

# NORTHERN LIGHTHOUSE BOARD

The General Lighthouse Authority  
for Scotland and the Isle of Man



## Guidelines for the Management of Local Lighthouse Authority (LLA) Aids to Navigation

# NLB GUIDELINES FOR THE MANAGEMENT OF LOCAL LIGHTHOUSE AUTHORITIES AIDS TO NAVIGATION (AtoN)

This document is intended to assist Local Lighthouse Authorities (LLAs) in the provision of suitable Aids to Navigation (AtoN) services.

The areas covered are:	PAGE
1. Why NLB has superintendence of LLAs	2
2. What are AtoN	3
3. Inspections, Reporting & Audits of LLAs	5
4. Outages, Fault Reporting and Recording	7
5. Aton Reporting Online System [AtonRep]	9
6. Statutory Sanction : Establish, Alter or Discontinue AtoN	11
7. Notices to Mariners	13
8. Marine Scotland Licensing	13
9. Updating LLA Contact Details	13
10. Web Sites	14
11. Abbreviations and Acronyms	15
12. NLB Navigation Section : Contact Details	16

## 1. WHY NLB HAS SUPERINTENDENCE OF LLAs

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The Northern Lighthouse Board (NLB) is the General Lighthouse Authority (GLA) for Scotland all of its Islands and the Isle of Man. As the GLA for Scotland and Isle of Man the NLB has the statutory responsibility to superintend and manage all of the Aid(s) to Navigation (AtoN) within its waters.

NLB are directly responsible for AtoN that are provided for general navigation purposes. Provision of AtoN for specific approaches to ports and harbours lies with the associated Local Lighthouse Authority (LLA).

NLB's responsibility is derived from the Merchant Shipping Act 1995, and through the Port Marine Safety Code (PMSC), where LLAs are required to have a Safety Management System (SMS) to include the maintenance and record keeping of AtoN within their area of responsibility.

## 2. WHAT ARE ATON

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Aid(s) to Navigation (AtoN), are any light, buoy, beacon, fog signal, Racon (Radar Beacon), Automatic Identification System (AIS) (if transmitting message #21), Differential GPS (DGPS) or any combination of these.

AtoN are required for both daytime and nighttime use and will consist of a combination of colours, shapes and light characters, see Figures 1 and 2 below.

Electronic AtoN (such as Racons, AIS and DGPS), are useable at any time of day and require specific receivers/radar to be able to use their signals.

