

Buchan Offshore Wind

PMP 4: Proposed Aids to Navigation Management Plan



BUC-C-R-NSH-002

Buchan Offshore Wind

pMP 4 Proposed Aids to Navigation

Management Plan

QMS Review

Name	Company	Date	Reviewed	Approved
NASH Maritime	Natural Power	18/06/2025	LJN	SMM
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1 INTRODUCTION

1.1 Purpose of the Document

1. This proposed Aids to Navigation Management Plan (pAtoN MP) has been prepared to support the Environmental Impact Assessment (EIA) Report for the Buchan Offshore Wind Farm Project (the Project).
2. The pAtoN MP provides details of the management of the marine aids to navigation (AtoN) associated with the Project, in accordance with relevant guidance, during the construction and operation and maintenance phases. The final AtoN MP will be submitted to Marine Directorate – Licensing Operations Team (MD-LOT) for approval post-consent. The aids to navigation requirements throughout the decommissioning phase as well as the management of them will be agreed in consultation with the NLB, and other key stakeholders as applicable, at least six months prior to the decommissioning works.
3. This pAtoN MP should be read alongside the proposed Lighting and Marking Plan (pLMP) (**PMP 5: Proposed LMP**) which specifies the types and locations of AtoN to be deployed. This document sets out the proposed management arrangements for those AtoN.

1.2 Project Overview

4. The array area is located off the east coast of Scotland, approximately 75 km north-east of Fraserburgh on the Aberdeenshire coast (see **Figure 1-1**).
5. The array area covers approximately 330 km². It comprises up to 70 floating Wind Turbine Generators (WTGs) and up to 3 Offshore Substation Platforms (OSPs). Subsea inter-array cables will connect the wind turbines to each other and to the OSPs, while interconnector cables will connect the OSPs to each other.
6. The Export Cable Corridor (ECC) runs south from the Array Area, and makes landfall within Rattray Bay, Aberdeenshire, which is located immediately north of the St Fergus Gas Terminal and the associated offshore pipelines. The total area of the ECC is 86km².
7. One Intermediate Reactive Compensation (IRC) platform located along the ECC may also be installed. The IRC platform will be located approximately midway between the OSP(s) and the onshore grid connection point to re-balance power being transported

