HYDROGRAPHIC, METEOROLOGICAL & OCEANOGRAPHIC
FORCE ELEMENT GROUP
MANAGEMENT SYSTEM DOCUMENT

AHO Chart Line Feature

Specification

.

Document Owner:	Authorised by:
HPG	DCIM
(Ms. H. Thompson)	(Mr. M. Prince)

**This document is authorised via the electronic signature capability in the DRMS
Approval delegations and authorisation history can be viewed in the DRMS**

THIS DOCUMENT IS UNCONTROLLED ONCE PRINTED
(Conditions of use are specified in SP_01_00_A6998)

Document History

Version	DESCRIPTION OF CHANGE	Date	Authorised
The version status of this document is the same for all pages			
V1	New Document	6/2005	HPG

DISTRIBUTION

- Distribution of this document is to HMFEG personnel who have access to the AHO Intranet; DRMS and/or DHDB.
- Electronic copies may be printed and used subject to the conditions specified in SP_01_00_A6998.

CONTENTS

1.   **OBJECTIVE**

   a)   The objective of this Specification is to detail line features to be shown on Australian Navigational charts.

2.   **SCOPE**

   a)   This specification provides guidance for creating line features to be used on chart production systems within the AHO

3.   **REFERENCES**

   Chart Specifications of the IHO (MP004)   DRMS A143122
   M4 Part A   DRMS A143121

4. DEFINITIONS

a) Chart – includes published Paper, ENC, RNC & GeoTIFF and MGI products, produced by the Product Generation Section.

b) Paper Chart - a specifically compiled paper product used for navigation

5. RESPONSIBILITIES

a) Head Product Generation (HPG) is responsible for ensuring production systems are tailored to use these specifications.

6. POLICY

6.1 Product Specification Sponsor

a) The sponsor of this specification is Head of Product Generation. As sponsor, Head of Product Generation shall ensure the adequacy of the specification to meet quality objectives and shall approve amendments taking into account:

(i) Amendments may need to be endorsed by the Chart Technical Working Group to ensure consistency with other technical specifications and procedures.

b) An assessment shall be made to determine whether the proposed changes influence Product Generation or Nautical Information work procedures or source dataset management.

6.2 Product Specification Maintenance

a) HPG shall draft amendments to this specification as required, and submit them to DCIM for approval. Amendments may result from:

(i) Feedback from document users;

(ii) Changes to international specifications

7. SPECIFICATION DESCRIPTION

The following table identifies the specification for each line feature.

The INT reference for each feature refers to the IHO INT1 Symbols Abbreviations Terms used on charts, 1992 document published by the German HO.

COL refers to colour – B being black, M being magenta

WEIGHT refers to line weight and is measured in millimetres (mm)

DASH refers to piece of line and is measured in mm

GAP refers to space between DASH and is measured in mm.

SYMBOL GAP refers to gap between symbols. Centreline to centreline measurements are annotated by cl

ADDITIONAL refers to any additional comments made by MRM to be considered.

FEATURE	INT	COL	WEIGHT	DASH	GAP	SYMBOL GAP	ADDITIONAL
Larger Scale Chart Reference	IA 18	M	0.2				
Isogonic Lines	IB 71	M	0.15				
Coastline Surveyed	IC 1	B	0.2				
Coastline Unsurveyed (or Approximate)	IC 2	B	0.2	1.5	1		
Steep Coast (& Escarpment)	IC 3	B	0.1				AutoChart cliff symbols required, see symbol file IC 3 Scale variation for series charts required.
Coastal Hillocks	IC 4	B					Not required
Flat Coast	IC 5	B	0.2				Identical to IC 1 (this feature not required)
Sandy Shore	IC 6	B	0.2 dia dot			0.5cl	Duplicate feature, vertical offset 0.5 required in addition to independent line feature. Right / left draw required.
Stony / Shingly Shore	IC 7	B					Not required
Sandhills / Dunes	IC 8	B	0.2 dia dot			0.5cl	see IC 6 but only as independent line for this feature.
(Topo) Contour Lines	IC 10	B	0.1				
(Topo) Index Contour	IC 10	B					Not required
(Topo) Approx Contour	IC 12	B	0.1	5	0.6		
(Topo) Form Lines	IC 13	B					Not required
River, Stream Navigable (Double Line) Non-navigable (Single Line)	IC 20	B	 0.2 0.15				

