

**NORTHERN LIGHTHOUSE BOARD
NAVIGATION COMMITTEE**

MINUTES – 9 December 2020

PRESENT:	Alastair Beveridge	Chair
	Mike Brew	Commissioner
	Hugh Shaw	Commissioner
	Brian Archibald	Commissioner
	Duncan Murray	Commissioner
	Mike Bullock	Chief Executive
	Phil Day	Director of Operations
	Mairi Rae	Director of Business Services
	Peter Douglas	Navigation Manager
	Paul Hudson	Programme and Renewals Manager
	Andrew Stevenson	Asset Manager
	Subrahmanya Manipadi	DGPS Engineer (Agenda Item 1-5)
	Karen Charleson	Senior Executive Assistant (notes)

1. APOLOGIES FOR ABSENCE

There were no apologies for absence.

2. MINUTES OF PREVIOUS MEETING

The Minutes of the Navigation Committee meeting held on 9 September 2020 were agreed. A copy will be published on the website.

Action: Senior Executive Assistant

3. MATTERS ARISING

The Committee noted that the majority of Matters Arising from the previous meeting would be addressed within the relevant subject areas.

IOM Wreck Response – Arrangements for a table top exercise are in place for 12 January 2021. The Isle of Man Harbours are happy with scenario. Commissioner Shaw will circulate draft exercise orders before Christmas.

Action: Commissioner Shaw

KEY BORA – The Director of Operations and Navigation Manager went to the MOWI installation and met with the Manager and consultant. Discussion took place on the moving of the buoy and additional marking which they might provide from the shore. Proposals are awaited regarding the marking. All underwater rocks have been removed providing a clear area of water around the berth and approach is much clearer now that the Black Eye buoy has been moved. Still awaiting receipt of the MAIB report.

SUCG – The Chair thanked the Navigation Manager and his Team for putting together the Agenda and arrangements for the meeting. The uptake of participation was good and similar to previous years. From the success of this year and looking forward to next year there may be an opportunity to hold a composite meeting where people have the option to attend either virtually or in person.

Alerts to monitor shored based planning applications – The Navigation Manager is continuing to investigate if it is possible to set up alerts. Commissioner Archibald will establish dialogue with the Marine Planning Officer at Orkney Islands Council to see at what stage it would be appropriate

for NLB to link in to the operational aspects of planning and liaise with the Navigation Manager accordingly.

Action: Commissioner Archibald

4. OPERATIONAL REQUIREMENTS

The Committee noted the report and discussion took place on the following items:

Corran Narrows South

Work has commenced at the new site, with construction of the foundation. This will be left to cure over the winter, with the construction project scheduled for March/April.

The proposed name, Rubha Cuil-cheanna, was discussed and agreed.

Wrecks

On 31 October 2020, 33 containers were lost overboard off Duncansby Head from eastbound MV FRANCISCA. NLV PHAROS was deployed as one of several assets to search for the containers, some of which came ashore in Orkney. An MAIB investigation is being undertaken.

The Chair highlighted the number of incidents in the Pentland Firth which are weather related and asked whether NLB should suggest that in these conditions there should be a broadcast or warnings on charts/pilot books emphasising that this is an area that should be avoided.

Consideration needs to be given on how information can be put on the ECDIS medium. The Navigation Manager will take this forward with the UKHO to see what options would be possible.

Action: Navigation Manager

Also on 31 October, the 19 metre fish farm workboat TIFFANY OF MELFORT broke her moorings in Loch Pooltiel, Skye, and travelled some 28 miles up the Minch before foundering at the Southern tip of the Shiant Islands. NLV POLE STAR was deployed from Oban to assist in the search but was stood down after the vessel was observed.

Oban Harbour

The Oban Community Harbour Development Association are progressing plans for a Trust Port in Oban, and have recently issued a request for consultation with regard to proposed harbour limits. NLB have replied to the consultation.

Orkney Marine Planning Partnership

On 27 November 2020, the Ministerial Direction came into force to allow Orkney Islands Council (OIC) to formally establish the Orkney Marine Planning Partnership. This Direction delegates functions to OIC to prepare a statutory regional marine plan for the Orkney Islands Marine Region, along with a variety of supporting assessments and documents.

GNSS update

GPSIII-3 was launched on 5 November, and is currently undergoing commissioning. The planned launch on 2 October had been aborted at T-2 seconds as a result of a rocket engine malfunction.

