

# Littoral light news

For the Safety of All...

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Monach Isles © Patricia & Angus Macdonald

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I am delighted to welcome you to the second edition of Littoral Light News aimed, as before, at all our users in the coastal waters around Scotland and the Isle of Man. Readers might be aware of the current debate on the cost of Light Dues; a read through Littoral Light News will show the advances we have made since the first edition, the breadth and nature of our work and the statutory duties placed upon us, and most importantly, that we continue to be “more than lighthouses”.



*“To deliver a reliable, efficient and cost-effective Aids to Navigation service for the benefit and safety of all Mariners”*

The NLB's Vision Statement and commitment to the Mariner  
Roger Lockwood, Chief Executive

## Provision of Service...

The Northern Lighthouse Board is responsible for the provision of Aids to Marine Navigation in Scotland and the Isle of Man. This area covers half the waters and coastline of the United Kingdom, together with the majority of offshore manned oil installations. The area is subject to severe weather conditions for many months of the year. The approximate length of this coastline is 6,214 miles (10,000km) a land area of 30,405sq miles (77,700 sq km) and 790 islands. \* *Source Scottish Statistics*

### Resources:

The Northern Lighthouse Board is responsible for a network of:-

208 lighthouses

166 Buoys

34 Beacons

4 DGPS Stations

27 Racons

1 GLA shared eLoran system

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



## The Board are pleased to announce the appointment of New Chairman...

The Commissioners of Northern Lighthouses are pleased to announce that Sir Andrew Cubie CBE took up appointment as Chairman of the Commissioners of Northern Lighthouses on 1 April 2009.

Sir Andrew Cubie has been Vice-Chairman of the Board since April 2007 and has been an active member of the Board since 2003. Sir Andrew's background is as a lawyer, specialising in Corporate Law. He holds a number of non-executive directorships, of both public and private companies involved in manufacturing and finance. He is the Chairman of the Royal National Lifeboat Institution (Scotland), Quality Scotland, the Centre for Healthy Working Lives and the Scottish Credit and Qualification Framework Partnership.

He said "I have greatly enjoyed my involvement with the Northern Lighthouse Board over the last six years and look forward to continuing to contribute to the work of the Board further, as Chairman.

*The next two years will contain considerable challenges for all of the General Lighthouse Authorities, but the Northern Lighthouse Board is an efficient, cost effective organisation with a highly motivated team. I am pleased that in February 2011 during my Chairmanship we will celebrate the bi-centenary of the lighting of the Bell Rock Lighthouse."*

Sir Andrew Cubie lives in Edinburgh.

## Financial News...

### Financial climate

The Northern Lighthouse Board and the other General Lighthouse Authorities (GLAs) are facing the same financial issues as most companies and organisations, i.e.

1. The Global downturn – our income is derived from shipping traffic
2. Oil prices – the volatile and high price of marine fuel
3. The strength of £ to \$ and £ to € - exchange rates have a significant impact on trade and hence shipping
4. Investment returns – part of our funding is from investment income that has suffered with the drop in the World's Financial Markets and interest rates.

The GLAs have a 10-year financial planning horizon and have annual planning discussions with the Department for Transport and the Lights Advisory Committee (representing shipping and ports interests). In the October 2007 discussions we made significant reductions to our spending plans for the Financial Year just ended – 2008/09. We are confident that we will meet these targets when our audited results are available

In the October 2008 discussions the financial crisis had taken a tighter grip and a further round of changes to spending plans were agreed for the new Financial Year – 2009/10. At the start of this new year we remain confident that we can achieve these new plans.

The Government fund the General Lighthouse Authorities through the collection of light dues – a charge on commercial shipping using UK and Irish ports – there is no UK taxpayer funding. Through an agreement with the Government of the Irish Republic the three GLAs provide an integrated network of Aids to Navigation around the British Isles. This discharges both Governments' obligations under the International Maritime Organisation's Safety of Life at Sea Convention.