Intermittent River	IC 21	B	0.15		3	0.5	
Rapids, Waterfalls	IC 22	B	0.1				
Lakes	IC 23	B	0.15				
Salt Pans	IC 24	B	0.1				IC 24 (a) hatch not required
Glacier	IC 25	B	0.15		0.5	0.5	Use with IN 60.1 (ice front)
Lava Flow	IC 26	B	0.1				
Mangrove Coast (Seaward Edge) (Symbol)	IC 32	B	0.15 0.1		1.3	0.5	10 Vertical Offset 1.0 (Left / Right draw required)
Marsh	IC 33	B	0.2		1.5	1	See Coastline Unsurveyed IC 2
Urban Area Perimeter Shadow	ID 1	B	0.1 0.2				
Settlement, Building Outline Perimeter Shadow	ID 2	B	0.1 0.2				see ID 1
Building Perimeter Shadow	ID 5	B	0.1 0.2				see ID 1
Ruin	ID 8	B	0.1		1	0.5	
Motorway	ID 10	B					Not required. Use hard surfaced road ID 11.
Hard Surfaced Road	ID 11	B	0.1				Digitise centreline, variable width (default 0.5) Intersection command required
Track, Path	ID 12	B					

	ID							Notes
VehicularTrack			0.15	1.5	0.5			Digitise centreline,variable width (default 0.5)
Path Unsurfaced			0.1	1.5	0.5			Intersection command required
(a) railway heavy	ID 13	B	0.3					Not required
(b1) railway, dashed fill			0.3	1.55	0.45			Not required
(b2) railway parallel to dash			0.1					Not required
(c) railway with ties, crane tracks			0.15		1.45		1.1	Use
Cutting	ID 14	B	0.1					Use AutoChart pattern symbol 62 Right and Left symbology for DHDB FCs. Offset centerline for product specific (variable width)
Embankment	ID 15	B	0.1					Use AutoChart pattern symbol 64 Right and Left symbology for DHDB FCs. Offset centerline for product specific (variable width)
Tunnel	ID 16	B	0.1	0.8	0.5			
Airport, Airfield	ID 17	B	0.1					
Fixed Bridge	ID 22	B	0.2					Buttresses: 1.2 length, 60 deg offset
Opening Bridge	ID 23	B	0.2					Buttresses: 1.2 length, 60 deg offset
Transporter Bridge	ID 24	B	0.2					Buttresses: 1.2 length, 60 deg offset
Overhead Transporter	ID 25	B						
line			0.15	1.9	0.6			
circle			0.15	0.6dia			2.5cl	start / end offset 2.2
Power Transmission Line	ID 26	B						
line			0.15	1.5	0.2			pattern length 4.9, pattern gap 1.9
dot				0.6dia			6.8cl	2.45 start offset
flash							6.8cl	5.85 start offset
pylon								use potsition circle symbol INT IB 21 (not in pattern)
Overhead Cable	ID 27	B						
line			0.15	1.5	0.2			
dot				0.6dia			6.8cl	2.45 start offset

