



Commissioners of  
**IRISH LIGHTS** | Navigation  
and Maritime  
Services

**2024/25**

**Irish Lights report on  
Quality Assurance  
of the  
Local Aids to Navigation service  
for Northern Ireland**



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## **Acronyms**

AtoN	Aid to Navigation
AIS	Automatic Identification System
GLA	General Lighthouse Authority
IALA	International Organisation for Marine Aids to Navigation
LLA	Local Lighthouse Authority
NIFHA	Northern Ireland Fishery Harbour Authority
ORE	Offshore Renewable Energy
UKHO	UK Hydrographic Office

## **Executive Summary**

This report is submitted to the Secretary of State for Transport pursuant to section 198 (4)(b) of the Merchant Shipping Act 1995. This report covers the period April 2024 to March 2025 inclusive.

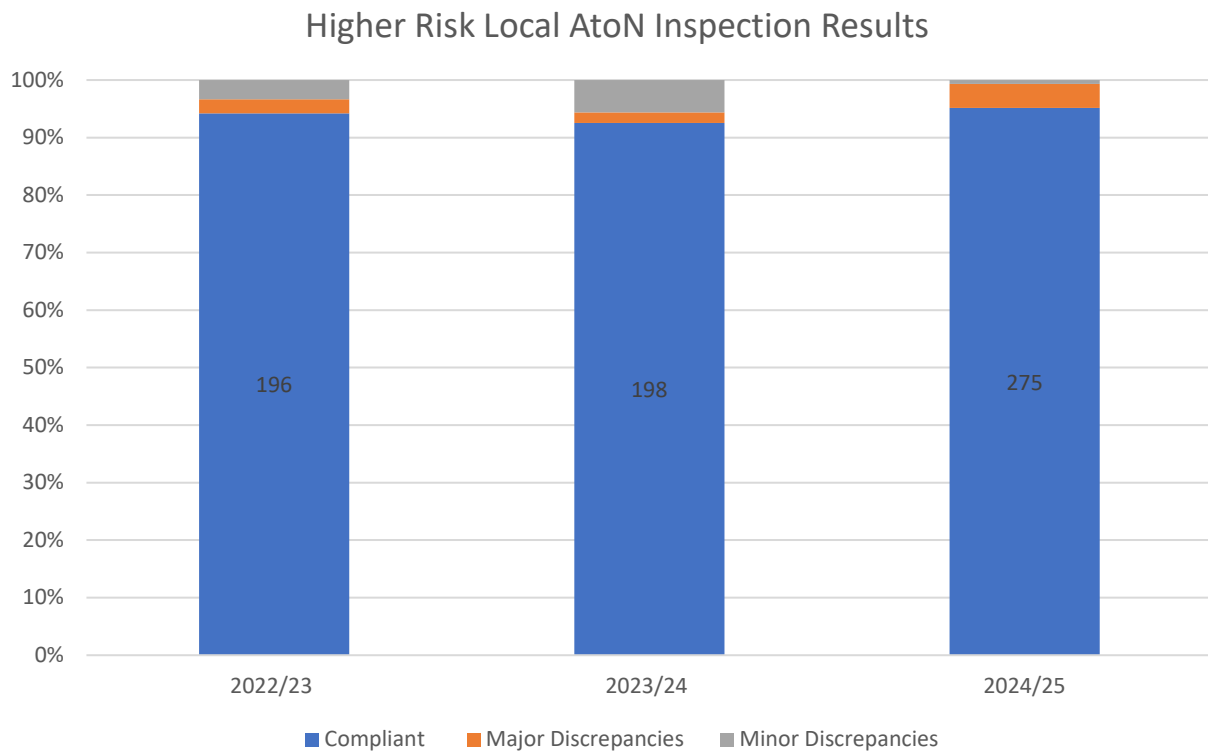
Irish Lights as the General Lighthouse Authority for Northern Ireland fulfils the requirements of the International Convention for the Safety of Life at Sea (SOLAS), 1974, Chapter V, Regulation 13 to provide “such aids to navigation (AtoN) as the volume of traffic justifies and the degree of risk requires.”. In addition to the provision of landfall and other significant AtoN around the coast of Northern Ireland, Irish Lights also provides a superintendence and management service for Local Lighthouse Authorities (LLA) to ensure that the recommendations and guidelines published by the International Organisation for Marine Aids to Navigation (IALA) are followed.

