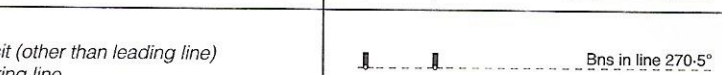
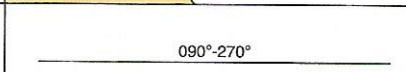
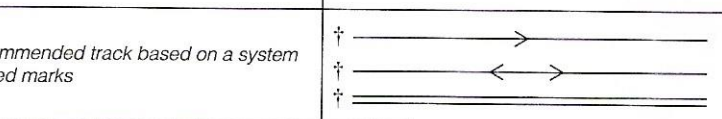
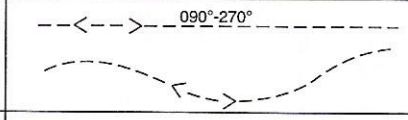
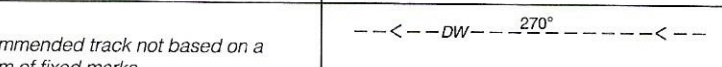
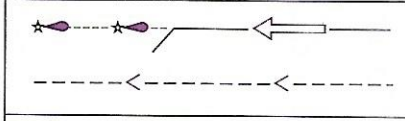
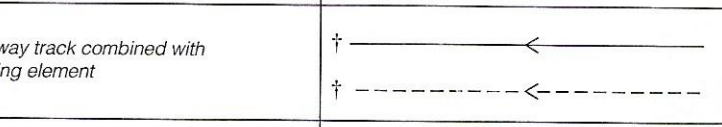
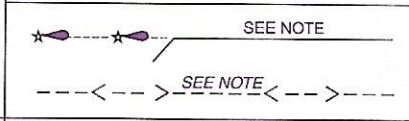
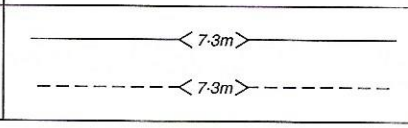
23	Pipe	*Above-water wellhead (lit and unlit). The drying height or height above height datum is charted if known*		445.7
24	Turbine	*Underwater turbine*		445.10
c		*Single Well Oil Production System. The depth shown is the least depth over the wellhead. For substantial periods of time a loading tanker is positioned over the wellhead*	93 SWOPS	
d		*Underwater installations; template, manifold*	Template Manifold	

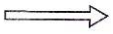
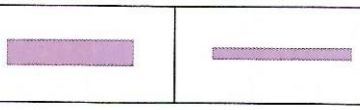
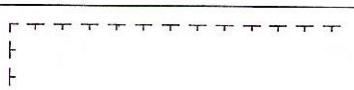
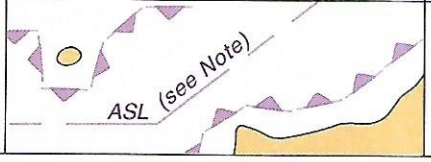
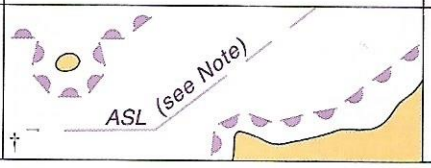
Submarine Cables

30.1		*Submarine cable*		443.1
30.2		*Submarine cable area*	Cable Area	443.2 439.3
31.1		*Submarine power cable*	Power Power	443.3
31.2		*Submarine power cable area*	Power Cable Area	443.2 439.3
32		*Disused submarine cable*		443.7