GLONASS 705 was scheduled for launch on 25 October.

Offshore Oil & Gas Inspection Voyage

NLV PHAROS commenced the annual inspection voyage on 29 November, and has made a good start to the inspection voyage. The trip has been more successful this year with 61 out of the 99 rigs inspected. NLV PHAROS has now one into Dundee for a Masters changeover but it is hoped that she will be able to go again to carry out some more inspections.

Marine Licence and Sanction Requests

The Committee noted the summary of Marine Licence Activity and Sanctions for the establishment/disestablishment of AtoN.

GLA Navigation Policy Documents

In accordance with best IALA practice, the GLA publish a 10-year Strategy document, currently '2030 – Navigating the Future' and a shorter term plan, the 'GLA Marine Navigation Plan'. Both of these documents are due for revision, and a light-touch review has been undertaken by the Navigation Managers and GRAD. It was noted that the name of the new strategy to 2035 is still to be chosen.

The Navigation Committee provided the following comments on the documents:

- New greener technologies could be emphasised more;
- Reliance of the leisure user on AtoNs seemed to be given less attention and could be highlighted more;
- eLoran requires to be reviewed to reflect the current position.

There is also a collection of various policies known as the Joint Navigational Requirements Policy (JNRP), which was last updated, but not published, in 2016. These will be reviewed once the Strategy documents are finalised.

Any further comments would be welcomed and should be passed to the Navigation Manager.

Action: All

The Chair will circulate information on inertial/integrated navigation, provided to a previous Navigation Committee, to Commissioner Archibald after the meeting.

Action: Chair

5. ENGINEERING

The Committee noted and discussed the Engineering report:

Programme and Renewals

Temporary lights remain at Stroma, Cape Wrath and Butt of Lewis. The establishment of the permanent light at Butt of Lewis is scheduled for 19 December 2020.

Work has continued across the estate with significant weather disruption at Barra Head, Stroma and Cape Wrath. Revenue work on Eigg, Na Cuitean, Ruadh Sgeir, Brother Isle has been completed.

Work is expected to start on Davaar and Holy Isle slips, Loch Ryan lighthouse and the Portain Beacon in the coming weeks with contracts awarded. Painting of Sound of Harris Beacons remains incomplete with two outstanding.

Assets

Availability - The Committee noted the 3 year rolling availability figures to 1 December 2020. Since the last Committee there has been 11 outages over 72 hours. There has been a number of Category 1 failures.

Unfortunately there was a protracted period getting out to Chicken Rock and Skerryvore due to weather. Technicians have now fixed Chicken Rock and attended Point of Ayre and Langness Lighthouses while they were on the Isle of Man. The Director of Operations thanked Commissioner Brew and the Isle of Man Authorities for their help with getting the appropriate exemptions, etc.

There is a growing risk at Skerryvore. One of the battery banks has been failed for some time, this means that if there is a failure of a generator or some other fault, technicians need to attend quicker to resolve any problems. This time the generator failed to run, batteries did not charge, therefore technicians had to be deployed sooner than if there had been both battery banks. There is a plan to replace the batteries either with the batteries from Cape Wrath or a new bought set of batteries however it is not a straightforward job and requires considerable planning.

Copinsay has been experiencing synchronisation issues. It was noted that TH have now started to experience similar problems. A Tri-GLA meeting is being arranged with Sealite to resolve the quality issues. An updated will be provided to the next the Navigation Committee.

Action: Director of Operations

Net zero challenge – Delivering Net zero at many sites across the NLB estate has been achieved for many years. The majority of the lights are mains (now on green tariff) or solar powered. These leaves a relatively small number of stations which utilise diesel generators. These are split into three groups:

- Solarised lights with a diesel backup generator for low sun periods (but which run circa weekly for operational maintenance reasons) e.g. Haskier
- Solarised sites with a domestic generator for live on facilities but which are now to be run for building conditioning e.g. Cape Wrath
- Charge cycle sites such as pillar rocks.