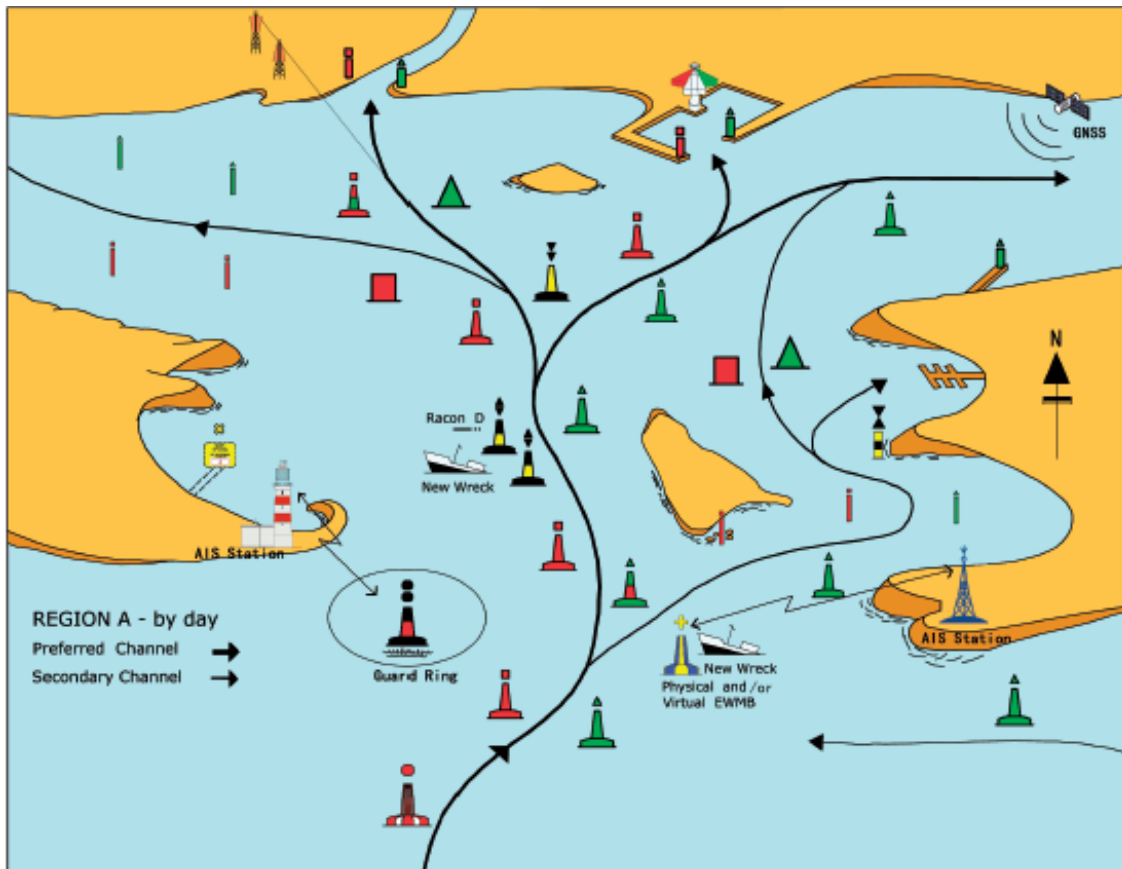


Figure 1: AtoN by Daytime

## 2. WHAT ARE ATON (CONTINUED)

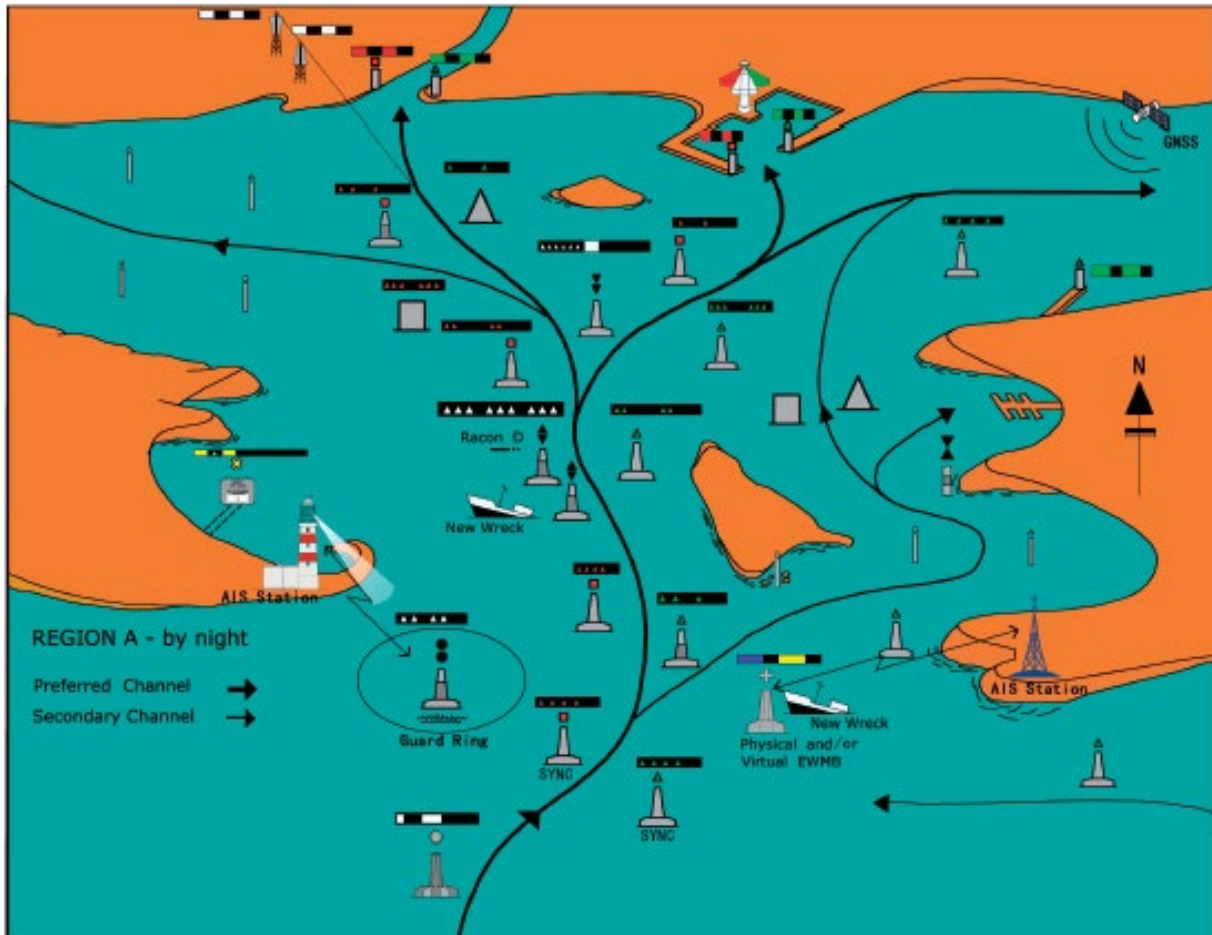


Figure 2 : AtoN by Nighttime

### 3. INSPECTIONS, REPORTING AND AUDITS OF LLAs

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To fulfil our statutory responsibilities NLB are required to inspect and record the outcomes for all LLA AtoN and report the findings annually to the Department for Transport.

NLB are also required to make the results of LLA inspections available to the relevant LLA. This is achieved via the “AtoN Reporting Online” System.

LLAs are required to manage their AtoNs within international guidelines as determined by the **International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA)**. AtoN are categorised according to their navigational importance with their ‘availability’ requirements reflecting this:

<b>Availability</b>	<b>Objective</b>	<b>Definition</b>
Category 1	99.8%	AtoN considered to be of primary navigational significance. (i.e. Lighted AtoN and Racons marking landfall and primary routes)
Category 2	99.0%	AtoN considered to be of navigational significance. (i.e. Lighted AtoN and Racons marking secondary routes or supplementing the marking of primary routes)
Category 3	97.0%	AtoN considered to be of less navigational significance than Cat 1 & 2.

NB. The ‘Availability Objective’ is calculated over a rolling 3-year period. This means that over a 3-year period a Cat 1 AtoN needs to be functional for 99.8% of the time, (maximum allowable time unavailable is 52.56 hours over 3-years rolling period).

### 3. INSPECTIONS, REPORTING AND AUDITS OF LLAs (CONTINUED)

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LLAs' key responsibilities and actions can be summarised as follows:

- LLAs should instigate a process for the regular inspection of their AtoN. This should include a frequent check of functionality, and also a process of checking the range achieved from navigation lights.