Submarine Pipelines

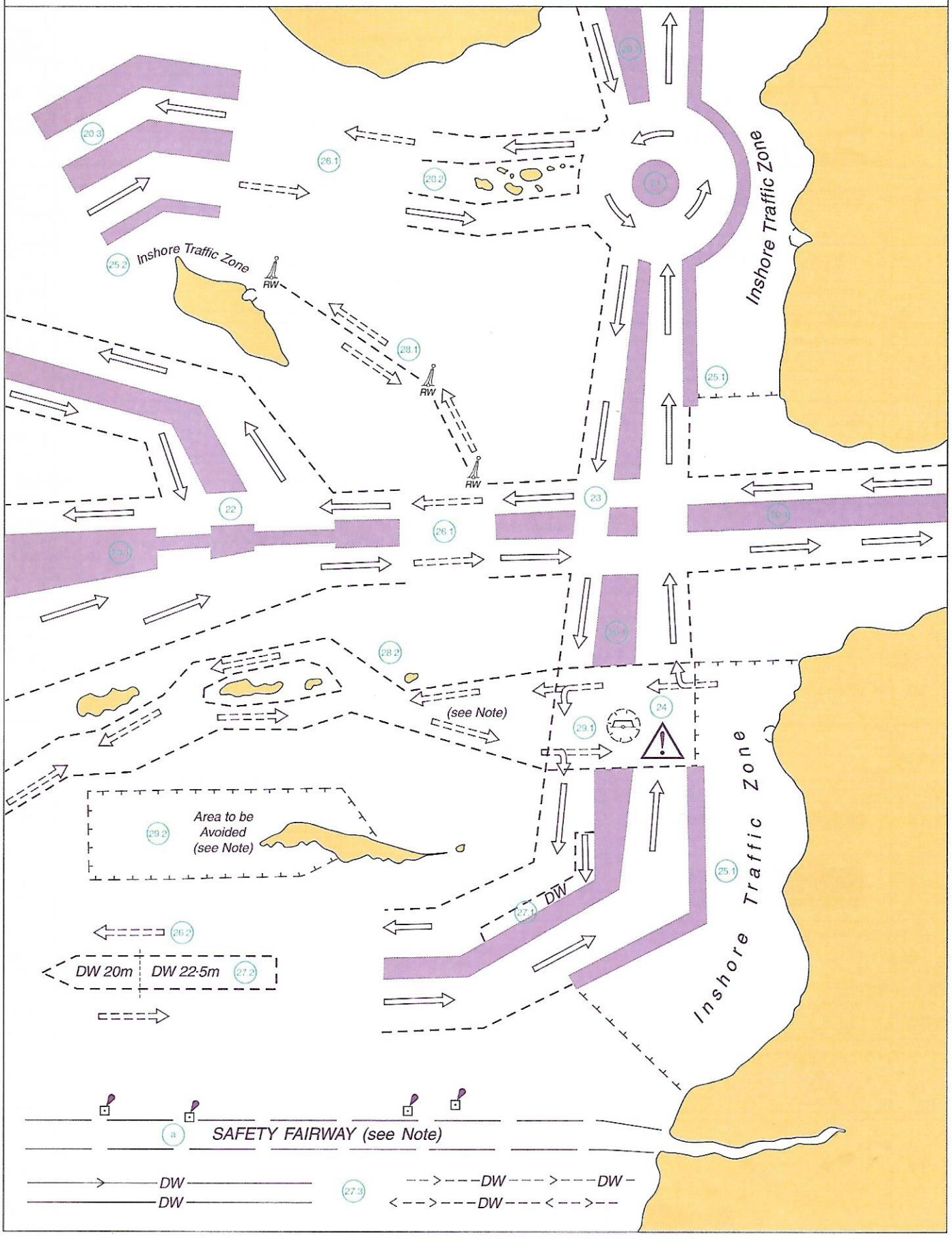
40.1	Oil Gas Chem Water	*Supply pipeline: unspecified, oil, gas, chemicals, water*	Pipeline	444 444.1
40.2	Oil Gas Chem Water	*Supply pipeline area: unspecified, oil, gas, chemicals, water*	Pipeline Area Pipeline Area	444.2 439.3
41.1	Water Sewer Outfall Intake	*Discharge pipe: unspecified, water, sewer, outfall, intake*	Sewer Outfall	444 444.4
41.2	Water Sewer Outfall Intake	*Discharge pipe area: unspecified, water, sewer, outfall, intake*	Pipeline Area Pipeline Area	444.2 439.3
42	Buried 1·6m	*Buried pipeline / pipe (with nominal depth to which buried)*		444.5
43	3₂ Obstn	*Diffuser*	3₂ Diffuser	
44		*Disused pipeline / pipe*		444.7

Tracks Marked by Lights → P	*Leading Beacons* → Q	Tracks	
1		*Leading line (≠ means "in line", the firm 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 combined with routeing element*		432.3
5.2		*Two-way track combined with routeing element (including a regulation described in a note)*		
6		*Recommended track with maximum authorised draught*		432.4 434.3 434.4

		Routeing Measures	
		Basic Symbols	
10		*Established 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 area (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

M Tracks, Routes

Examples of Routeing Measures



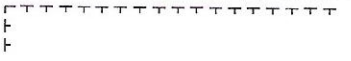
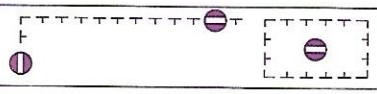
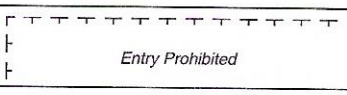
Examples of Routeing Measures (see diagram on page 36)		
20.1	*Traffic separation scheme (TSS), traffic separated by separation zone*	435.1
20.2	*Traffic separation scheme, traffic separated by natural obstructions*	435.1
20.3	*Traffic separation scheme, with outer separation zone, separating traffic 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 navigational aid*	435.7
29.2	*Area to be avoided, because of danger of stranding*	435.7
a	*Safety fairway*	432.2

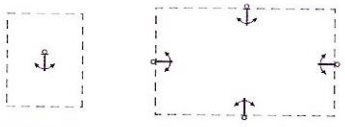
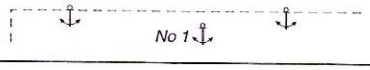
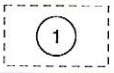
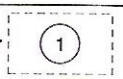
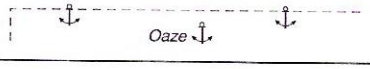
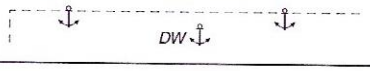
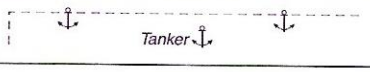
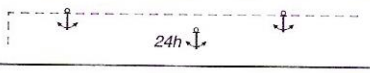
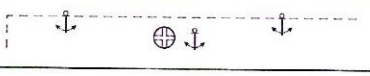
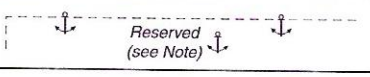
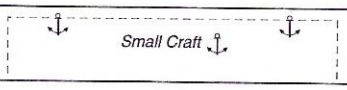
Radar Surveillance System				
30	Radar Surveillance Station	*Radar traffic surveillance station*		487 487.3
31	Ra Cuxhaven	*Radar range*		487.1
32.1	Ra	*Radar reference line*		487.2
32.2	Ra 270° - 090°	*Radar reference line coinciding with a leading line*		

Radio Reporting				
40	B 7	*Radio calling-in point, way point, or reporting point (with designation, if any) showing direction(s) of vessel movement*	† B 7	488
b		*Radio reporting line (with designation, if any) showing direction(s) of vessel movement*	† †	