## Ministers Announcement on Light Dues...

On 10th June 2009, Paul Clark MP, Parliamentary Under-Secretary of State for Transport, made a statement to Parliament regarding Light Dues rates for 2009-10 and 2010-11 in which he said:

*"The government believes that transport providers and not the general taxpayer should pay for the essential safety services needed for safe and reliable operations. For shipping, this includes the aids to navigation provided by the three General Lighthouse Authorities (GLAs) around the coasts of Great Britain and Ireland.*

*The GLAs have improved the cost effectiveness of their services in recent years. Overall their operating costs have been reduced by 25% in the last ten years, and light dues have not had to go up since 1993."*

- Light dues will increase in two stages:
  - From 1 July 2009 light dues will increase to 39p per nrt.
  - From 1 April 2010 light dues will increase to 43p per nrt.
- The Tonnage Cap will rise to 40,000 nrt from 1 April 2010.
- Chargeable voyages will increase from 7 to 9 per year.
- Light dues will still be 32% less in real terms than in 1993.

*"In conclusion, in order to ensure that the GLAs have sufficient funds to enable them to carry out their statutory duties it is necessary to increase light dues."*

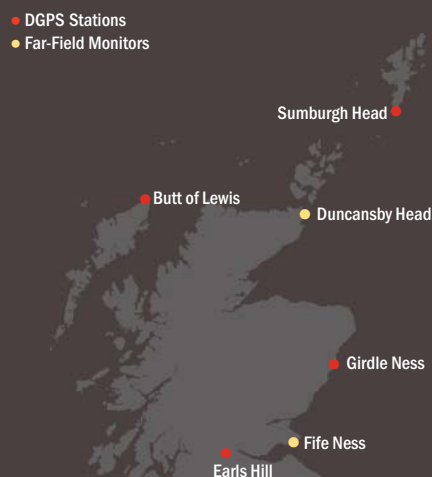
The minister's full statement can be seen at:  
[www.dft.gov.uk/press/speechesstatements/statements/wmslightdues0609](http://www.dft.gov.uk/press/speechesstatements/statements/wmslightdues0609)

# General Lighthouse Authority DGPS Upgrade...

Since 1998, the Northern Lighthouse Board has operated and maintained a *Differential GPS* system for the mariner, which is part of an integrated system run by the three GLA's. The system works by monitoring the signals, received at Reference Stations, from US Defence Department GPS satellites. The Reference Stations run by the Board are located at Earls Hill (near Stirling), Girdle Ness, Sumburgh Head and the Butt of Lewis. These signals are compared with a reference and the errors, introduced by virtue of the signals passing through the atmosphere, calculated. These error data are then broadcast from large wire antennas at the Reference Stations as MF radio transmissions. Ships in the vicinity (up to about 200 nautical miles) with equipment that is capable of receiving the MF transmissions can use the error data to improve the accuracy of their own received GPS data. The Reference Stations have Integrity Monitors in order to ensure the veracity of error correction transmissions. The Board have Far-Field monitors at Fife Ness and Duncansby Head, which can also be used to check transmissions from our transmitters. The whole system is connected back to the Monitoring Centre in George Street where signal quality and integrity is monitored and any alerts sent out to the marine community.

This existing DGPS system has come to the end of its life and a contract was awarded in 2008 to VT Systems of Ashchurch to carry out an upgrade to the GLA's system. In the case of the NLB this will involve the replacement of DGPS equipment at Sumburgh, Butt of Lewis, Girdleness and Earls Hill (Stirling) and also the Far-Field monitor equipment at Fife Ness and Duncansby. The existing batteries at these sites will, however, be retained. The reference and integrity monitor equipment will be supplied by Kongsberg Seatex AS of Norway. Earls Hill will have a standby generator installed, as this site can be difficult to access in wintry conditions. The masts at Sumburgh supporting the wire antenna are beyond economical repair and will be replaced by lattice towers which will be more easily maintained. The equipment at the Monitor Centre in Edinburgh will be replaced and duplicated at the Oban facility as a back up. The major change introduced by the upgrade will be to the communications to and from remote DGPS sites. This will be by ADSL (broadband) rather than the existing PSTN (telephone dial up) network. It is hoped that the system will be more reliable and that considerable savings will be made in communication costs

The Upgrade Project is progressing well with factory acceptance tests being the next stage of the programme. Installation at site is expected to start during the summer months.