NLB will be committed to charge cycle for many years to come if the pillar rocks are refurbished in the same way. It is the charge cycle stations that bring the greatest number of failures whereas the minor lights are purely either mains or solar and therefore do not have significant numbers of failures. In advance of any firm designs being developed and in the spirit of trying to achieve a better outcome, the Director of Operations has requested that the Assets Team report back a different approach and identify a renewables solution of a large battery bank, with solar, micro wind and fuel cell technology etc. This scoping proposal would likely result in a range reduction as there is an exponential/doubling rise in power demand per mile. This proposal will come to the Navigation Committee in due course to consider as a possible solution.

Action: Asset Manager

DGPS

The DGPS system continues to work well. The GLA remain on track to shut down the DGPS system in end March 2022. An M notice is prepared but will be issued 6 months from closure. The DfT have confirmed there is no UK Government interest in the sites in particular Earls Hill and Wormleighton. There is doubt that the Scottish Government would have requirement for the facility at Earls Hill but the question has been posed. GRAD have indicated any future use of equipment is likely to be

limited to the GNSS receiver locations and comms rather than the transmitter or antenna installations. A GRAD report is expected soon on this aspect.

Monitoring

The Existing monitoring system and servers continue to operate reliably. NLB staff working from home and the Harwich Nightwatch have continued to provide 24 hour cover throughout. COVID remains a threat to this service and a review of NLB options to cover in the event of loss of Nightwatch has been conducted and prepared for.

The replacement system project was suspended during lockdown but in August the necessary preparations were made for server install. Contractors attended and installed the servers but have some remote configuration to do. However since then there has been a protracted router problem that has limited access to the servers and delayed configuration of the top end monitoring system for Site Acceptance Tests. RTU install dates at 13 stations remains unclear but whilst delaying switch off of the Datac system does not stop the transfer to the new system for all other stations.

The DGPS Engineer gave a presentation covering:

- The existing system – Reaflex and WebSCADA
- The reason for change – Current systems have reached end of life and are operating within upgrades or enhancements,
- The new system – One single system with ability to monitor supporting both legacy and new RTU integration.
- Web-based open source system with unlimited users, tags, screens and connections. Two servers (Edinburgh/Oban) running on a Microsoft platform.
- Schneider Talus T4c and T4e RTUs – T4c to be used on minor lights, T4e for major lighthouses.
- Communication – IP using 3G, 4G, broadband or broadband over satellite.
- Cyber Security – Expand a cyber-security network protection. Penetration testing will be carried out every few years to ensure the cyber security is at the best level.
- Project Milestones – Specification October 2018, Tender works December 2018, Tender awarded April 2019, Factory Acceptance Testing early March 2020, Site Acceptance and training January 2021, RTU replacement programme 2021-2024.

Commissioner Archibald asked if satellite broadband would work in every situation or are there any situations where satellites are not appropriate and why 5G is not mentioned. The DGPS Engineers advised that satellite comms is the very last option where there are no other options available. All major lighthouses where there is a phone line will be converted to broadband which can be plugged into the RTUs. This will be the most stable and best option. All minor and remote lighthouses will go on to 3G/4G, 5G is not a requirement as the amount of data is negligible.

The Navigation Committee thanked the DGPS Engineer for his interesting and informative presentation.

6. NOTICES TO MARINERS

The four Notices to Mariners published since the last meeting were noted.

7. RISK CARD REVIEW

The Committee reviewed the Risk Card and no changes were identified.

8. ANY OTHER BUSINESS

EGNOS

The European Space Agency are going to be broadcasting a maritime service with no change in accuracy but will provide navigational warnings when the service is unavailable or affected. That level of service will be guaranteed for all EU nations. As a result of Brexit, the UK will be excluded from that guarantee when the maritime system is implemented. There will still be coverage and service. There is an option to pay to receive the guarantee but it thought the UK are unlikely to do this. This is important due to the move away from DGPS and whilst the decision to remove was not based on the EGNOS service it is a component in what replaces the DGPS input. However it is not indifferent to GPS which is non-guaranteed service that is done on a best endeavour basis by the US. The Director of Operations does not foresee any issues.

Whiting Rock

CMAL are progressing with siting a buoy in East Loch Tarbert. The Navigation Manager will follow up with CMAL and report to the next meeting.

Action: Navigation Manager

EU Exit – Helicopter

The Navigation Committee received an update on developments regarding the helicopter contract. High level support was given to the Executive Team to bring discussions to a conclusion.

9. DATE AND TIME OF NEXT MEETING

The next meeting of the Navigation Committee will take place on 18 March 2021 at 10.00am.