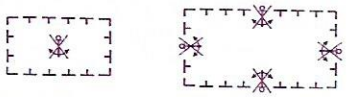
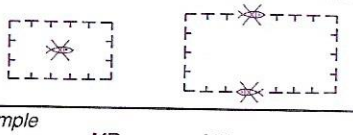
Ferries				
50		*Ferry*	† Ferry † Ferry	438.1
51	Cable Ferry	*Cable Ferry*		438.2

N Areas, Limits

General	*Dredged and Swept Areas* → I	*Submarine Cables, Submarine Pipelines* → L	*Tracks Routes* → M	
1.1		*Maritime limit in general, usually implying physical obstructions*		439.1
1.2		*Maritime limit in general, usually implying no physical obstructions*	 *(for emphasis)*	
2.1		*Limit of restricted area*	 *(for emphasis)*	439.2 439.3 441.6
2.2		*Limit of area into which entry is prohibited*	†  *Entry Prohibited*	

Anchorages, Anchorage Areas				
10		*Recommended anchorage (no defined limits)*	†	431.1
11.1		*Anchor berths*		431.2
11.2		*Anchor berths with swinging circle shown*		
12.1		*Anchorage area in general*		431.3
12.2	 *No 1*	*Numbered anchorage area*	†  † 	
12.3	 *Oaze*	*Named anchorage area*		
12.4	 *DW*	*Deep water anchorage area, anchorage area for deep-draught vessels*		
12.5	 *Tanker*	*Tanker anchorage area*		
12.6	 *24h*	*Anchorage area for periods up to 24 hours*		
12.7		*Explosives anchorage area*		
12.8		*Quarantine anchorage area*		
12.9	 *Reserved (see Note)*	*Reserved anchorage area*		
13		*Seaplane landing area*	† *Seaplane Landing Area (see Note)*	449.6
14		*Anchorage for seaplanes*		449.6
a		*Anchorage area for small craft*	 *Small Craft*	

Restricted Areas

20		Anchoring prohibited, IMO-adopted No Anchoring Area	† Anchoring Prohibited †	431.4 439.3 439.4
21		Fishing prohibited		439.3 439.4
22	Example MR MR Examples	Limit of marine reserve, national park, non-specific nature reserve 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)	† Marine Nature Reserve (see Note) #	437.3 437.6 437.7
23.1	Explosives Dumping Ground	Explosives dumping ground	† Explosives Dumping Ground	442.1 442.2 442.3 442.4
23.2	Explosives Dumping Ground (disused)	Explosives dumping ground (disused)	† Explosives Dumping Ground (disused)	
24	Dumping Ground for Chemicals	Dumping ground for chemical waste		442.1 442.2 442.3
25	Degaussing Range	Degaussing range	† D.G. Range D.G. Range	448.1 448.2
26	Historic Wk	Historic wreck and restricted area		449.5
b		Explosives dump used to temporarily deposit explosives which are recovered at a later date	Explosives Dump (temp)	
c		Seabed operations dangerous/prohibited	#	
d		Diving prohibited	#	

Military Practice Areas

30		Firing practice area		441.1 441.2 441.3
31		Military restricted area into which entry is prohibited	† Entry Prohibited	441.6
32		Mine-laying practice area		441.4
33	SUBMARINE EXERCISE AREA (see Note)	Submarine transit lane and exercise area		441.5
34	Minefield (see Note)	Minefield	Mine Danger Area (see Note)	441.8

3-6

N Areas, Limits

International Boundaries and National Limits				
40	DANMARK DEUTSCHLAND	*International boundary on land*	DENMARK GERMANY †	440.1
41	*UNITED KINGDOM* *NORGE*	*International maritime boundary*	*UNITED KINGDOM* *NORWAY* † *Continental Shelf Boundary* †	440.3
42		*Straight territorial sea baseline with base point*		440.4
43		*Limit of Territorial Sea*	#	440.5
44		*Limit of Contiguous Zone*		440.6
45		*National fishery limits*		440.7
46		*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
e		*National fishery limit and limit of Territorial Sea*		

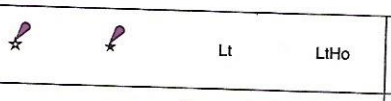
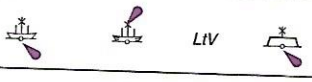
Various Limits				
60.1	#	*Limit of fast ice, Ice front*	†	449.1
60.2	#	*Limit of sea ice (pack ice) seasonal*		
61	*Log Pond*	*Log pond*	† *Booming Ground* † *Timber*	449.2
62.1	*Spoil Ground*	*Spoil ground*		446.1 446.2
62.2	*Spoil Ground (disused)*	*Spoil ground (disused)*		
63	*Dredging Area*	*Dredging area*		446.4 446.5
64	*Cargo Transhipment Area*	*Cargo transhipment area*		449.4
65	*Incineration Area* †	*Incineration area*	*Area for burning refuse material* †	449.3

