

Provision and Maintenance of Local Aids to Navigation Marking Offshore Renewable Energy Installations.



Trinity House

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1. This document should be read in conjunction with IALA O-139 Recommendations on the Marking of Man-Made Offshore Structures and MGN 543.
2. The Merchant Shipping Act 1995 (MSA 1995) vests in the General Lighthouse Authorities (GLAs) the superintendence and management of all lighthouses, buoys and beacons within their respective areas. The same Act empowers the GLAs to inspect all lighthouses, buoys and beacons under Local Lighthouse Authority (LLA) Management, and vests in the GLAs the duty to communicate the results of any such inspections to the LLA and make general reports to the Secretary of State on the same.
3. The manner in which Trinity House (TH) discharges its statutory duty in respect of local AtoN is a combination of consent to changes, audit and inspection. It is the current policy of TH to inspect/audit all local Aids to Navigation (AtoN) within its area of operation and to carry out a seaward inspection of all AtoN on offshore structures, annually.
4. The inspection/audit of local AtoN is co-ordinated with the other GLAs ensuring continuity of standards throughout the United Kingdom and the Republic of Ireland.
5. The annual inspection is just one of the ways in which TH can ensure that, due to changes in the degree of risk and volume of traffic, as well as to the existing circumstances and available technology, local AtoN originally consented/sanctioned/specified by TH continue to adequately meet the mariners' requirements, taking into account environmental considerations, and are therefore appropriate to the current circumstances. Many Local Lighthouse Authorities also consider the inspection to form an important external audit element of their port quality management systems.
6. Under the UK Government's Port Marine Safety Code all aids to navigation maintained by Harbour Authorities and any other existing LLAs must be maintained in accordance with the availability criteria laid down by the General Lighthouse Authorities and must be subject to periodic review. The characteristics of these aids to navigation must comply with Guidelines and Recommendations as laid down by the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA). The GLAs require Harbour Authorities and any other existing LLAs to be responsible for ensuring that any third party AtoN, within their area of responsibility, are also established and maintained to the same standards.
7. Those responsible for local Aids to Navigation, which lie outside statutory Harbour Authorities' and Local Lighthouse Authorities' areas of jurisdiction, e.g. AtoN established as a result of Marine & Coastal Access Act 2009 Consents, AtoN maintained by Government Agencies and the Ministry of Defence – to name but a few, will also be responsible for ensuring that these are established and maintained to the same standards.

8. A review of the local AtoN Inspection regime highlighted the need to introduce an audit of all local AtoN on an ongoing basis, In addition the TH Inspector of Seamarks (IOS) making an inspection on a particular day. This is achieved by carrying out audits of local AtoN Availability Statistics and Casualty Response records.
9. The responsibility to state Availability Targets for local AtoN established to mark renewable energy installations rests with the appropriate GLA. These availability targets are based on IALA guidelines and will normally form part of the consent issued to the developer/operator by the appropriate consenting authority.
10. The responsibility to accomplish these availability targets, and lay down response priorities for the individual AtoN in order to achieve these targets rests with the developer/operator. In order to ensure consistency of response the timescales laid down and applied by TH shall be used.
11. The developer/operator responsible for the provision of local AtoN shall keep appropriate records of the availability statistics and casualty response times. The availability shall be reported to TH using the system provided and as required. For full details on the reporting system contact navigation@trinityhouse.co.uk.
12. Each developer/operator shall establish procedures for responding to casualties to AtoN within the timescales as laid down and applied by TH.
13. The requirement to record the availability and casualty information at the local level will ensure international standard are met.
14. Scrutiny of the statistics and records mentioned above will also assist TH in identifying those areas where improvement is necessary and additional site visits may be required.
15. The IOS and/or TH Navigation Directorate will also use these details as a basis for offering additional advice/guidance to those authorities, as appropriate.
16. Contact: Navigation Directorate
 Trinity House,
 Tower Hill,
 London,
 EC3N 4DH

 Tel: 0207 481 6900
 Email: navigation@trinityhouse.co.uk

AtoN Characteristics.

IALA, from time to time, makes recommendations, guidelines, specifications and practical notes on technical matters relating to AtoN provision and maintenance. Such recommendations and guidelines include matters relating to the rhythmic characters of lights used on AtoN, IALA Maritime Buoyage System, Solar Power Systems and the marking of offshore wind farms and offshore wave and tidal devices, to name a few. Details can be accessed directly through the IALA website.

Performance Targets

The following IALA availability targets are required to be adopted by authorities responsible for the provision and maintenance of local AtoN marking renewable energy installations.

- Category 1 = availability 99.8% (this equates to 17.52 hours downtime per annum)
- Category 2 = availability 99.0% (this equates to 3.65 days downtime per annum)
- Category 3 = availability 97.0% (this equates to 10.95 days downtime per annum)
- The absolute minimum level of availability is 95.0%

As mentioned in 9, the responsibility to state these availability targets rests with the GLA and these targets will be included either within any consent issued by the appropriate consenting authority or be included in any correspondence entered into between the developer/operator and the relevant GLA under the Transport and Works Act.

To ensure consistency in application of standards, when setting individual availability targets, TH uses the appropriate IALA guidelines, which relate specifically to AtoN marking renewable energy installations, fields and farms.

Casualty Response Considerations for Renewable Energy Developers and Operators.

For renewable energy developers/operators the casualty response should be coordinated by the relevant designated department/team within their organisation.

When prioritising the response to aids to navigation failure full concern should be given to maintaining the availability requirements as per Trinity House directions and all relevant Marine Licences. As these are determined over a 3 year rolling time frame, frequent failures will require more urgent response so the availability can be maintained.

When prioritising the response to aids to navigation failure the operator should take in to account all local navigational issues and fully risk assess any delayed response.

Here are two suggested guidelines which could be considered by operators when developing their own systems.

Where structures are without the required lights for any period of time. Immediate response to investigate and mobilise or divert appropriate resources, other maintenance priorities to be amended accordingly. Radio Navigation Warning required via either UKHO (NAVTEX), Coast Radio Stations or Local Port Radio / Vessel Traffic Services as appropriate.

Where structures have partial or intermittent failure to aids to navigation. Urgent mobilisation of maintenance resources, subsequent to initial investigation. Consideration should be given to Radio Navigation Warning required via either UKHO (NAVTEX), Coast Radio Stations or Local Port Radio / Vessel Traffic Services as appropriate.