Overhead Pipe	ID 28	B	0.2					
line dot	ID 29	B	0.15 0.6dia		2	1	3.0cl	start offset 2.0
Cemetery	IE 19	B	0.1					
Church	IE 10	B	0.1					
Silo	IE 33	B	0.15					
Fortification	IE 34	B	0.15					
Quarry	IE 35	B						Use Cutting symbol ID 14.
Dyke, Levee Style A Dyke Thin Line Dyke Thick Line Style B Levee (Small Scale) Levee (Large Scale)	IF 1	B	 0.1 0.2 0.1 0.1					 Use AutoChart symbol pattern 64 (centerline to be digitised) Use AutoChart symbol pattern 65. (1)Left (2)Right (3)Centre digitise with variable width default 0.5.
Seawall (large scale)	IF2.1	B	0.1			1	0.8	It must be offset above Coastline
Seawall (small scale)	IF 2.2							Use embankment pattern ID 15.
Causeway intertidal dry	IF 3	B	 0.2 0.2		1.35	0.45		Both features require centerline digitise, variable width with default 0.5
Breakwater	IF 4.1	B						

Style A two sides single line			0.2 0.3					
Style B								Not required
Style C coastline embankment			0.2					Use embankment symbol ID 15
Breakwater (loose boulders)	IF 4.2	B						Not required.
Breakwater (masonary)	IF 4.3	B						Not required.
Training wall single line always dry single line intertidal two lines always dry two lines intertidal	IF 5	B	0.3 0.3 0.2 0.2	1 1	0.5 0.5			
Groyne two lines dry single line dry	IF 6.1	B	0.2 0.3					
two lines intertidal single line intertidal	IF 6.2	B	0.2 0.3	1.5 1.5	0.5 0.5			
two lines covered single line covered	IF 6.3	B	0.2dia 0.3dia				0.5cl 0.6cl	
Berthing Facility	IF 12	B	0.3					
Quay, Wharf coastline wharf	IF 13	B	0.2 0.3					
Pier, Jetty two lines single line	IF 14	B	0.2 0.3					

Promenade Pier two lines single line	IF 15	B	0.2 0.3				
Pontoon	IF 16	B	0.2				
Landing for Boats	IF 17	B	0.15	1.55	0.45		
Steps, landing stairs coastline (external) internal lines	IF 18	B	0.2 0.1			0.5	
Dolphin small scale large scale	IF 20	B	0.2 0.15				

Slipway, Patent Slip, Ramp
          two lines
solid line (seaward)
solid line (land)
intertidal
submerged
          single line
seaward
intertidal
submerged
	IF 23	B	0.2
			0.1
			0.2
			0.2dia
			
			0.3
			0.3
			0.3dia
				0.5
				
				0.5
					0.3
					
					0.3
						0.5cl
						
						0.5cl	

Gridiron	IF 24	B	0.1			0.25	
Dry Dock lines seaward edge of gate	IF 25	B	0.15 0.2				
Floating Dock	IF 26	B	0.2 0.5				
Non Tidal Basin, Wet Dock	IF 27	B	0.2				
Tidal Basin, Tidal Harbour	IF 28	B	0.2				

Floating Oil Barrier linework changepoint	IF 29.1	B	0.15 	 0.7dia	2	0.8	
Oil Retention Barrier line dot	IF 29.2	M	0.15 0.6dia		2	1 3	start offset 2.0
Works on land	IF 30	B	0.15	1.55	0.45		
Works at sea, under reclamation	IF 31	B	0.2	1.55	0.45		
Ruin pier or jetty double line (dry) double line (submerged) single line (dry) single line (submerged)	IF 33	B	0.2 0.2 0.3 0.3	 1.55 1.55	 0.45 0.45		
Canal style (a) double line style (b) single line (line) style (b) single line (stroke)	IF 40	B	0.2 0.3 0.3	 2.75			0.5 length
Lock symbol line	IF 41.1 &41.2	B	 0.15 0.2				see symbol file
Caisson	IF 42	B	0.2				
Flood Barrage	IF 43	B	0.2 0.2	 1.55	 0.5		
Dam	IF 44	B					

