

TRINITY HOUSE 2010 – Aids to Navigation Review

Trinity House (TH) has undertaken a review of their Aids to Navigation (AtoN's) provided around the coasts of England, Wales and the Channel Islands. Members of the Trinity House Users Consultative Group (THUCC) were advised of this process, at the meeting held on the 06 October 2009, and members of the wider GLA Joint User Consultative Group (JUCG) were similarly advised at the meeting held on the 20 May 2009. The initial results of this review process are attached as a draft plan for consultation, your views are requested by the 29th January 2010.

In December 2008, the IMO Maritime Safety Committee (MSC) approved an E-Navigation strategy. Whilst the end result and the timeframe to complete are not certain, nonetheless navigational technology continues to advance. At the same time, the reliance on the traditional system of lighthouses around the coast diminishes. With the exception of leading lights and "PELS", landfall lights and passing lights are now less important and their primary function is for coastal navigation, confirmation of position and spatial awareness. Thus the "traditional" AtoN's can be regarded as a secondary but complementary system to the primary navigation system of GNSS.

AIS as an Aid to Navigation

As part of a phased program TH will be deploying a number of shore and buoy AIS installations at various locations around the coast. These transmit AtoN messages (Type 21); Feedback received to date is that not all users are able to detect message Type 21, and only some users are able to fully utilise this functionality on a radar or electronic chart display, TH will continue to deploy AIS as an aid to navigation where there is seen to be added value in doing so, but the full value of this AtoN will only be realised when AIS manufacturers incorporate the necessary functionality within receivers, and the use of fully AIS-capable displays becomes more widespread. IMO's decision to mandate the carriage of ECDIS by SOLAS vessels will improve the latter situation. The deployment of AIS as an Aid to Navigation has not been included in this review.

In this Review, the following principles are applied.

- Generally, the lights system can be considered a complementary but secondary system to GNSS.
- Generally, having one light in view is acceptable.
- Generally, a maximum range of 18 miles is considered sufficient for all lights. However due to geographical locations, lights with a maximum range up to 24nm may still be required.
- Generally, rotating optics are no longer a necessary requirement, and new technology LED lights will be used when stations are re-engineered.
- Where a discontinuance of an AtoN is being considered it may be that the adjacent AtoN's require an increase in range provision.
- If practical, there can be a reduction in amount and diversity of flash characters on lighthouse lights.
- Leading and sectored lights remain important, in some locations.

- Fog signals are no longer considered to be AtoN's but are required as hazard warning signals, in some locations.
- Sequential or synchronised lights may be utilised where appropriate and after a suitable risk assessment.

Methodology

As in previous Reviews, the coasts of Britain and Ireland have been divided into 21 coastal areas. Areas 1 to 7 are the responsibility of NLB. Areas 8 to 14 are the responsibility of Trinity House. Areas 15 to 21 are the responsibility of Irish Lights.

- **AIS analysis has been used extensively to determine the volume, type, tracks and pattern of traffic and to carry out risk assessments.**
- A full Risk Assessment (RA) is carried out on AtoN where changes are being considered.
- A Risk Assessment may be applied either to individual AtoN or to a group of interrelated AtoN.
- The GLA's have cross checked their RAs and recommendations with each other.
- The full list of changes for consultation is attached to this document with significant proposed changes reproduced in the table below.

Orfordness Lighthouse	Discontinue all Aids to Navigation at this station in conjunction with increasing the range of the light at Southwold lighthouse to 24nm.
Beachy Head Lighthouse	Discontinue all Aids to Navigation at this station in conjunction with increasing the range of the light at Royal Sovereign lighthouse to 24nm.
Hartland Point Lighthouse	Discontinue all Aids to Navigation at this station, in conjunction with increasing the range at Trevoze Head Lighthouse to 24nm & Lundy South Lighthouse to 18nm and establishing a lighted buoy off Hartland Point.
Blacknore Lighthouse	No ongoing requirement for a long range (17Nm) light at this station.
Skokholm Lighthouse	Discontinue all Aids to Navigation at this station, in conjunction with establishing a new minor light with an 8nm range
Maryport Lighthouse	Enter negotiations to hand over station to Local Lighthouse Authority

The initial results of this review process are attached as a draft plan and comments are sought by the 29th January 2010.