Each LLA is required to seek a Statutory Consent from Irish Lights to add, change or remove marine aids to navigation within their control around the coast of Northern Ireland. During this reporting year Irish Lights processed applications in Northern Ireland under the Merchant Shipping Act 1995 for the establishment of one (1) new AtoN, and the disestablishment of two (2) existing AtoN through the Statutory Consenting process. This consent from Irish Lights ensures that the proposed change is risk assessed from a safety of navigation perspective and that Appropriate Assessment screening is conducted under the Conservation (Natural Habitats, etc.) (Amendment) (Northern Ireland) (EU Exit) Regulations 2019. Once approved, the changes to AtoN are communicated to the UKHO so that they can be included in weekly updates to nautical charts used by all commercial, fishing and leisure vessels to navigate around the UK.

In addition, Irish Lights conducts physical site visits to inspect over 400 of these local AtoN in Northern Ireland annually and periodically audits each LLA to ensure adherence to international IALA requirements and standards. Allowing for annual variations due to the two-year inspection cycle, the local AtoN inspections results from the reporting year show that a very high level of compliance is being maintained by LLA in Northern Ireland. Focusing on the higher risk local AtoN, which are inspected annually, over 90% of local AtoN were found to be compliant for each of the last three (3)<sup>1</sup> reporting years.

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<sup>1</sup> Full year data for higher versus lower risk local AtoN inspections is available for the previous 3 years.



*Figure 1 - Inspection results from higher risk local AtoN – Northern Ireland*

Observations gathered during the audit process show a better understanding amongst LLA of the need for and utility of local AtoN provision to reduce risk. In particular, audits conducted on ports & harbours which are also subject to the Ports & Marine Facilities Safety Code (PMSC, updated 2025) demonstrated a high level of awareness of their duties as an LLA. These ports value the audit process conducted by Irish Lights to demonstrate compliance with Para 10.9 of the PMSC. For other LLA outside the ports sector, some experienced high turnover of staff during the reporting year which has resulted in a loss of corporate knowledge and a lack of business continuity. The LLA Training Course provided by Irish Lights, coupled with improvements to the Local AtoN Management portal (to provide scheduled reminders to LLAs to follow up on outstanding items) have both been cited by LLA as a benefit for the education and training of new personnel, especially those from non-marine backgrounds.

## **Results of Local AtoN Inspections in Northern Ireland**

To prioritise safety of navigation, Irish Lights categorises Local AtoN as higher, or lower risk based on defined criteria. Higher risk local AtoN are inspected annually while lower risk local AtoN (typically aquaculture and AtoN in areas of lower traffic density) are inspected every second year. The criterion in use includes the volume of traffic in the area, the IALA category and criticality of the AtoN, importance of the AtoN to major shipping routes and whether the AtoN is located within an environmentally sensitive area.

In the reporting years there were 654 Local AtoN under the authority of 20 LLA around the coast of Northern Ireland. Of these, Irish Lights inspected 400 AtoN, which is 61.1% of the total number. Of the 289 Local AtoN designated as higher risk, Irish Lights inspected 100% of these AtoN.