ABOVE: One of the DGPS Racks under Commissioning at VT Systems.

## Long Term Lighting for Frigg

In July 2009, the final stages of decommissioning were completed at TOTAL E&P's Frigg and MCP01 installations, more than 30 years after production began. The two steel jacket platforms have been removed to the seabed and now all that remains of the four gravity base structures are the legs and protective barriers.

The Frigg field, which sits astride the UK/Norwegian border, is now lit by three Rigwatcher AtoNs, while the separate MCP01 site is lit by one Rigwatcher. The Rigwatcher AtoNs are designed to be exchanged using helicopter long-line lifting and are monitored via satellite from NLB's headquarters in Edinburgh. Routine maintenance will be carried out at NLB Oban.





Hyskeir Lighthouse  
 Latitude 56° 58.14'N  
 Longitude 06° 40.85'W

Hyskeir Lighthouse by Barri Millar

# Introducing *AtoNRep*

In February the long-awaited roll-out of *AtonRep*, the Navigation Team's new **Aid to Navigation Reporting** software was given to a trial group of users in various port authorities. *AtonRep* has been developed by the Commissioners of Irish Lights, as an evolution of their own software, as a means of recording the ownership of all AtoNs, and for logging inspection and outage details for all AtoNs in our waters.

This is a further development of the Board's core role of 'superintendence and management of all lights, buoys and beacons', and moves us from a first generation database, which required repeated software updates sent out to all users in reaction to developments of Operating Systems, to a web-based system compatible with any user PC.

As well as allowing the Navigation Section to keep essential records, the software allows Local Lighthouse Authorities (LLA) to update their own records, report both outages and corrective actions, and apply for new, alteration or discontinuation of AtoNs. It will also allow Inspecting Officers on PHAROS and POLE STAR to report results of inspection directly to the database, which will allow calculations of outage statistics for both LLA and NLB AtoNs, thus identifying who is meeting IALA performance standards.

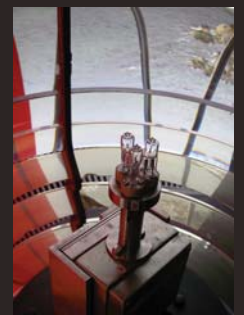
Now the trial period has concluded, the performance of the system will be assessed, and any necessary improvements made, before the remainder of LLAs are invited to join the programme. *AtonRep* has evolved into a highly useful tool as a result of co-operation between CIL and NLB, and allows the Board to demonstrate how it is achieving the core role.

To find out more about *AtoNRep* contact the Marine Navigation Team at [navigation@nlb.org.uk](mailto:navigation@nlb.org.uk).

## Notices to Mariners...

So far this year, NLB has published a number of Notices to Mariners detailing changes in service provision. These can be found on the Board's website at [www.nlb.org.uk](http://www.nlb.org.uk).

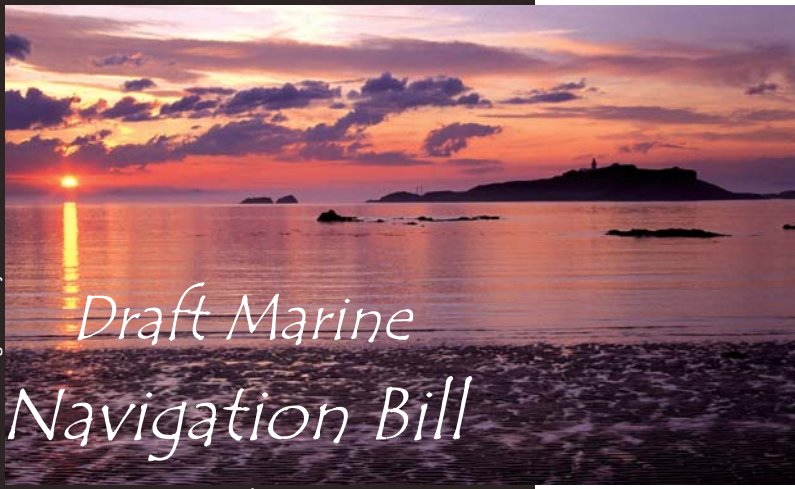
One of the port hand buoys in Upper Loch Linnhe, Corpach, was relocated following discussions with the operators of the Corpach jetty. In March an additional buoy was established at Bono Rock, South of Oban, following discussions with local users. The Class 1 buoy with racon and AIS at Whale Rock was established, and an additional buoy established nearby on a temporary basis for comparison purposes.