		Hydrographic Terms			
1		*Ocean*			
2		*Sea*			
3		*Gulf*	*G.*		
4		*Bay*	*B.*		
5		*Fjord*	*Fj.*	† *Fd.*	
6		*Sea Loch, Lough, Arm of Sea*	*L.*		
7		*Creek*	*Cr.*		
8		*Lagoon*	*Lag.*	† *Lagn*	
9		*Cove*			
10		*Inlet*			
11		*Strait*	*Str.*		
12		*Sound*	*Sd.*		
13		*Passage*	*Pass.*		
14		*Channel*	*Chan.*		
15		*Narrows*			
16		*Entrance*	*Ent.*	† *Entce*	
17		*Estuary*	*Est.*	† Esty.	
18		*Delta*			
19		*Mouth*	*Mth.*		
20		*Roads, Roadstead*	*Rds.*		
21		*Anchorage*	*Anch.*	† Anche.	
22		*Approach*	*Appr.*	† *Apprs*	
23		*Bank*	*Bk.*		
25		*Shoal*	*Sh.*		
26		*Reef*	*Rf.*		
27		*Sunken rock*			
28		*Ledge*	*Le.*		
29		*Pinnacle*			
30		*Ridge*			
31		*Rise*			
32		*Mountain*			
33	*SMt*	*Seamount*			429.1
34		*Seamount chain*			
35		*Peak*			
36		*Knoll*			
37		*Abyssal hill*			
38		*Tablemount*			
39		*Plateau*			
40		*Terrace*			
41		*Spur*			
42		*Continental shelf*			
43		*Shelf-edge*			
44		*Slope*			
45		*Continental slope*			
46		*Continental rise*			
47		*Continental borderland*			
48		*Basin*			
49		*Abyssal plain*			
50		*Hole*			
51		*Trench*			
52		*Trough*			
53		*Valley*			
54		*Median valley*			
55		*Canyon*			
56		*Sea channel*			
57		*Moat, Sea moat*			

O Hydrographic Terms

58		*Fan*			
59		*Apron*			
60		*Fracture zone*			
61		*Scarp, Escarpment*			
62		*Sill*			
63		*Gap*			
64		*Saddle*			
65		*Levee*			
66		*Province*			
67		*Tideway, Tidal gully*			
68		*Side arm*			
69		*Turning area, Turning basin, Turning circle*			

Other Terms					
80		*projected*	proj	† projd	
81		*lighted*			
82		*buoyed*			
83		*marked*			
84		*ancient*		† Anct	
85		*distant*	dist		
86		*lesser*			
87		*closed*			
88		*partly*			
89		*approximate*	approx		
90		*submerged*	subm	† submd	
91		*shoaled*			
92		*experimental*	exper	† experi	
93		*destroyed*	dest	† destd	
a		*about*	abt		
b		*discontinued*	discont	† discontd	
c		*prohibited*	prohib	† prohibd	
d		*prominent*	prom	† promt	

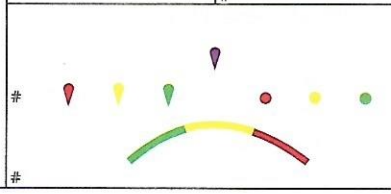
Beacons → Q			Light Structures, Major Floating Lights	
1		*Major light, minor light ‡, light, lighthouse*	 #	470.5
2		*Lighted offshore platform*		445.2
3		*Lighted beacon tower ‡*	† Bn Tower † Bn Tr	456.4 457.1 457.2
4		*Lighted beacon ‡* *On smaller scale charts, where navigation within recognition range of the daymark is unlikely, lighted beacons are charted solely as lights*		457.1 457.2
5		*Buoyant beacon, resilient beacon ‡*		459.1 459.2
6		*Major floating light (light vessel, major light float, LANBY)*	† 	462.9 474

‡ *Minor lights, fixed and floating, usually conform to IALA Maritime Buoyage System characteristics*

P Lights

Light Characters			Light Characters on Light Buoys → Q	471.2
	Abbreviation		Class of Light	Illustration — Period shown ⊢—⊣
	International	National		
10.1	F		Fixed	
10.2	*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	W R W R W R

Colours of Lights

11.1	W	*White (may be omitted)*		450.2 450.3 470.4 470.6 471.4 475.1
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 *Example*	*Period in seconds*	† 90sec	471.5

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

Elevation

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

Note: Charted ranges are nominal ranges given in sea miles

Range

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.)*	471.8

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' visibilty, taking no account of earth curvature. In those countries (eg United Kingdom) where the term 'clear' is defined as a meteorological visibilty 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

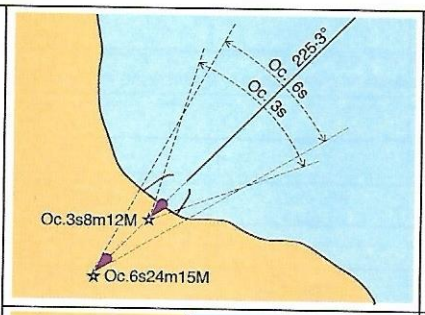
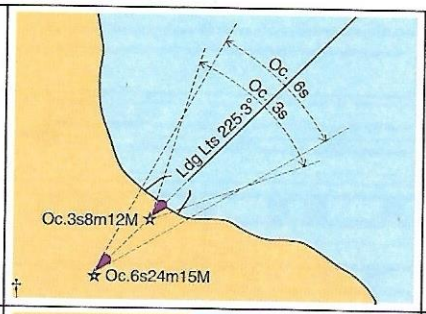
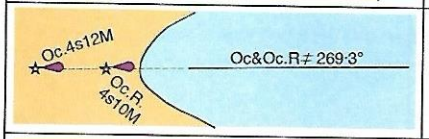
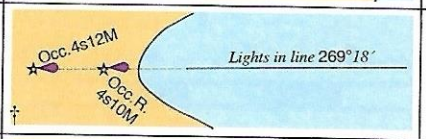
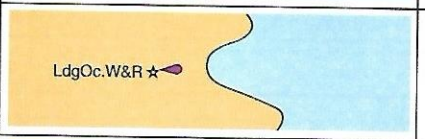
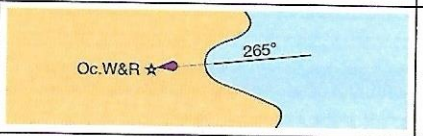
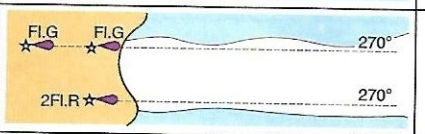
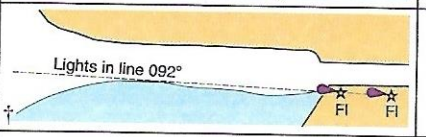
- Al.Fl. — Class *or* character *of light: in this example exhibiting single flashes of differing colours alternately.*
- WR. — Colours *of light shown alternately: white and red all-round (ie, not a sector light).*
- 30s — Period *of light in seconds, ie, the time taken to exhibit the sequence of two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