*Figure 2 – AtoN marking the approaches to AtoN at the entrance to Phennick Cove Marina Co. Down*

Overall, when viewed across higher and lower risk AtoN, the inspection results from the reporting year show an increase in compliant AtoN and a reduction in discrepancies. There is an expected variation in compliance between different reporting years due to the biennial inspection cycle and the inclusion of different subsets of lower-risk AtoN in the different reporting periods<sup>2</sup>. Allowing for this biennial cyclical variation, an increasing trend in compliance is evident, moving from a low point of ~55% in 2021/22 during the COVID period, up to ~85%, then down to ~70% before increasing to 95% in the reporting year, the latter percentage reflecting a focus on AtoN within the ports of Foyle, Belfast, Larne and Coleraine. One caveat regarding this high level of compliance is that most of the lower risk local AtoN located within Strangford Lough were not scheduled for inspection in the current year. These AtoN have proven difficult to maintain at the required standard in the past, but an improvement programme is currently underway, led by one of the two LLA adjacent to the Lough.

Inspection Outcomes	Explanation of Outcomes
Compliant	Where the AtoN is as described in the Statutory Consent
Major Discrepancy	Where the AtoN is not compliant and is considered a risk to navigation
Minor Discrepancy	Where the AtoN is not fully compliant but is not a risk to navigation

Table 1 – Description of major and minor discrepancies

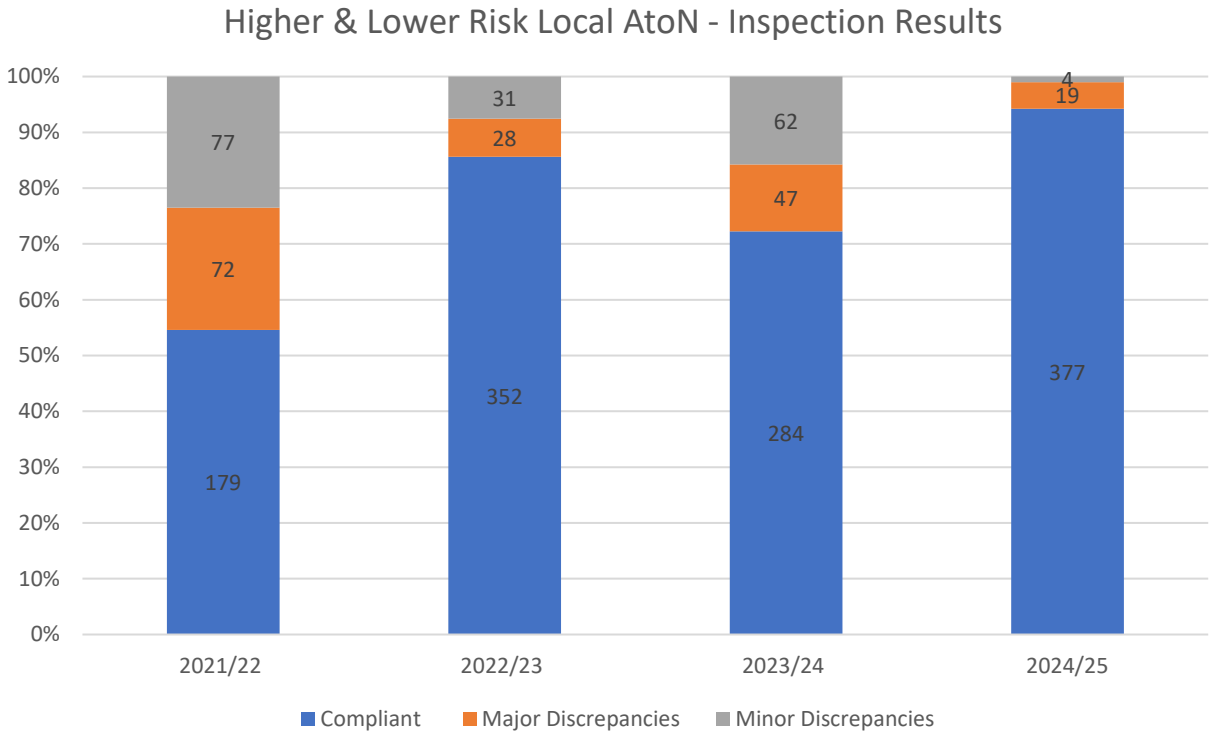


Figure 3 – Inspection Results – All Local AtoN – Northern Ireland

<sup>2</sup> For example, the inclusion or omission of a larger number of aquaculture AtoN in a certain reporting period, can cause a cyclical variation in discrepancies observed.