In February a new Safe Water buoy was established in Loch Ryan (Loch Ryan light pictured from passing ferry) at the request of the two ferry operators. The buoy marks the entrance of what is effectively the deep water channel for the larger ferries. Loch Ryan is likely to see further developments in the next few years as Stena seek to develop a new terminal at Old House Point, north of Cairnryan, in preference to Stranraer.

Lochindaal lighthouse on Islay was modified in January to incorporate an additional northerly red sector, in response to a request from the operators of the tanker which supplies the island with fuel via the Bruichladdich pier.





# Draft Marine Navigation Bill Update

## Progress on the Draft Marine Navigation Bill to date is;

1. The Bill was published for public consultation by the Department for Transport on 6th May 2008 with a closing date of 25th July 2008.
2. The House of Commons Transport Committee held an inquiry into the draft Bill as part of pre-legislative scrutiny. A team from the GLAs gave evidence to the Committee on 25th June 2008 as part of this process. The Committee published its report on 19th July 2008. In the report's conclusions it said that:
 

*The provisions relating to General Lighthouse Authorities are, for the most part, a sensible package intended to clarify their powers and put beyond doubt the legal validity of much of the essential work which they have been carrying out for centuries.*
3. The Department for Transport published the Government's response to the Transport Committee Report on 15th December 2008. It said:
 

*We welcome the Committee's general support of the Government's objectives and proposals in the draft Bill. We will make every effort to take account of valid concerns of the Committee and those who gave evidence.*
4. Work is in hand to make some revisions to the draft Bill as a result of this pre-legislative scrutiny.
5. The Government has stated that the Bill will only progress if Parliamentary time permits.

The draft Bill includes FIVE important measures for the GLAs. The FIVE areas are:

- **Pension powers** - we need to clarify some of our powers for making contributions to other pension arrangements that were not foreseen at the time they were originally written. We also need to ensure that pension powers allow the GLAs to follow best practice in security and provision of pensions in the future.
- **Area of Jurisdiction** - currently we are relying on powers that say that our area of jurisdiction is "Scotland and the adjacent seas and islands" and "the Isle of Man and the seas adjacent". This definition uses nineteenth century legal language to describe our area and will be updated to give it a clear geographical reference. Our areas will extend to the recognised Pollution Control Zone.
- **Commercial work** - powers to allow the GLAs to utilise spare capacity were contained in the Merchant Shipping and Maritime Security Act 1997. However, over time we have found these powers to be too restrictive and this Bill will loosen some of these restrictions.
- **Local Lighthouse Authorities** - the Bill will also address our powers over local lighthouse authorities. This will permit, in extreme cases, criminal proceedings to be taken against local lighthouse authorities.
- **Wreck marking** - the Bill will amend Part IX of the Merchant Shipping Act 1995 to allow wrecks to be marked by a "virtual" mark through AIS as well as a "physical" navigation buoy.

For more information on the Draft Marine Navigation Bill visit:  
[www.dft.gov.uk/consultations/closed/marinenavbill](http://www.dft.gov.uk/consultations/closed/marinenavbill)

# Offshore Europe 2009

Come along and meet the team

## NLB TO EXHIBIT AT OFFSHORE EUROPE 8 - 11 September 2009

Offshore Europe is the premier exhibition and conference for the oil and gas industry in Europe. Held every two years in Aberdeen it attracts a global audience, with particular emphasis on operators involved in the North Sea and other British Waters.

The Board will be represented by Statutory and Business Development teams to enhance our contact with this critical maritime sector.