style (a) double line style (b) single line (line) style (b) single line (stroke)			0.2 0.15 0.15	0.4 length	0.8		
Transit shed, Warehouse with designation linework shadow line	IF 51	B	 0.1 0.2				
Flood tide Stream	IH 40	B	0.15				11.0 * 0.9 symbol size
Ebb tide Stream	IH 41	B	0.15				11.0 * 0.9 symbol size
Current in restricted waters	IH 42	B	0.15				11.0 * 1.0 symbol size
Ocean current	IH 43	B	0.15				10.7 * 0.8 symbol size
Overfalls, tide rips, races	IH 44	B	0.15				4.8 * 0.8 wavelength * 0.25 amplitude
Limit of dredged area	II 20	B	0.1	1.7	0.35		
Swept depth area	II 24	M	0.15	2	1		
Inadequately / Unsurveyed Area	II 25	 B M	 0.15 0.5	 8 10	 2 1.7		
Low Water Line Hydrographic contour Depression contour Peak contour Index contour	II 30	B B B B B	0.1 0.1 0.1 0.15 0.15				 not required.
Approx depth contour	II 31	B	0.1	5	1.5		
Sandwaves	IJ 14	B					See symbol file

Areas with stones or gravel	IJ 20						
solid line		B	0.1				
peck line		B	0.1	0.5	0.5		
Rock reef	IJ 21	B	0.1				Use Autochart symbology. Scale factor required. Digitising point seaward edge.
Rock Reef Approx	AHS						
Line		B	0.1	0.5	0.5		pattern length 5.0, pattern gap 3.5
Symbol (Matrix 128)		B	0.1			1.5	start offset 5.0
Symbol (Matrix 129)		B	0.1			1.5	start offset 6.5
Coral Reef	IJ 22	B	0.1				As for rock reef IJ 21 above.
Coral Reef Approx	AHS						
Line		B	0.1	0.5	0.5		pattern length 5.0, pattern gap 3.5
Symbol (Matrix 133)		B	0.1			1.5	start offset 5.0
Symbol (Matrix 134)		B	0.1			1.5	start offset 6.5
Danger Line	IK 1	B	0.25dia		0.65cl		
Swept by wire drag	IK 2	B					See symbol file
Wreck, hull dry	IK 20	B	0.2				
Wreck Intertidal	IK 21	B	0.2	1.85	0.65		
Wreck submerged	IK 22	B	0.25dia		0.65cl		see Danger Line IK 1.
Foul area boundary	IK 31	B	0.15	2	0.7		
Obstruction Line	IK 40	B	0.25dia		0.65cl		see Danger Line IK 1.
Fishing stakes	IK 44.1	B					
spine			0.15				
tick			0.1		0.55		0.5 tick length

Description	Code						Notes
Fish trap	IK 44.2	B	0.2dia		0.5		See symbol file
Fish trap, tunny net area	IK 45	B	0.15	2	0.7		see Foul Area Boundary IK 31
Shellfish Beds	IK 47	M	0.15	2	1		
Submarine cable	IL 30.1	M	0.15				wave 0.7 amp 0.35
Submarine cable area submarine cable IL 30.1 restricted area boundary IN 2.1	IL30.2	M					pattern length of 11.9 - start and finish on half amplitude. pattern length of 11.0 for restricted area boundary. There should be 0.5 gap between line patterns.
Submarine power cable pattern 1 pattern 2	IL 31.1	M					see submarine cable IL 30.1 Insert power symbol at 50.0 intervals Insert power symbol at 10.0 intervals
Submarine power cable area Submarine power cable Il 31.1 resticted Area Boundary IN 2.1	IL 31.2	M					Pattern length of 11.9 - start and finish on half amplitude. power symbol centered on pattern length. Pattern length of 11.0 for restricted area boundary. There should be 0.5 gap between line patterns.
Disused submarine cable submarine cable IL 30.1	IL 32	M		4.5	1.3		
Supply pipeline unspecified line dot	IL 40.1	M	 0.15 0.6dia	 2	 1 3cl		 see Oil Retention Barrier IF 29.2
Supply Pipeline Area see supply pipeline IL 40.1	IL 40.2	M		11	1		