P Lights

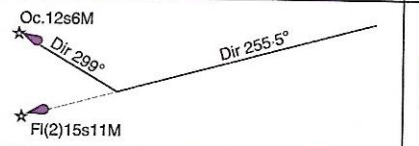
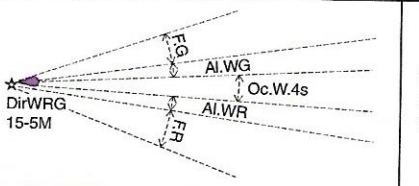
Lights marking Fairways

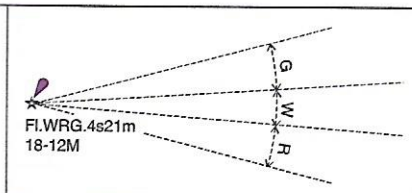
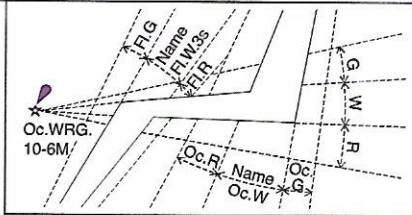
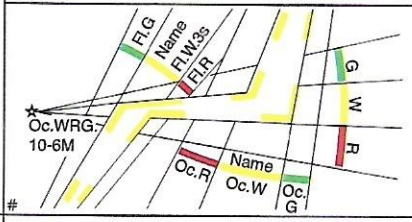
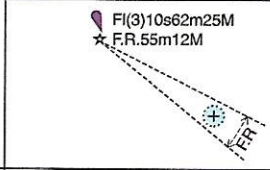
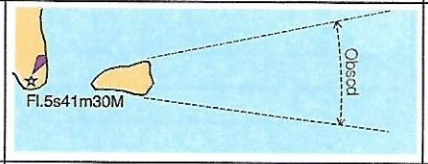
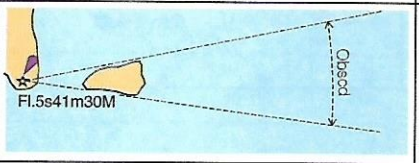
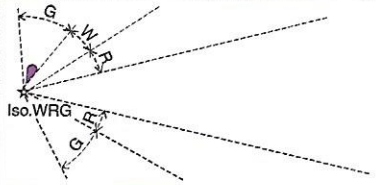
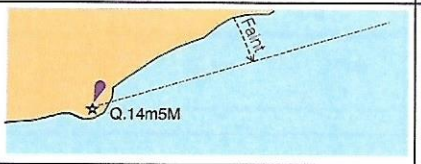
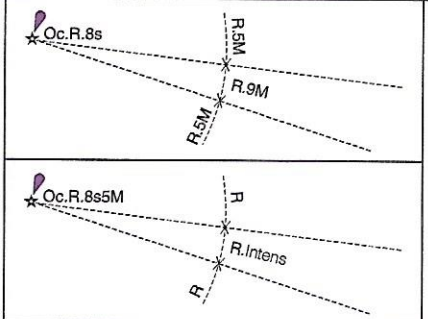
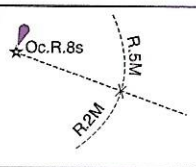
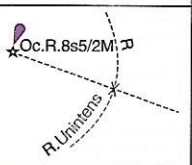
Note: Quoted bearings are always from seaward

Leading Lights and Lights in line

20.1		*Leading lights with leading line (the firm line is the track to be followed) and arcs of visibility*	 †	433 433.1 433.2 433.3 475.1 475.6
20.2		*Leading lights (≠ means "in line", the firm line is the track to be followed. The light description will be at the light star or on the leading line, not usually both).*	 †	433.2 433.3 475.6
20.3		*Leading lights on small-scale charts*		433.1 475.6
21		*Lights in line, (marking the sides of a channel)*	 †	433.4 475.6
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 †	475 475.1 475.7
30.2		*Direction light with course to be followed, uncharted sector is flanked by darkness or unintensified light*	DirLt †	475 475.7
30.3		*Direction light with narrow fairway sector flanked by light sectors of different character*		471.3 471.9 475 475.1 475.5 475.7
31		*Moiré effect light (day and night), variable arrow mark. Arrows show when course alteration needed*		475.8

				Sector Lights
40		*Sector light on standard charts*		475 475.1 475.2 475.5
41.1		*Sector lights on standard charts, the white sector limits marking the sides of the fairway*		475 475.1 475.5
41.2		*Sector lights on multicoloured charts, the white sector limits marking the sides of the fairway*		475 475.1 475.5 470.4
42		*Main light visible all-round with red subsidiary light seen over danger*		471.8 475.4
43		*All-round light with obscured sector*		475.3
44		*Light with arc of visibility deliberately restricted*		475.3
45		*Light with faint sector*		475.3
46		*Light with intensified sector*		475.5
a		*Light with unintensified sector*		