Irish Lights adopts a collaborative approach to assist and support LLA in delivering the Local AtoN service under their remit. In addition to hosting an annual Local AtoN Providers meeting for LLA, Irish Lights meets with individual LLA on a regular basis to gather feedback and offer professional advice and support. Based on these discussions with LLA, the improvement in compliance in recent years demonstrates an increased awareness, at the management level of these organisations, of the risk posed to life, property and the environment resulting from poor standards in local AtoN provision, as evidenced by the initiative to improve the local AtoN within Strangford Lough which was agreed during the reporting period and will be implemented during 2025. This awareness of risk has been improved through initiatives such as the Irish Lights LLA Training Course, which provides a modular introduction to the provision of AtoN tailored for non-mariners. In addition, enhancements to the Irish Lights Local AtoN Management Portal, which is a web-based GIS tool provided at no charge by Irish Lights, have made it easier for LLA to comply with their duties under the Merchant Shipping Act 1995 and the PMSC.



*Figure 4 – Irish Lights personnel inspecting local AtoN in Strangford Lough*

## **Aquaculture AtoN Inspection Results in Northern Ireland**

The aquaculture sector in Northern Ireland is currently small but has the potential for growth, especially in the more profitable finfish and shellfish segments. Of the 654 local AtoN in Northern Ireland, 54 are aquaculture AtoN and all are classified as lower risk. The majority of these AtoN are located in Carlingford Lough, with smaller sites in Belfast Lough, Strangford Lough and Lough Foyle. Only 16 of these AtoN were due inspection in the reporting year and all were compliant.



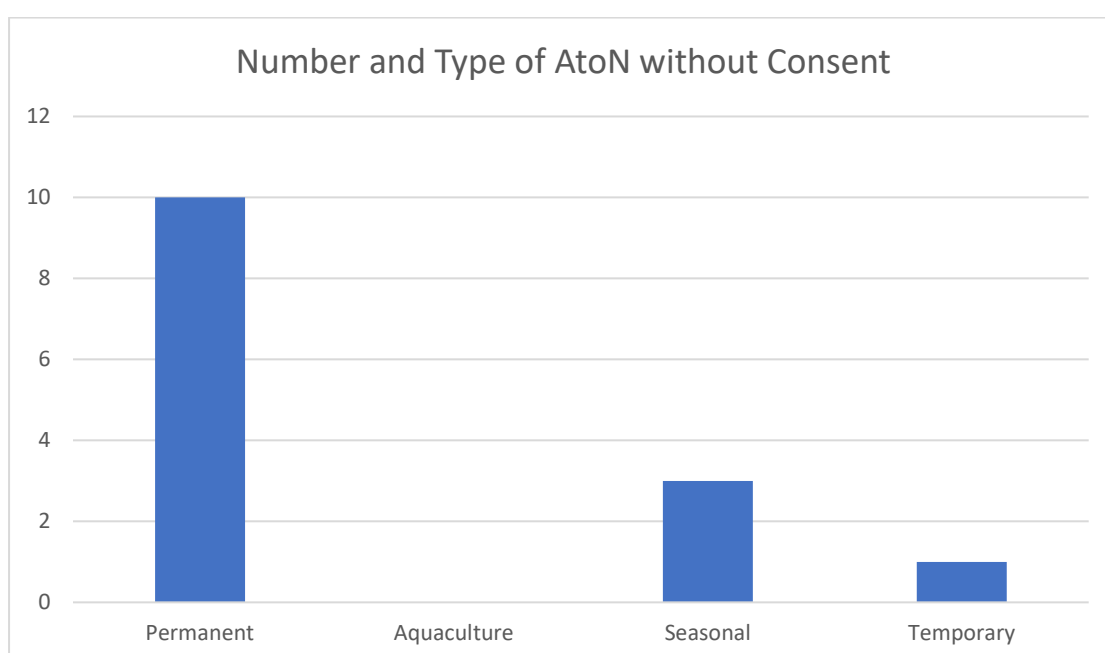
*Figure 5 – Oyster trestles located outside the shipping channel in Lough Foyle*