Please send your responses to:

Navigation Directorate
Trinity House
Tower Hill
London
EC3N 4DH

Or Email to: navigation.directorate@thls.org

Captain Roger Barker
Director of Navigation



Navigation 2010 AtoN Review

<u>Area</u>	<u>Name</u>	<u>Type</u>	<u>Character</u>	<u>Range</u>	<u>Fog Signal</u>	<u>Radio Aids</u>	<u>Comment</u>
9	FLAMBOROUGH HEAD	LIGHTHOUSE	Fl (4) 15s	24	Horn (2) 90s	DGPS	2010 Review - Reduce main light from 24nm to 18nm 2010 Review - FS site threatened may require move FS to LH & reduce range
9	GUILE POINT	LIGHTHOUSE	Oc WRG 6s	4			2010 Review - Synchronise with Heugh LH
9	HEUGH	LIGHTHOUSE	Oc WRG 6s	5			2010 Review - Synchronise with Guile Point LH
9	LONGSTONE	LIGHTHOUSE	Fl 20s	24	Horn (2) 60s		2010 AtoN Review - Light to be reduced to 18nm, character altered to Fl.7.5s., 2010 AtoN Review - Fog Signal to be discontinued
9	CORTON	BUOY	Q (3) 10s	7	Whistle		2010 Review - Whistle to be discontinued
9	LOWESTOFT	LIGHTHOUSE	Fl 15s	23		AIS	2010 AtoN Review - Reduce range to 18nm
9	SOUTHWOLD	LIGHTHOUSE	Fl (4) WR 20s	16		AIS	2010 Review - Increase Main Light Range to 24nm 2010 AtoN Review - Discontinue Red Sectors - Expand White Sectors to Cover existing arc
9	WINTERTON	BEACON				RACON	2010 AtoN Review - Discontinue Racon
10	ORFORDNESS	LIGHTHOUSE	Fl 5s	20		RACON AIS	2010 Review - Discontinue
10	KNOB NE	BUOY	QG	4			2010 Review - Discontinue

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10	KNOB SE	BUOY	Fl G 5s	4			2010 Review - Discontinue
10	SHINGLES MID [Estuary]	BUOY	Fl (2) R 5s	4			2010 Review - Discontinue
10	SHINGLES N	BUOY	Fl R 2.5s	4			2010 Review - Discontinue
10	SHINGLES NW	BUOY	VQ	5			2010 Review - Discontinue
10	SHINGLES PATCH	BUOY	Q	5			2010 Review - Discontinue
10	TIZARD	BUOY	Q (6) + LFl 15s	5			2010 Review - Discontinue
10	BEACHY HEAD	LIGHTHOUSE	Fl (2) 20s	20	Horn (1) 30s		2010 AtoN Review - Discontinue
10	CS5	BUOY	Fl Y 2.5s	6			2010 AtoN Review - Discontinue
10	ROYAL SOVEREIGN	LIGHTHOUSE	Fl 20s	12	Horn (2) 30s		2010 AtoN Review - Increase Range to 24nm
11	ANVIL POINT	LIGHTHOUSE	Fl 10s	19			2010 AtoN Review - Decrease Range to 9nm
11	NAB	LIGHTHOUSE	Fl 10s	16	Horn (2) 30s	RACON	2010 AtoN Review - Decrease range to 12nm
11	ALDERNEY	LIGHTHOUSE	Fl (4) 15s	23	Horn (1) 30s		2010 AtoN Review - Reduce Main Light Range to 12nm on re-engineering 2010 AtoN Review - Main Light - Night Time & Reduced vis only
11	CASQUETS	LIGHTHOUSE	Fl (5) 30s	24	Horn (2) 60s	RACON	2010 - AtoN Review - Light range to be reduced to 18nm and fog signal range to 2nm