The Statutory team from the Navigation Section will be on hand to discuss:

- **Offshore Standard Marking Schedule**
- **Coast Protection Act**
- **Territorial Waters**
- **Safety Zones – both Operational & Construction/Decommissioning**

The Business Development team will be presenting the Board's expertise in:

- **Marking of decommissioned structures**
- **Buoy work**
- **Survey capabilities**

With thousands of offshore professionals visiting the show each day it will be a busy 5 days.



## An integrated approach from the General Lighthouse Authorities

The Automatic Identification System (AIS) has been mandatory for certain classes of vessel for 5 years and voluntary carriage by other mariners is on the increase. Recognising the part AIS can play in increasing the safety of navigation, the GLAs have been forward thinking in developing a common approach in the UK and Ireland. The coordinated approach goes beyond the GLAs with both the UK and Irish Coastguard Authorities involved in working together to provide an integrated AIS service.



NLB AIS BUOY

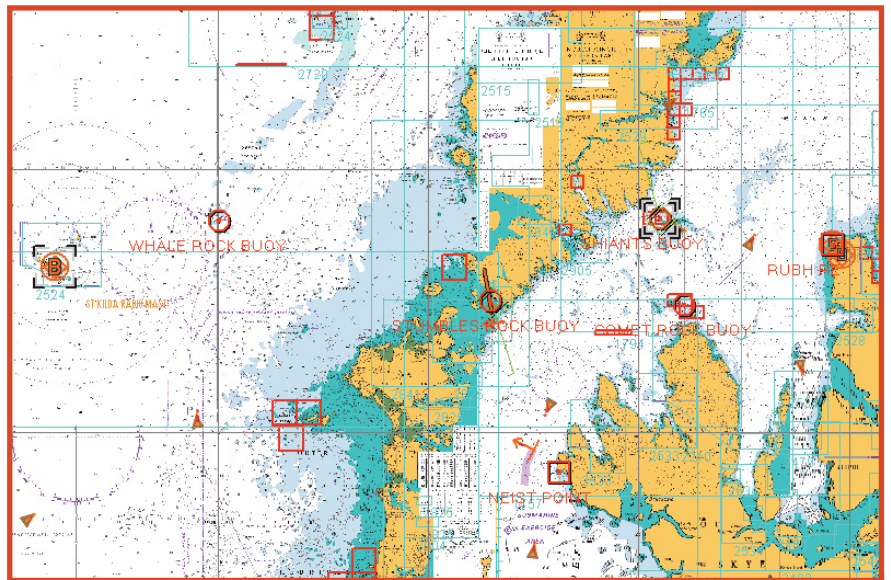
AIS is based on digital communications between participating vessels, AtoNs and Shore Stations using dedicated VHF channels in the world wide maritime mobile band. The data that is exchanged, ship to ship and ship to shore, is shared by the Lighthouse and Coastguard Authorities using a common shore side network of Base Stations.

Not only are participating vessels tracked around the coast but AIS equipped buoys are monitored to ensure they are on position and all the AtoN systems on board are functioning correctly. The GLAs jointly are developing software that will continuously monitor AIS AtoNs. AIS will provide a means of providing more reliable, cost effective AtoNs. Monitoring trends, such as the drop off in battery voltage in winter months, will allow NLB to target maintenance where it is really needed.

Added features for AIS AtoNs include the provision of real time Metrological and Hydrological information. The IMO have defined a world wide standard Met/Hydro message for AIS and the GLAs have been trialling this as an added service to the mariner. NLB transmit wind and wave data from Milleur Point buoy at the entrance to Loch Ryan and Irish Lights do the same from the South Hunter buoy off Belfast. This combined service gives ferries on the Stranraer to Belfast run information about the sea state at their destination.

The same type of information is broadcast from three navigation buoys in the Minches, Shiants, Comet Rock and Stumbles Rock. The figure above is from the GLAs monitoring and display software that is being developed and indicates how the information can be presented. Although this has been developed for a shore side monitoring application, vessels displays are similar.

New applications for AIS are developing, including a role in GMDSS where combined GLA/MCGA trials have demonstrated it has the potential to greatly improve the locating of life rafts and vessels in distress.