- Under the Safety Management System (SMS) LLAs should undertake a regular review of their AtoN suitability in consultation with their users. These consultations should be recorded to support any subsequent alterations to the AtoN provided by the LLA.
- The SMS also requires the LLA to keep records of maintenance activities and report faults for each of their AtoN.
- LLAs are responsible for any third party AtoN that lie within their area of responsibility and should ensure they are maintained to the relevant IALA Category.
- LLAs are required to send 'Availability' figures to NLB in April of each year, covering the previous 3-year period for all of their AtoN. [See AtoN Reporting Online System section below for details].

Under sections 4.21 to 4.24 of the Port Marine Safety Code, NLB will perform audits of LLA's AtoN Management System documentation to ensure the SMS requirements are met.

## 4. OUTAGES, FAULT REPORTING AND RECORDING

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Any AtoN that fails to meet its advertised characteristics (either daytime or nighttime) is classed as an outage.

AtoN outages are usually first identified by the operator, but may also be notified as a result of an inspection by NLB, or local observation by shipping or a member of the public. If an inspection ‘failure’ or a notification from shipping/public is received, NLB will contact the relevant LLA informing them and ask for confirmation of the report. The LLA should respond and follow the process as detailed in Figure 3 : Response to Aid to Navigation (AtoN) faults, or as defined in their Safety Management System (SMS).

Recording of outages is the responsibility of the LLA and can be completed using NLBs AtoN Reporting Online System (see next section for details). LLAs are encouraged to update any ‘outage’ records as necessary when there is any delays in restoring the AtoN.

A member of NLBs Navigation Section will monitor outages and contact the LLA on a regular basis requesting updates on the status until the AtoN is fully restored.