see restictted area boundary IN 2.1					11	1		
Discharge Pipe	IL 41.1	B						
line			0.15		2	1		see Oil Retention Barrier IF 29.2
dot			0.6dia			3cl		
Discharge Pipe Area	IL 41.2	B						
see supply pipeline IL 40.1					11	1		
see restictted area boundary IN 2.1					11	1		
Buried pipeline	IL 42	M						
line			0.15		2	1		see Oil Retention Barrier IF 29.2
dot			0.6dia			3cl		
Disused pipeline	IL 44	B or M						
see Oil retention Barrier IF 29.2								patter n length 8.0, patter gap 4.2
Leading Line	IM 1	B						
fairway			0.2					
transit			0.1		1.1	0.3		
Transit, clearing line	IM 2	B	0.1		1.1	0.3		
Recommended track (fixed marks)	IM 3	B	0.2					
Recommended track (not fixed)	IM 4	B	0.2		2.3	0.6		
One-way track	IM 5.1							
line		B	0.2		2.3	0.6		
direction arrow		M	0.2					see symbol file IM 5.1
Two-way track	IM 5.2							
line		B	0.2		2.3	0.6		
direction arrow		M	0.2					see symbol file IM 5.1

Feature	IM	Cat					Notes
Recommended Track with max draught	IM 6	B					
solid line			0.2				
peck line			0.2		2.3	0.6	
direction arrow			0.2				see symbol file IM 6
Mandatory Traffic Direction	IM 10	M					see Symbol File
Recommended Traffic Direction	IM 11	M					see Symbol File
Separation line	IM 12	M	3				30% positive dot stipple subject to CMYK definition.
Separation zone	IM 13	M					
large scale			30% positive dot stipple				
small scale			0.3				
Limit of Restricted Area	IM 14	M					
line			0.15		2	1	see Limit of Restricted Area IN 2.1
stroke						3	0.8 length
Limit of routeing measure	IM 15	M	0.15		1.9	0.75	
Traffic Separated by Separation Zone	IM 20.1	M					
Zone			30% positive dot stipple				see IM 13
Boundary Line				0.15	2	1	see IM 15
Direction arrow							see symbol file for IM 10
Traffic Separated by Natural Obstructions	IM 20.2	M					
Boundary Line				0.15	2	1	see IM 15
Direction arrow							see symbol file for IM 10
Outer Separation Zone	IM 20.3	M					
Zone			30% positive dot stipple				see IM 13
Direction arrow							see symbol file for IM 10

Roundabout Zone Direction Arrow	IM 21	M	30% positive dot stipple				see IM 13 see symbol file for IM 10
Precautionary Area	IM 24	M					see symbol file for IM 16
Inshore Traffic Zone	IM 25.1	M					see Limit of Restricted Area IN 2.1
line			0.15		2	1	
stroke			0.15			3	0.8 length
Recommended Direction of Traffic Flow Direction Arrow	IM 26.1	M					see symbol file for IM 11
Recommended Direction of Traffic Flow Direction Arrow	IM 26.2	M					see symbol file for IM 11
Deep Water Route	IM 27.1	M					
Boundary Line Direction arrow				0.15	2	1	see IM 15 see symbol file for IM 10
Two-way Deep Water Route	IM 27.2	M					
Boundary Line				0.15	2	1	see IM 15
Deep Water Route Centreline	IM 27.3	M					
Solid Line			0.2				
Peck Line			0.2		2.3	0.6	
Arrow head			0.2				see symbol file IM 5.1
Recommended Route	IM 28.1	M	0.2		2.3	0.6	see IM 27.3
Two-way Route (with One-way Sections)	IM 28.2	M					