The Department of Agriculture, Environment and Rural Affairs (DAERA), Marine and Fisheries Division is responsible for the licensing of fish farms and shellfish farms, under the Fisheries Act (Northern Ireland) 1966, as amended. While the 1966 Act does not explicitly list statutory consultees in the way more modern legislation does, Irish Lights is routinely consulted by DAERA prior to licensing of aquaculture sites in Northern Ireland, ensuring that the licence conditions include a requirement to mark the site with marine AtoN as appropriate to the volume of traffic and the degree of risk, meeting the requirements of SOLAS Convention V/13 and international IALA standards.

## **Local AtoN without consent**

Aids to Navigation (AtoN) without consent are discovered by Irish Lights personnel while conducting routine local AtoN inspections or are observed by the ILV Granuaile during the conduct of buoy maintenance on the general AtoN network. These AtoN have been placed in the water, usually as part of a development which has received a consent under the Marine and Coastal Access (Northern Ireland) Act 2009, but without first applying for statutory consent from Irish Lights under the Merchant Shipping Act 1995. This means that the new AtoN is not known to the UKHO and therefore not shown on nautical charts and may present a hazard to vessels in the area, who will be unaware of its presence initially.

As the search area for finding a new AtoN without consent is linked to the routes taken to conduct inspection visits to existing local AtoN, only those coasts, bays and harbours adjacent to an existing consented AtoN are routinely checked. Occasionally, Irish Lights may receive a report of a new AtoN from a 3<sup>rd</sup> party observer and will investigate these reports. To date, this has resulted in the identification of 14 AtoN without consent in Northern Irish waters. The majority of these AtoN are located in lower risk areas, away from shipping lanes or deeper navigable channels. If maintained and serviceable, their presence should not increase risk significantly, apart from on first encountering the AtoN as the purpose or position will be unclear without a charted reference. Irish Lights is working with the LLA in each case to identify the original AtoN developer and regularise the consent. Further work is planned by Irish Lights to develop an information campaign targeted at LLA stakeholders, companies or individuals engaged in the development of the marine space and the wider public, regarding the statutory role of Irish Lights and the legal requirements related to AtoN consenting.



*Figure 6 - Graph showing the number and type of AtoN without consent in Northern Ireland*

## **LLA Audits**

In the reporting year Irish Lights conducted six (6) LLA audits from the twenty (20) LLA in Northern Ireland. This smaller number reflects a historic 50% (2-yearly) audit cycle across the LLA located in Northern Ireland and Ireland combined, with the remaining 14 LLA in Northern Ireland due for audit in 2025/26. Irish Lights intends to amend the audit schedule in future so that 50% of the LLA in Northern Ireland are audited each year.

These audits are designed to ensure that the LLA is aware of and following best practice for AtoN provision, including preventative maintenance visits, periodic inspections of AtoN, rolling budgetary provision for repairs and eventual replacement.

There are three possible outcomes from an audit.

- **Compliant** - Appropriate standards observed in respect of records of inspections and maintenance as evidenced during the audit. The LLA has in place comprehensive policies and procedures for the management of AtoN.
- **Compliant with Advisory** – The LLA partially meets the required standards. Partial records of inspections and maintenance were evidenced during the audit. The audit report will contain advice and guidance on how to improve processes and develop policies to form a more robust management system for AtoN within the LLA area.
- **Corrective Action Request** – The LLA does not meet its obligations in respect of the required standards and urgent action is required on the part of the LLA. Irish Lights provide guidance and assistance on the appropriate improvement measures and required timelines.