## 4. OUTAGES, FAULT REPORTING AND RECORDING (CONTINUED)

### Response to Aid to Navigation (AtoN) faults

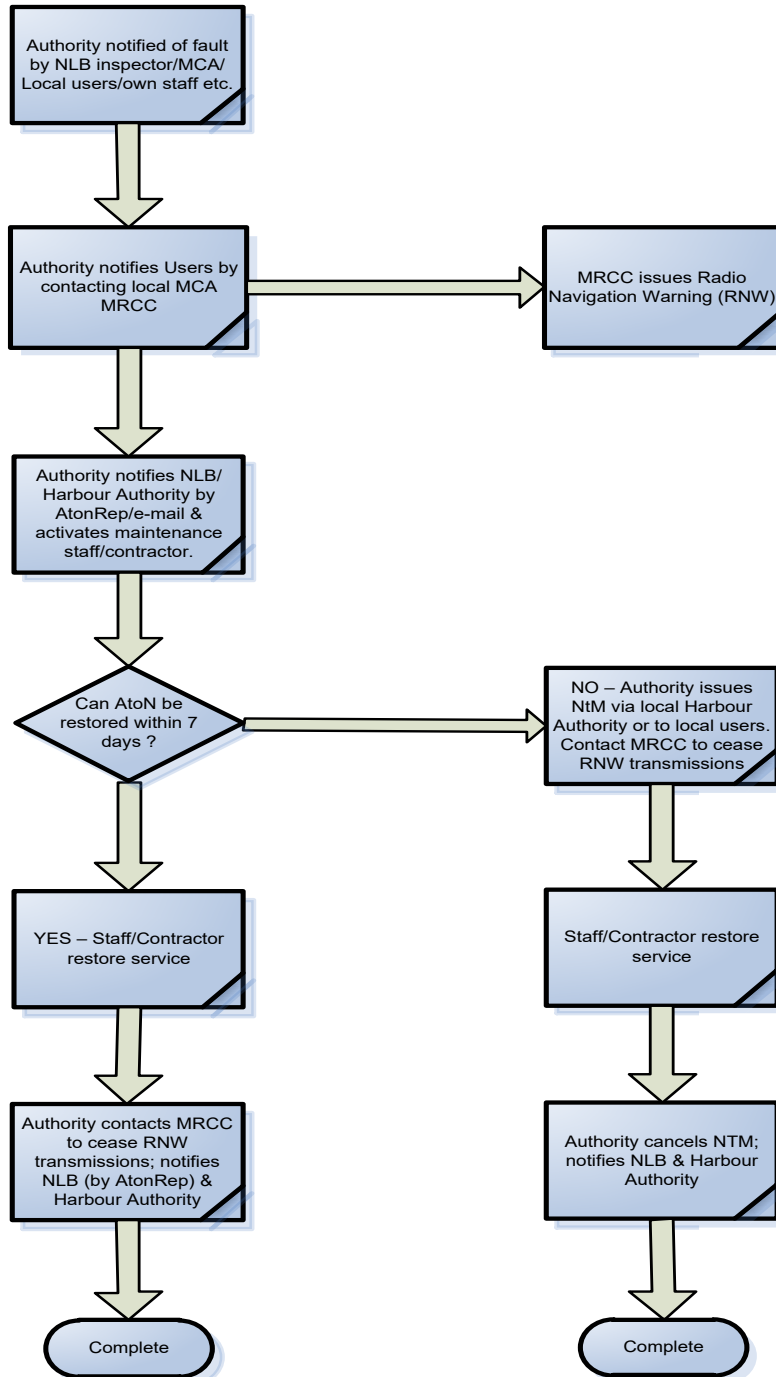


Figure 3: Response to Aid to Navigation (AtoN) faults

## 5. ATON REPORTING ONLINE SYSTEM [ATONREP]

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To assist LLAs with the management of their Aton NLB provides access free of charge to the “Aton Reporting Online Portal”, <http://nlbhq.nlb.org.uk/latonsonline/>

[As of November 2016, the portal operates with the following browsers: Internet Explorer 11, Google Chrome or Firefox]

The “Aton Reporting” system allows LLAs to manage their Aton data; logging outages, production of availability reports, listing inspection records and applying for Statutory Sanctions, to establish, alter or discontinue an Aton. All LLAs can request multiple user access, contact [navigation@nlb.org.uk](mailto:navigation@nlb.org.uk) for assistance.

There is a “User Guide” download available on the login page to help get you started. If you experience difficulties in using the portal contact the Navigation Section on the above email address for assistance.

The annual reports of ‘Availability’ figures for a 3-year period as requested by NLB can be generated using this system:

Select <Reports> highlight <LLA Aton Availability by Category/LLA Aton Availability by Aton> select <Run selected Report>; a report is generated and can be saved in various formats.

## 5. ATON REPORTING ONLINE SYSTEM [ATONREP] (CONTINUED)

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The 'Report' facility above can be used by the LLA to generate various reports for use within other areas of their organization to support their compliance with the PMSC and SMS.