ID	992351024
Name	SHIANTS BUOY
Type	Starboard hand
Mark	
Sub Type	Floating
Positional Accuracy	Low
Latitude	57° 54' 36.12" N
Longitude	006° 25' 38.39"W
EPFS	GPS
Repeat Indicator	0
Mode	Autonomous
RAIM	Not In Use
Status	On Position
Last Update Time	11.00:09
Target	992351024
Latitude	57° 54' 36.12" N
Longitude	006° 25' 38.40"W
Time of Tx	10.08
Average Wind Speed	9 kts
Significant Wave Height	0.2m
Wave period	3s
Wind Gust	10kts
Wind Direction	102°



Flare Demonstration at NLB Oban

## Aquaculture Industry Training Day

In February Scottish aquaculture farmers came together at NLB Oban to attend the UK's first aquaculture and maritime safety training awareness event. Through practical demonstrations it reminded aquaculture farmers of good practice and provided an opportunity for the industry and authorities to get together and share their experiences.

The event was organised by the Scottish Aquaculture Industry Forum of which the founder members are the Maritime and Coastguard Agency (MCA), Health and Safety Executive (HSE), Northern Lighthouse Board, Scottish Government, The Crown Estate and the Royal National Lifeboat Institution (RNLI) along with a growing representation from industry companies.

Attendees from the aquaculture industry were given practical demonstrations on how to avoid the most common causes of accidents and ill health arising in their industry and other marine activities.

These include:

- Boat stability and cranes
- Safe Entry into confined spaces
- Fork lift truck/transport issues
- Manual Handling
- Lifejackets
- Life rafts and flares
- Cold shock

A similar event was held in Shetland in July, which was very well attended. If you want to find out more about the workshops contact the Navigation Team at [navigation@nlb.org.uk](mailto:navigation@nlb.org.uk).

## Commissioners of Northern Lighthouses 2000 Trust

## New Prizes Awarded at NAFC Marine Centre (Shetland)



LEFT to RIGHT: NAFC Marine Centre director Professor David Gray, David Clark, Captain George Sutherland, David Sutherland, and head of the Shetland School of Nautical Studies Jan Rigden.

## The Northern Lighthouse Board Prize

For the first time at the Shetland School of Nautical Studies two students received *The Northern Lighthouse Board Prize* which recognises academic achievement, excellence in assessment and/or project work and consistent professional performance by Merchant Navy Officer cadets.

David Sutherland from Scalloway and David Clark from Aberdeen each received a £1,000 prize at a presentation at the NAFC Marine Centre on Wednesday 20 May. The prizes were presented by former Chairman of the Commissioners of Northern Lighthouses, Captain George Sutherland.

*George Sutherland said: "I'm delighted to make this award on behalf of the Commissioners of Northern Lighthouses to two promising young cadets and wish them every success for their future careers. I hope the link between*

*the Northern Lighthouse Board and the Shetland School of Nautical Studies will continue in years to come".*

The prize has been funded by the *Commissioners of Northern Lighthouses 2000 Trust*, which is a recognised Scottish Charity, set up in 2000 with the purpose to assist in the provision of training, education and support for Merchant Navy Officer Cadets. The criteria for the award, which has been given to one deck officer and one engineering officer, has been agreed between the School and the Trust. Selection was decided by a group of three Trustees of the Shetland Fisheries Training Centre with recommendations coming from the teaching staff at the Shetland School of Nautical Studies to the Commissioners of Northern Lighthouses 2000 Trust.

Summarising the event, Professor David Gray, director of the NAFC Marine Centre said: *"These awards recognise the true excellence in the quality of the trainees that we send out into the workplace. There is no better praise than when companies come back to us and ask us for more students who are clearly flying the flag for the Centre. As well as the Northern Lighthouse Board, I'd like to give thanks to the staff for the hard work they put into the training. In my opinion you'd be hard pushed to find a better qualified team than at the NAFC. I'd also like to thank the students who are committed and dedicated to doing this, as well as their families and friends – the support network who also want to see them reach their potential."*