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P Lights

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

Special Lights	*Flare Stack (at Sea)* ⟶ L	*Flare Stack (on Land)* ⟶ E	*Signal Stations* ⟶ T	
60	AeroAl.Fl.WG.7·5s11M	*Aero 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) (R Lts)	*Air obstruction lights of low intensity*	*(Red Lt.)* †	476.2
62	Fog Det Lt	*Fog detector light*		477
63	(illuminated)	*Floodlit, floodlighting of a structure*	(illum) †(lit)	478.2
64	Iso F F.R	*Strip light*		478.5
65	F.R (priv) #	*Private light other than one exhibited occasionally*	⊙ Y.Lt ⊙ R.Lt †(Priv)	473.2
c		*Navigation lights on landmarks or other structures*		

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

General

1		*Position of buoy or beacon*		455.3 460.1 462.1

Abbreviations for colours (lights) ⟶ P 11 — **Colour of Buoys and Beacon Topmarks**

2	G B G G G	*Single colour; green (G) and black (B)*	*Non-IALA System* † B G	450 450.1 450.2 450.3 464 464.1 464.2 464.3
3	R R Y Y Or R	*Single colour other than green and black: red (R), yellow (Y), orange (Or)*	*Non-IALA System* † R Y Or	
4	BY GRG BRB	*Multiple colours in horizontal bands: the colour sequence is from top to bottom*	*Non-IALA System* † BW RW BR BW	
5	RW RW RW	*Multiple colours in vertical or diagonal stripes; the darker colour is given first. In these examples, red(R), white(W) & black(B)*	*Non-IALA System* † RW BR BW BW	
6		*Retroreflecting material may be fitted to some unlit marks. Charts do not usually show it. Black bands will appear dark blue under a spotlight*	† *Refl*	
a		*Single colour other than green and black (non-IALA system: white (W) grey (Gy), blue (Bu))*	*Non-IALA System* W Gy Bu (non-IALA) W (non-IALA) Gy (non-IALA) Bu	464
b		*Wreck buoy (not used in the IALA System)*	† G G G G	
c		*Chequered*	† BR BW RW BW	

Marks with Fog Signals ⟶ R — **Lighted Marks**

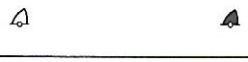
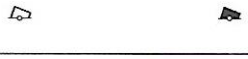
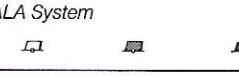
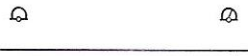
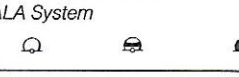
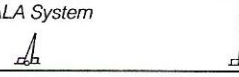
7	Fl.G G Fl.R R	*Lighted marks on standard charts (examples)*	†	457.1 466 466.1
8	# Fl.R R Iso RW Fl.G G	*Lighted marks on multicoloured charts (examples)*		

For Application of Topmarks within the IALA System ⟶ Q 130
For other Topmarks (Special Purpose Buoys and Beacons) ⟶ Q
Radar reflector ⟶ S — **Topmarks and Radar Reflectors**

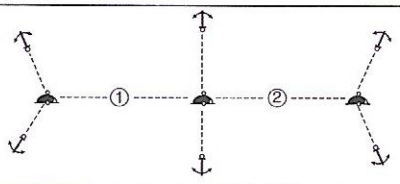
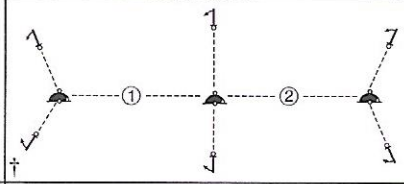
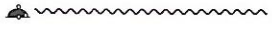
9		*IALA System buoy topmarks (beacon topmarks shown upright)*	*Non-IALA System* # etc.		463 463.1
10	Name 2 R	*Beacon with topmark, colour, radar reflector and designation*	'2' R No.2 R	† Ra.Refl "2" R	450 455.2 455.7
11	Name 3 G	*Buoy with topmark, colour, radar reflector and designation. Radar reflectors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

Q Buoys, Beacons

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

Shapes				
20		*Conical buoy, nun buoy, ogival buoy*	*Non-IALA System* †  *etc.*	462.2
21		*Can buoy, cylindrical buoy*	*Non-IALA System* †  *etc.*	462.3
22		*Spherical buoy*	*Non-IALA System* †  *etc.*	462.4
23		*Pillar buoy*	*Non-IALA System* † 	462.5
24		*Spar buoy, spindle buoy*	*Non-IALA System* † 	462.6
25		*Barrel buoy, tun buoy*		462.7
26		*Superbuoy. Superbuoys are very large buoys, e.g. a LANBY (P6) is a navigational aid mounted on a circular hull of about 5m diameter. Oil or gas installation buoys (L16) and ODAS buoys (Q58), of similar size, are shown by variations of the superbuoy symbol*	† 	445.4 460.4 462.9 474

Minor Light Floats				
30		*Light float as part of IALA System*		462.8
31		*Light float not part of IALA System*	† 	462.8

Mooring Buoys	*Oil or Gas Installation Buoy* → L	*Visitors' (Small Craft) Mooring* → U		
40		*Mooring buoy*	#  †	431.5
41		*Lighted mooring buoy*		431.5 466.1 466.2 466.3 466.4
42		*Trot, mooring buoys with ground tackle and berth numbers*	† 	323.1 431.6
43		*Mooring buoy with telegraphic or telephonic communications*		431.5
44		*Numerous moorings (example)*		431.7