Irish Lights conducts these LLA audits every two years, unless an LLA has been issued with a Corrective Action Request (CAR) due to a safety critical failure during AtoN inspections or a failure to action previous advice in relation to a “Compliant with Advisory” finding from a previous audit<sup>3</sup>. Where a CAR has been issued the audit frequency reduces to annual. Of the 6 LLA audited by Irish Lights in 2024/25, none were issued with a CAR. One LLA in Northern Ireland has an open CAR at the end of the reporting period.

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<sup>3</sup> Depending on the degree of navigation risk associated with a failure, a CAR may be issued immediately or may follow due to inaction on the part of the LLA to resolve a previously identified defect. Irish Lights expects that a CAR will be resolved within six (6) months of receipt and in the interim that the correct Maritime Safety Information (MSI) including NAVAREA 1 and/or UK Coastal Warnings (WZs) will be broadcast to alert mariners of any danger arising from the defect.

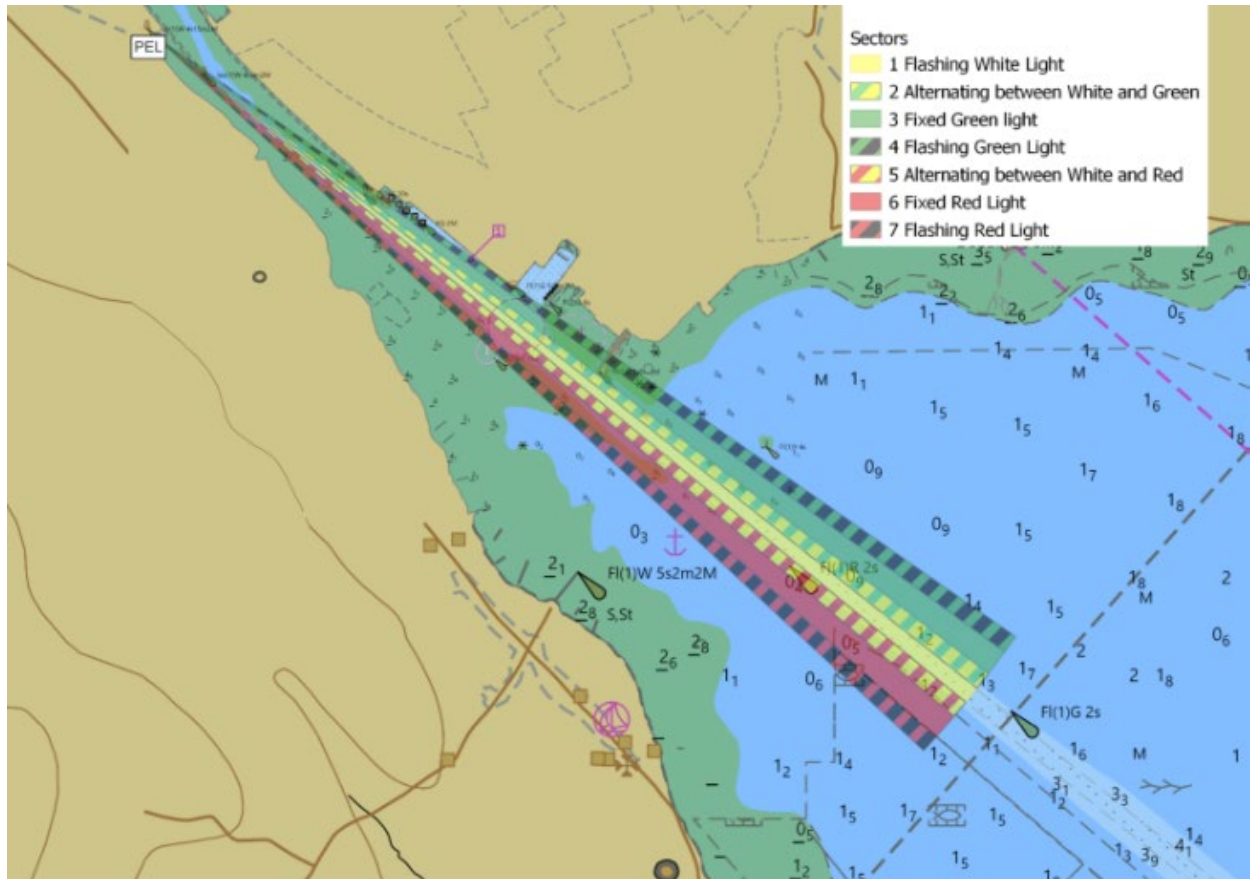
## **Assistance Provided to LLA**

In addition to quality assurance through the Local AtoN inspection and LLA audit service, Irish Lights provides expert navigation advice and assistance to all LLA as required. During this reporting period, Irish Lights continued to participate in the Strangford Lough Marine Protected Area steering group and the Research & Development subgroup, with a focus on improving the standards for provision of AtoN within the Lough. With support from Irish Lights, a review of the existing AtoN in Strangford Lough was conducted by Ards and North Down Borough Council (ANDBC). Following extensive local stakeholder engagement, the final report detailed that a single, lit, arterial route should be provided through the centre of the Lough, with additional routes identified to complement the main arterial route. ANDBC has secured £80,000 from the UK Shared Prosperity Fund to implement the findings of the review, and changes are progressing during 2025 following consenting by Irish Lights.



*Figure 7 – One of the renewed local AtoN in Strangford Lough*

Collaboration also continued with Warrenpoint Harbour Authority in relation to changes required arising from the Narrow Water Bridge project, including the establishment of a Port Entry Light (PEL) to replace the previous Leading Lights in transit.