Feature	Ref	Class				Notes
Boundary Line Direction Arrow			0.15	2	1	see IM 15 see symbol file for IM 11
Area to be Avoided (Navigation Aids) line stroke	IM 29.1	M	0.15	2	1 3	see IM 15 0.8 length
Area to be Avoided (Danger) line stroke	IM 29.2	M	0.15	2	1 3	see IM 15 0.8 length
Radar Range	IM 31	M	0.2			30% positive dot stipple subject to CMYK classification.
Radar Reference Line	IM 32.1	M	0.2	1.65	0.35	
Ferry	IM 50	M	0.15	1.6	0.4	
Cable Ferry	IM 51	B	0.2	1.6	0.4	
Maritime Limit in General _ Permanent	IN 1.1	B	0.15	2	1	
Maritime Limit in General _ Not Permanent	IN 1.2	M	0.15	2	1	
Limit of Restricted Area line stroke	IN 2.1	M	0.15	2	1 3	0.8 length
Limit of Prohibited Area line stroke	IN 2.2	M	0.15	2	1 3	see Restricted Area IN 2.1 0.8 length
Swinging Circle	IN 11.2	M	0.15	2	1	see Maritime Limit in General IN 1.2

Feature	Ref							Notes
Anchorage Area in General	IN 12.1	M						see Maritime Limit in General IN 1.2
line			0.15	2	1			pattern gap for symbol 4.0
symbol (see symbol file in IN 12.1)							24cl	start offset 7.0
Anchorage Numbered	IN 12.2 to IN 12.9	M	0.15	2	1			as above and refer to relevant symbol files
Anchorage Named								
Anchorage DW							24cl	
Anchorage Tanker								
Anchorage 24h								
Anchorage Explosives								
Anchorage Quarantine								
Anchorage Reserved								
Seaplane Landing Area	IN 13	M						
line			0.15	2	1			
symbol			0.15				9.0cl	5.5 start offset
Anchoring Prohibited	IN 20	M						
line			0.15	2	1			see Limit of Restricted Area IN 2.1
stroke			0.15			3		0.8 length
								pattern gap for symbol 4.0
symbol			0.15				24cl	start 7.0
Fishing Prohibited	IN 21	M						
line			0.15	2	1			see Limit of Restricted Area IN 2.1
stroke			0.15			3		0.8 length
symbol			0.15				23.4	
Limit of Nature Reserve	IN 22	G						Not required
Explosives Dumping Ground	IN 23	M						
line			0.15	2	1			see Limit of Restricted Area IN 2.1
stroke			0.15			3		0.8 length

Feature	Code	Type					Notes
Dumping Ground for Chemicals	IN 24	M					
line			0.15	2	1		see Limit of Restricted Area IN 2.1
stroke			0.15			3	0.8 length
Degaussing Range	IN 25	M					
submarine cable			0.15				wave 0.7 amp 0.35
							pattern length of 11.9 start and finish on half amplitude.
restricted area line			0.15	2	1		pattern length of 11.0 for restricted area boundary.
restricted area stroke					3.0cl		0.8 length
							There should be 0.5 gap between line patterns.
Historic Wreck	IN 26	M					see IN 2.1
line			0.15	2	1		
stroke					3		0.8 length
							diameter default 4.10
Firing Danger Area	IN 30	M					see IN 1.2
line			0.15	2	1		
symbol			see symbol file			24.0cl	start offset 5.5
Entry Prohibited (Military)	IN 31	M					see IN 2.1
line			0.15	2	1		
stroke					3.0cl		0.8 length
Mine Laying Area	IN 32	M					see IN 1.2
line			0.15	2	1		
							pattern gap for symbol 4.0
symbol			0.15	1.4dia		24	start offset 7.0
Submarine Transit / Exercise	IN 33	M	0.15	2	1		see IN 1.2
Minefield	IN 34						
line		M	0.15	2	1		see IN 2.1
stroke					3		0.8 length
International Boundary (land)	IN 40						
style (a)							
line		B	0.15	1.55	0.5		