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 cross topmark is optional.			Special Purpose Buoys	
50	DZ	*Firing danger area (Danger Zone) buoy*		441.2
51	Target	*Target*		
52	Marker Ship	*Marker Ship*		
53	Barge	*Barge*		
54		*Degaussing Range buoy*	DG	448.3
55		*Cable buoy*	*Non-IALA System* Cable †	443.6
56		*Spoil ground buoy*		446.3
57		*Buoy marking outfall*		444.4
58	ODAS	*Data collection buoy (Ocean Data Acquisition System) of superbuoy size*	ODAS †	462.9
59		*Buoy marking wave recorder or current meter*		
60		*Seaplane anchorage buoy*		
61		*Buoy marking traffic separation scheme*		
62		*Buoy marking recreation zone*		
d		*Racing mark*		

			Seasonal Buoys	
70	(priv)	*Buoy privately maintained (example)*		
71	(Apr-Oct))	*Seasonal buoy (the example shows a yellow spherical buoy in use between April and October)*	# (1.4 -15.10) (occas)	460.5

Q Buoys, Beacons

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

General

80	 Bn	*Beacon in general, characteristics unknown or chart scale too small to show*	 #	455.5
81	 BW  Bn BW	*Beacon with colour, no distinctive topmark (examples)*		455.4 456 456.3
82	 R  BY  BRB	*Beacon with colour and topmark (examples)*	*Non-IALA System* † W  B R  BW *etc.*	455.4 456 463 463.1
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 Impermanent Marks usually in Drying Areas (Lateral Mark for Minor Channel)

Minor Pile → F

90			*Stake, pole*	†	456.1
91	PORT HAND 	STARBOARD HAND 	*Perch, stake*	†	456.1
92			*Withy*		456.1

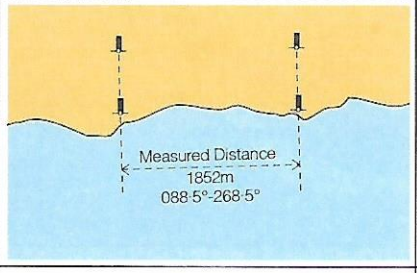
Minor Marks, usually on Land

Landmarks → E

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	456.3
102.2	RW RW	*Painted boards with function of leading beacons*		

Beacon Towers

110	 R  G R  G BY  BRB	*Beacons towers without and with topmarks and colours (examples)*	† Bn Tower † Bn Tr *etc.*	456.4
111	# 	*Lattice beacon*		456.4

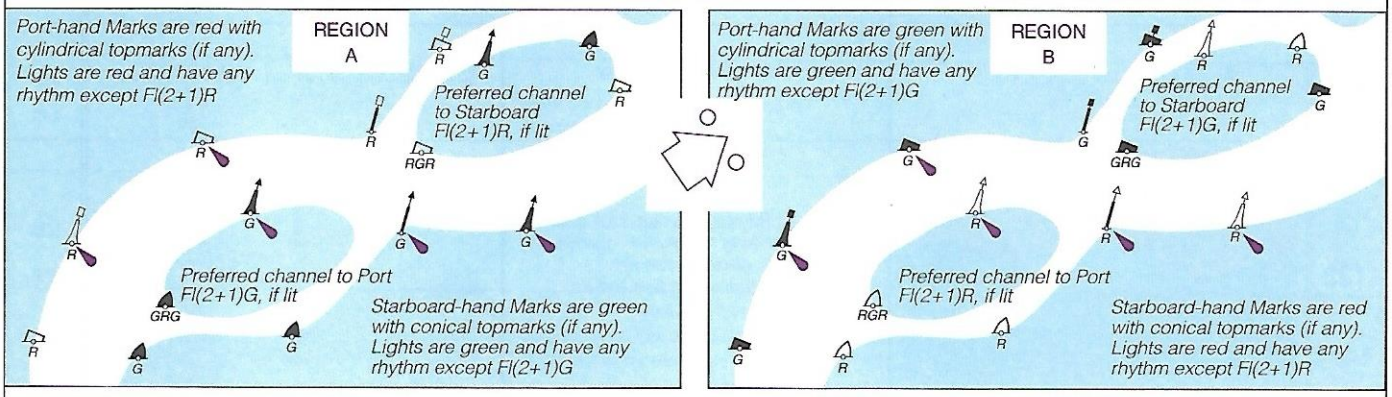
Leading Lines, Clearing Lines → M			Special Purpose Beacons	
Note: Topmarks and colours are shown where scale permits				
120		*Leading beacons (the firm line is the track to be followed)*	 †	458
121		*Beacons marking a clearing line or transit*	 †	458
122		*Beacons marking measured distance with quoted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

Q Buoys, Beacons

130 IALA Maritime Buoyage System — *IALA International Association of Lighthouse Authorities* — NP 735

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 below, 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.

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



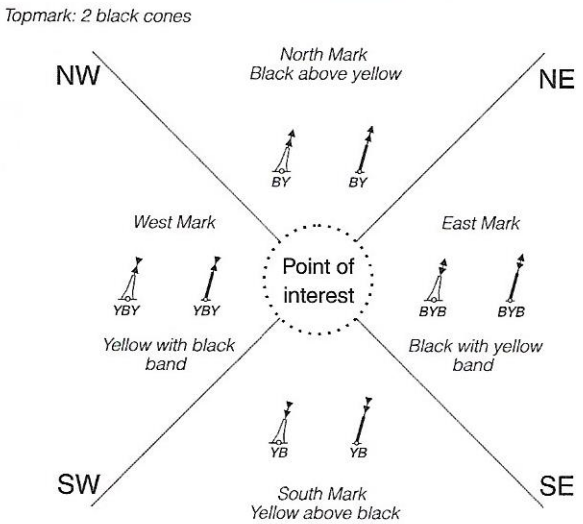
A preferred channel buoy may also be a pillar or a spar. All preferred channel marks have three horizontal bands of colour.
Where for exceptional reasons an Authority considers that a green colour for buoys is not satisfactory, black may be used.