## **Offshore Renewable Energy Sector**

Northern Ireland published its Energy Strategy Action Plan 2024 at the beginning of the reporting period, which reaffirmed the goal of 1GW of offshore wind by 2030. Subsequently, the Department for the Economy (DfE) has progressed the preparation of a Strategic Environmental Assessment (SEA) and Habitats Regulations Assessment (HRA), which will enable the identification of suitable areas for offshore renewable energy development and facilitate future licensing decisions.

During the reporting period, Irish Lights held preliminary stakeholder engagement meetings with a number of prospective offshore wind projects in UK waters adjacent to Northern Ireland, although challenges remain before these projects could progress to the licencing stage, including improvements to grid capacity ashore and agreement on a Renewable Energy Support Scheme for Northern Ireland (RESS) to replace the Northern Ireland Renewables Obligation (NIRO) support mechanism for renewable energy, which closed in 2016.

## **Conclusion**

As a party to the Safety of Life at Sea 1974 (SOLAS) Convention, and in its role as a Coastal State, the UK including Northern Ireland is responsible for ensuring marine aids to navigation are provided as the volume of traffic justifies and the degree of risk requires. Under the UK Merchant Shipping Act 1995, Irish Lights is charged with the superintendence and management of all marine aids to navigation in the Northern Ireland maritime area. This report provides a quality assurance mechanism to ensure that the aids to navigation provided by Local Lighthouse Authorities meet international IALA best practice. The report is submitted annually pursuant to section 198 (4)(b) of the Merchant Shipping Act 1995.

Inspections and audits of LLA during the reporting period indicate a good level of compliance with IALA standards and an upwards trend in year-on-year compliance results, especially for higher risk AtoN. The number of discrepancies found in 2024/25 was low, which was consistent with expectations due to the smaller number of lower risk AtoN scheduled for inspection in this reporting period.

The results of LLA audits completed in 2024/25 show that all six (6) LLA audited were compliant and all have good policies & procedures in place. Of the 20 LLA in Northern Ireland there is one (1) LLA with a Corrective Action Request for Irish Lights as a result of a previous audit.

Irish Lights continues to monitor developments in both the Aquaculture Sector and the Offshore Renewable Energy Sector in Northern Ireland to provide support and guidance, ensuring that safety of navigation is maintained through the correct provision of AtoN in line with the SOLAS Convention.