The screenshot shows the 'Log In' page of the ATON Reporting Online system. The page has a blue header with the text 'ATON REPORTING ONLINE' on the left and a navigation bar on the right containing 'About' and 'Log in'. Below the header is a large white area with a central 'Log In' form. The form has a title 'Log In' and two input fields: 'Username:' and 'Password:'. A 'Log In' button is located at the bottom right of the form. Below the form, there is a link: 'Forgotten your user name or password? [Click here](#)'. At the bottom of the page, there is a footer with the text 'By logging in you are accepting the [Terms of Use](#)' on the left and 'Contact Us' on the right. Below the footer, there is a small line of text: 'Northern Lighthouse Board, 84 George Street, Edinburgh, EH2 3DA, Tel: +44 131 4733100'.

Figure 4: AtoN Reporting Online 'Log In' Page

## 6. STATUTORY SANCTION: TO ESTABLISH, ALTER OR DISCONTINUE AN AID TO NAVIGATION

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LLAs are required to apply for a “Statutory Sanction” from NLB if they intend to establish, alter or discontinue any AtoN. The necessary forms are available on request from the Navigation Section of NLB ([navigation@nlb.org.uk](mailto:navigation@nlb.org.uk)), or on the NLB web site,

<http://www.nlb.org.uk/ourlights/Statutory.htm>

Please note it is essential that LLAs inform NLB once a Statutory Sanction has been implemented to ensure our records are updated as necessary. It should also be noted that if a Statutory Sanction is not to be implemented and is no longer needed NLB need to be informed.

LLAs are responsible for the notification of the UK Hydrographic Office ([sdr@ukho.gov.uk](mailto:sdr@ukho.gov.uk)), of any changes to their AtoN and subsequent chart updates. NLB will copy each Statutory Sanction letter to the UK Hydrographic Office but this will **NOT** initiate chart updates.