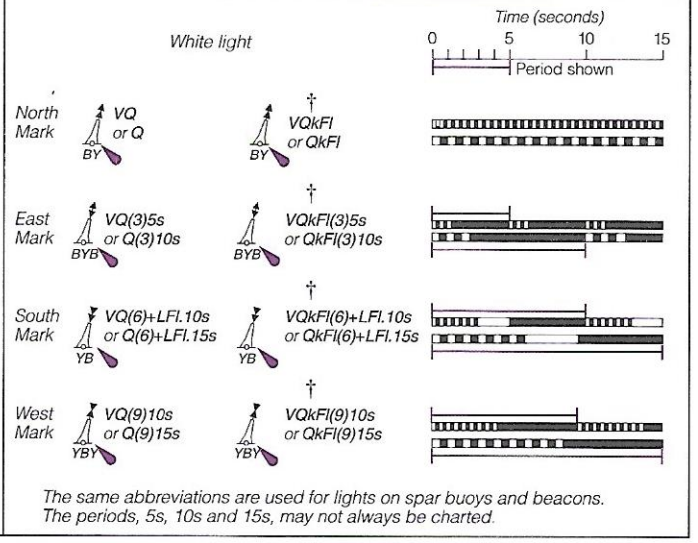
130.2


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).

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*

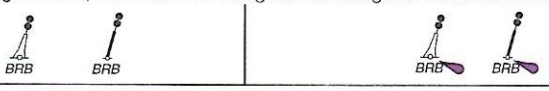




The same abbreviations are used for lights on spar buoys and beacons.
The periods, 5s, 10s and 15s, may not always be charted.

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

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

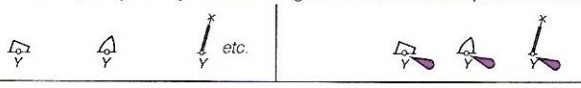


130.5 Safe Water Marks, such as mid-channel and landfall marks.

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

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

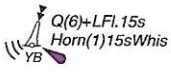
Body: (shape optional): yellow
Topmark (if any): yellow X



Fog Signals R

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

Types of Fog Signals, with 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

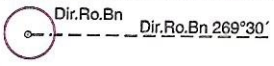
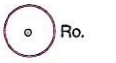
Examples of Fog Signal Descriptions				
20	 ‡	*Siren at a lighthouse, giving a long blast followed by a short one (N), repeated every 60 seconds*		452.3 453.3
21	 ‡	*Wave-actuated bell buoy.* *The provision of a legend indicating number of emissions, and sometimes the period, distinguishes automatic 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) will usually be omitted when associated with another navigation aid (e.g. light or buoy) when a description of the signal is given*

S Radar, Radio, Satellite Navigation Systems

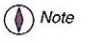
Radar	*Radar Structures Forming Landmarks* → E		*Radar Surveillance Systems* → M	
1	Ra	*Coast radar station providing range and bearing from station on request*		485.1
2	Ramark	*Ramark, radar beacon transmitting continuously*		486.1
3.1	Racon(Z) (3cm)	*Radar transponder beacon, with morse identification, responding within the 3cm (X) band*	† Racon(Z)	486.2 486.3
3.2	Racon(Z) (10cm)	*Radar transponder beacon, with morse identification, responding within the 10cm (S) band*		486.3
3.3	Racon(Z)	*Radar transponder beacon, with morse identification, responding within the 3cm (X) and the 10cm (S) bands*	† Racon(Z) (3 & 10cm)	
3.4	Racon Obscd Racon(P)	*Radar transponder beacon with sector of obscured reception*		486.4
	Racon(Z) Racon(Z)	*Radar transponder beacon with sector of reception*		
3.5	Racon Racon Racons ≠ 270	*Leading radar transponder beacons*		486.5 433.3
	Racon Racon Lts ≠ 270 / Racons ≠ 270	*Leading radar transponder beacons coincident with leading lights*		
3.6	Racon (T) Racon	*Radar transponder beacons on floating marks (examples)*		486.2
4		*Radar reflector (not usually charted on IALA System buoys)*	† *Ra.Refl.*	460.3 465
5		*Radar conspicuous feature*	† Ra conspic	485.2

Radar, Radio, Satellite Navigation Systems

	Radio Structures Forming Landmarks ⟶ E	*Radio Reporting (Calling-in or Way) Points* ⟶ M		Radio
10	† 	*Non-directional marine or aeromarine radiobeacon*		481.1 480.1
11	† 	*Directional radiobeacon with bearing line*	† 	481.2 433.6
	† 	*Directional radiobeacon coincident with leading lights*		
12	† 	*Rotating pattern radiobeacon*		481.1
13	† 	*Consol beacon*		481.3
14		*Radio direction-finding station*	† 	483
15		*Coast radio station providing QTG service*	† 	484
16	† 	*Aeronautical radiobeacon*		482
17.1		*Automatic Identification System transmitter*		489.1
17.2		*Automatic Identification System transmitters on floating marks (examples)*		489.1

					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. See Annual Notice to Mariners No.19.*					202

T Services

Pilotage				
1.1		*Pilot boarding place; position of pilot cruising vessel*	† *Pilots* † Pilots	491.1 491.2 491.6
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*		491.2
2	Pilot lookout	*Pilot office with Pilot lookout; Pilot lookout station*		491.3
3	Pilots	*Pilot office*		491.4
4	Port Name (Pilots)	*Port with pilotage service (boarding place not shown)*		491.5

Coastguard, Rescue				
10	CG ⊙CG	*Coastguard station*	CGFS	492 492.1 492.2
11	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	*Refuge for shipwrecked mariners*		456.4

CONTENTS KEY