**Ronan Boyle**

**Director of Navigation, Maritime & Consenting**

### **Distribution:**

#### **External**

Secretary of State for Transport

#### **Internal**

Irish Lights Board

Chief Executive Irish Lights

## **Annexes**

### **Annex A – Legislative Background**

Section 198 (1) of the UK Merchant Shipping Act 1995 empowers Irish Lights as the General Lighthouse Authority (GLA) for Northern Ireland to inspect all lighthouses, buoys, and beacons in Local Lighthouse Authority management. In accordance with Section 198 (4) (a) of the UK Merchant Shipping Act 1995, the GLA shall make a general report of the results of the inspections of the local lighthouses, buoys, and beacons to the Secretary of State for Transport.

Section 195 (1) of the 1995 Act vests in the GLA the superintendence and management of all lighthouses, buoys, and beacons within their areas. The characteristics of these AtoN must comply with guidelines and recommendations as laid down by the International Organization for Marine Aids to Navigation (IALA).

The UK Port Marine Safety Code (revised 2025) sets out clear requirements for how Local AtoN are to be managed by harbour authorities and Local Lighthouse Authorities (LLAs), including the definition of an LLA, requirements for consenting and reporting, the inclusion of local AtoN within a Safety Management System and the setting of performance and availability standards.

## **Annex B – Extract from IMO SOLAS**

Available at: [Regulation 13 - Establishment and operation of aids to navigation \(imorules.com\)](https://www.imorules.com/Regulation%2013-Establishment%20and%20operation%20of%20aids%20to%20navigation)

### REGULATION 13 - Establishment and operation of aids to navigation

1. Each Contracting Government undertakes to provide, as it deems practical and necessary either individually or in co-operation with other Contracting Governments, such aids to navigation as the volume of traffic justifies and the degree of risk requires.
2. In order to maintain the greatest possible uniformity in aids to navigation, Contracting Governments undertake to consider the international recommendations and guidelines<sup>4</sup> when establishing such aids.
3. Contracting Governments undertake to arrange for information relating to aids to navigation to be made available to all concerned. Changes in the transmissions of position-fixing systems which could adversely affect the performance of receivers fitted in ships shall be avoided as far as possible and only be affected after timely and adequate notice has been promulgated.

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<sup>4</sup> Refer to the recommendations and guidelines of IALA and SN/Circ.107–Maritime Buoyage System

## **Annex C – IALA Categorisation and Availability Objectives for Short Range AtoN**

Available at:

<https://www.iala.int/product/r0130/>

Within these IALA guidelines, Aids to Navigation are categorised into three types - Cat 1, Cat 2, Cat 3:

- CATEGORY 1 - An AtoN or system of AtoN that is considered by the Competent Authority to be of vital navigational significance. For example, lighted AtoN, AIS AtoN and racons that are essential for marking landfalls, primary routes, channels, waterways, dangers or protecting the marine environment.
- CATEGORY 2 - An AtoN or system of AtoN that is considered by the Competent Authority to be of important navigational significance. For example, it may include any lighted AtoN, AIS AtoN and racons that mark secondary routes and those used to supplement the marking of primary routes.
- CATEGORY 3 - An AtoN or system of AtoN that is considered by the Competent Authority to be of necessary navigational significance.

Categories of percentage availability

Category	AVAILABILITY OBJECTIVE	CALCULATION PERIOD
1	99.80%	Availability Objectives are calculated over a continuous three-year period, unless otherwise specified.
2	99.00%	
3	97.00%	

Table 2

Calculations principles according to IALA Guideline on Availability and Reliability of Aids to Navigation. The minimum availability of any individual AtoN should be 95.00%. Where the availability of an individual AtoN consistently falls below 95.00%, consideration should be given to the discontinuance or replacement/ modification of that AtoN.

### **Maximum permissible downtime per AtoN by category to remain IALA compliant:**

Category 1 – 17.5 hours per annum

Category 2 – 3.6 days per annum

Category 3 – 10.9 days per annum