## 6. STATUTORY SANCTION (CONTINUED)

### Establishment of Aid to Navigation (AtoN)

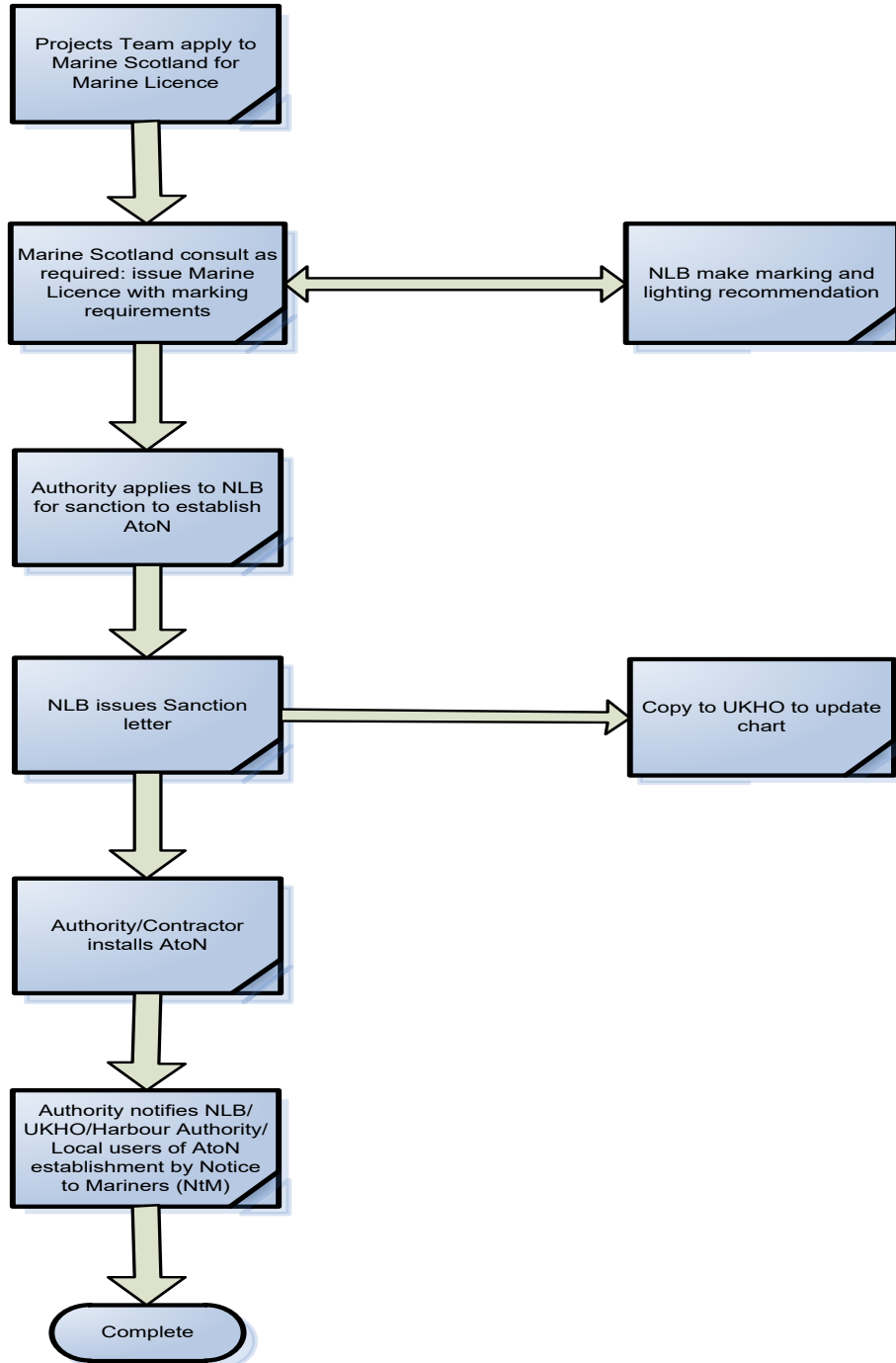


Figure 5: Statutory Sanction process

## 7. NOTICE TO MARINERS

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A Notice to Mariners (NtM), should be issued on establishment/alteration or discontinuation of any AtoN, an NtM should also be issued if an AtoN fails to meet its advertised characteristics. A further NtM should be issued on the return to service of the AtoN.

NLB should be included in the NtM distribution list: [navigation@nlb.org.uk](mailto:navigation@nlb.org.uk).

## 8. MARINE SCOTLAND LICENSING

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NLB are a statutory consultee with regard to safe navigation for all Marine Licence Applications in Scotland, giving navigation marking recommendations as necessary. We welcome enquiries from LLAs and individuals on proposed works and projects prior to formal licence applications to discuss any marking requirements and recommendations.

## 9. UPDATING LLA CONTACT DETAILS

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NLB retain contact details for all LLAs, any changes should be notified to [navigation@nlb.org.uk](mailto:navigation@nlb.org.uk), to ensure our records are updated, i.e. personnel changes, altered email addresses, phone numbers etc.

## 10. WEB SITES

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Northern Lighthouse Board

[www.nlb.org.uk/](http://www.nlb.org.uk/)

Commissioners of Irish Lighthouses

[www.irishlights.ie/](http://www.irishlights.ie/)

Trinity House

[www.trinityhouse.co.uk/](http://www.trinityhouse.co.uk/)

IALA

[www.iala-aism.org/](http://www.iala-aism.org/)

Marine Scotland

[www.gov.scot/About/People/Directorates/marinescotland](http://www.gov.scot/About/People/Directorates/marinescotland)

MCA

[www.gov.uk/government/organisations/maritime-and-coastguard-agency](http://www.gov.uk/government/organisations/maritime-and-coastguard-agency)

Receiver of Wrecks

[www.gov.uk/government/groups/receiver-of-wreck](http://www.gov.uk/government/groups/receiver-of-wreck)

Department for Transport

[www.gov.uk/government/organisations/department-for-transport](http://www.gov.uk/government/organisations/department-for-transport)

Crown Estate Scotland

[www.crownestatescotland.com](http://www.crownestatescotland.com)

## 11. ABBREVIATIONS AND ACRONYMS

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AIS	Automatic Identification System
AtoN	Aid to Navigation
AtonRep	AtoN Reporting Online System
DfT	Department for Transport
DGPS	Differential GPS
GLA	General Lighthouse Authority
GPS	Global Positioning System
IALA	International Association of Marine Aids to Navigation & Lighthouse Authorities
LLA	Local Lighthouse Authority
MS	Marine Scotland
MSA	Merchant Shipping Act 1995
NLB	Northern Lighthouse Board
NtM	Notice to Mariners
PMSC	Port Marine Safety Code
Racon	Radar Beacon
SMS	Safety Management System
UKHO	United Kingdom Hydrographic Office



## 11. NLB NAVIGATION SECTION: CONTACT DETAILS

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Northern Lighthouse Board  
84 George Street  
Edinburgh  
EH2 3DA

Reception: 0131 473 3100 (ask for Navigation Section)

Email address: [navigation@nlb.org.uk](mailto:navigation@nlb.org.uk)

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