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11	HANOIS	LIGHTHOUSE	FI (2) 13 s	20	Horn (2) 60s		2010 AtoN Review - Reduce Main Light Range to 18nm
11	PORTLAND BILL	LIGHTHOUSE	FI (4) 20s	25	Horn (1) 30s		2010 AtoN Review - Reduce FS from 3nm to 2nm
11	SARK	LIGHTHOUSE	FI 15s	20	Horn (2) 30s		2010 AtoN Review - Reduce Main Light Range to 18nm
12	BERRY HEAD	LIGHTHOUSE	FI (2) 15s	19			2010 AtoN review - Decrease Main Light Range from 19nm to 16nm
12	ST ANTHONY	LIGHTHOUSE	Iso WR 15s	16	Horn (1) 30s		2010 AtoN Review - Decrease Main Light Range from 16nm to 12nm 2010 AtoN Review - Decrease Red Sector Light Range from 14nm to 9nm
12	START POINT	LIGHTHOUSE	FI (3) 10s	25	Horn (1) 60s		2010 AtoN Review - Decrease Red Sector Light Range from 12nm to 9nm
12	TATER DU	LIGHTHOUSE	FI (3) 15s	20	Horn (2) 30s		2010 AtoN Review - Decrease Main Light Range from 20nm to 16nm 2010 AtoN Review - Decrease Sector Light Range from 13nm to 9nm
12	GODREY ISLAND	LIGHTHOUSE	FI WR 10s	12			2010 AtoN Review - Reduce range of Main Light to 8nm 2010 AtoN Review - Reduce range of Red Sector Light to 8nm
12	PENINNIS	LIGHTHOUSE	FI 20s	17			2010 AtoN Review - Reduce Main Light Range from 17nm to 9nm
12	TREVOSE HEAD	LIGHTHOUSE	FI 7.5s	21	Horn (2) 30s		2010 AtoN Review - Increase Range to 24nm 2010 AtoN Review - Change Character to FI 15s
13	BLACKNORE	LIGHTHOUSE	FI (2) 10s	17			2010 AtoN Review - Discontinue station
13	HARTLAND POINT	LIGHTHOUSE	FI (6) 15s	22	Horn (1) 60s		2010 AtoN Review - Discontinue station 2010 AtoN Review - Deploy lighted starboard lateral buoy with WAB

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13	LUNDY SOUTH	LIGHTHOUSE	Fl 5s	15	Horn (1) 25s		2010 AtoN Review - Increase Range to 18nm 2010 AtoN Review - Change Character to Fl W 10 secs
13	SKOKHOLM	LIGHTHOUSE	Fl WR 10s	19			2010 AtoN Review - Discontinue Station 2010 AtoN Review - Establish new light - Fl ev 10s - W 360 deg - 8nm Range
14	SOUTH STACK	LIGHTHOUSE	Fl 10s	24	Horn (1) 30s		2010 AtoN Review - Reduce FS Range from 3nm to 2nm
14	BAR LF	LIGHT FLOAT	Fl 5s	12		RACON	2010 AtoN Review - Enter negotiations to hand over to Port of Liverpool
14	HE1	BUOY	Q (9) 15s	5			2010 AtoN Review - Enter negotiations to Hand over to Port of Liverpool
14	HE2	BUOY	Fl G 2.5s	4			2010 AtoN Review - Enter Negotiations to hand over to Port of Liverpool
14	HE3	BUOY	QG	4			2010 AtoN Review - Enter negotiations to hand over to Port of Liverpool
14	HOYLE N	BUOY	VQ	5			2010 AtoN Review - Discontinue in line with construction of Gwynt-Y-Mor OREI
14	MARYPORT	LIGHTHOUSE	Fl 1.5s	6			2010 AtoN Review - Enter negotiations to hand over to Maryport Harbour Authority