stroke			0.15		2.05cl		0.8 length
style (b)							
line			0.15	2.6	0.9		
stroke			0.15		3.5cl		1.3 length
International Boundary (maritime)	IN 41						
line		M	0.15	2.6	0.9		
stroke			0.15		7.0cl		1.3 length
Straight Territorial Sea Baseline	IN 42						
baseline		M	0.15				
symbol			0.15			25cl	symbol dimensions 1.25b * 2.0h. 10.0 start offset
basepoint			0.15			1.8 dia	
Seaward Limit of Territorial Sea	IN 43						see IN 41
line		M	0.15	17.1	7.9		
line '+'			0.15	2.6	0.9		
stroke '+'			0.15		3.5cl		1.3 length
							Set of two '+' 25.0cl apart, start offset 21.05
Seaward Limit of Contiguous Zone	IN 44						see IN 41
line		M	0.15	20.6	4.4		
line '+'			0.15	2.6	0.9		
stroke '+'			0.15				1.3 length
							One '+' 25.0cl apart, start offset 22.8
Limits of Fishery Zones (INNER)	IN 45						
line		M	0.15	4.9	1.1		pattern length 24.0, gap for symbol 5.8
symbol						25.8cl	symbol start offset 14.45, symbol length 3.6
Limits of Fishery Zones (OUTER)	IN 45						
line		M	0.15				pattern length 24.0, gap for symbol 5.8
symbol						25.8cl	symbol start offset 14.45, symbol length 3.6
Limit of Continenetal Shelf	IN 46	M	0.15	2	1		see IN 1.2

Exclusive Economic Zone	IN 47	M	0.2				
Customs Limit line symbol circle symbol lines	IN 48	M	0.15 0.15 0.1	2	1 0.4 apart	25.0cl	see IN 1.2 pattern length 21, pattern gap 4.0 2.5dia,
Harbour Limit	IN 49	M	0.15	2	1		see IN 1.2
Limit of fast Ice	IN 60.1	B	0.15				
Limit of Sea Ice	IN 60.2	M	0.15				
Log Pond line pile	IN 61	B	0.15	2	1	1.00 dia	see IN 1.2
Spoil Ground	IN 62	B	0.15	2	1		see IN 1.2
Dredging Area	IN 63	M	0.15	2	1		see IN 1.2
Cargo Transhipment Area	IN 64	M	0.15	2	1		see IN 1.2
Incineration Area	IN 65	M	0.15	2	1		see IN 1.2
Leading Line	IP 20.1	B					see IM 1
Sector Light Arc line arrow	IP 40	B	0.1 0.1	1.1	0.3		see IM 2 0.71l * 0.75f
Light Sector Line	IP 40	B	0.1	1.1	0.3		see IM 2 Start offset of 0.5mm

SPEC_03_05_A141539

Sector Limit Marking Fairway	IP 41	B	0.1				
Trot Mooring Buoys with Ground Tackle	IQ 42	M	0.1 / 0.25	0.75 / 2	0.4 / 0.65		
Small Craft Moorings	IQ 44	B	0.15	2	1		see IN 1.2
Measured Distance	IQ 122	B	0.1	1.1	0.3		see IM 2
Radar Transponder Sector	IS 3.4	M	0.1	1.1	0.3		see IM 2
Leading Radar Transponder Beacons fairway transit	IS 3.5	M*	0.2 0.1	 1.1	 0.3		see IM 1 * B if coincident with leading lights
Ship Reporting System Boundary	AHS	M	2				30% Positive Stipple
Marine Reserve line stroke	AHS	 G	 0.15	 2	 1 3		 0.8 length
Environmentally Sensitive Sea Area line stroke band	AHS	 G 30% of G	 0.15	 2	 1 3		 0.8 length 3·0 wide band placed adjacent to the line.
Particularlry Sensitive Sea Area line stroke band	AHS	 G 30% of G	 0.15	 2	 1 3		 0.8 length 3·0 wide band placed adjacent to the line.
Designated Sea Area line band	AHS	 M 30% of M	 0·15	 2	 1		 1·0 wide band placed adjacent to the line.
Areas of Possible Shoaling	AHS	B	0.1	0.5	0.5		