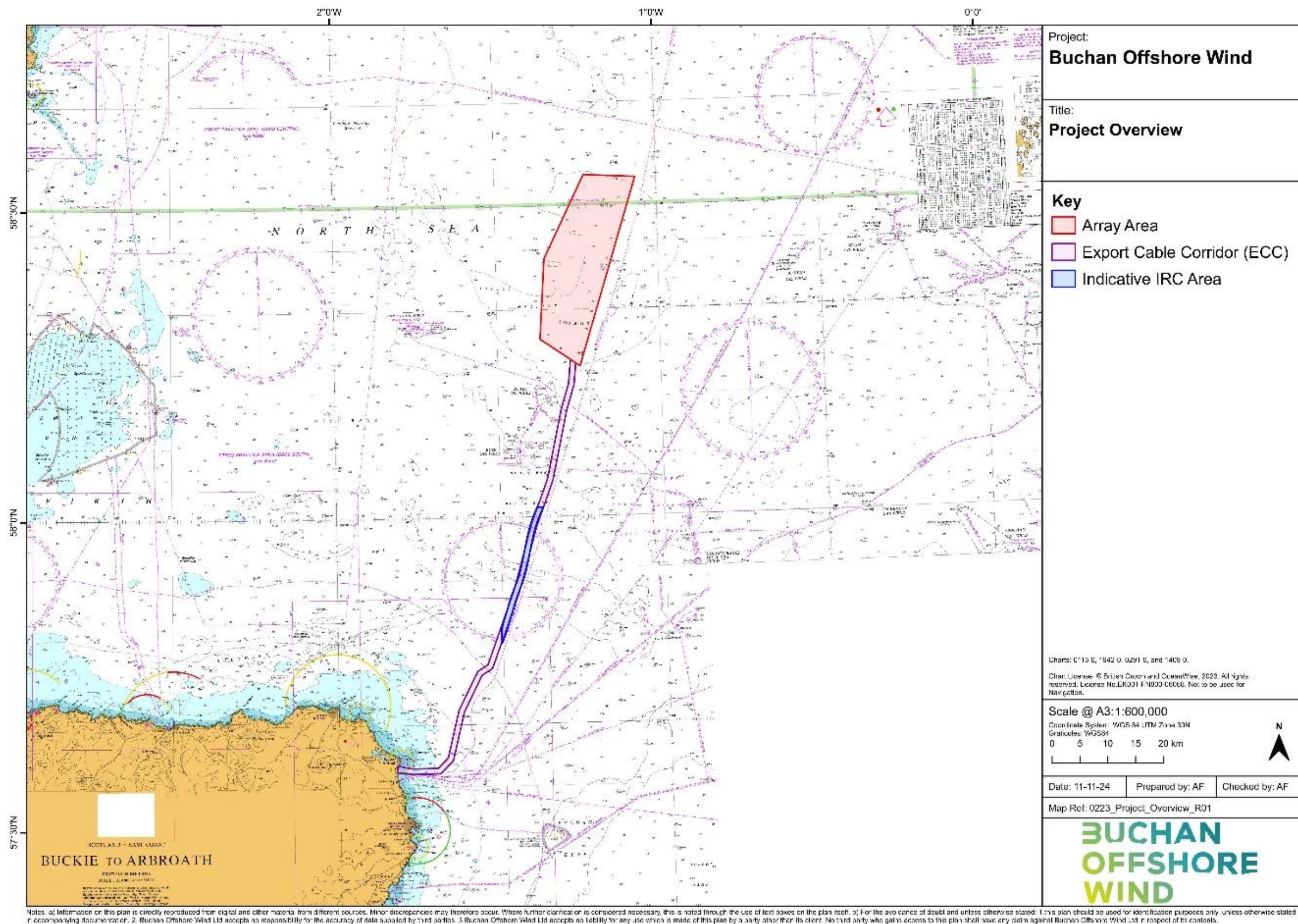


Figure 1-1: Project Overview

1.3 Amending and Updating the Final AtoN Management Plan

8. The nature of the anticipated construction process means that updates to the Final AtoN MP may be necessary as the Project progresses.
9. Where the need for an update or amendment is identified following approval from MD-LOT, either through a consultation response, or due to practicalities arising as the Project progresses amendments will be recorded within a table such as that displayed in **Table 1-1**.

Table 1-1: Updates and Amendments Table

Document revision No.	Section	Summary	Reason	Implementation

1.4 Compliance Tracker

10. This section of the Final AtoN MP will include information on license conditions and associated details relevant to management of marine AtoN required for the project.

2 MAINTENANCE OF AIDS TO NAVIGATION

11. The following subsections will summarise the expected maintenance associated with AtoNs installed by the Project.

2.1 Testing

12. Following the commissioning of marine AtoN, they will be tested at least once per annum. If sound signals are installed, they should be equipped with functionality to be manually overridden to conduct the required testing.

2.2 Availability

13. To assist in meeting the required International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) availability standards of any given marine AtoN, remote monitoring should be used, if feasibly practicable, to ensure faults can be rectified as soon as possible.

2.2.1 Monitoring of aids to navigation on structures

14. Monitoring of AtoNs on structures for both functionality and availability shall be undertaken throughout both construction and operation and maintenance phases.

2.2.2 Monitoring of aids to navigation on buoyage

15. During the construction and operation and maintenance phases, remote monitoring will alert the operative to failures. Upon discovery of a defective or extinguished AtoN, the process detailed in **Section 3.1** would be adopted.
16. For both AtoNs on structures and buoyage, downtime shall be monitored (remotely where possible) supporting calculation of availability. This will be in addition to maintenance activities which will include, as an example, management of marine growth as required. The data collected through monitoring shall be used to calculate the overall availability ensuring

IALA availability standards are adhered to. Availabilities will also be reported to the Northern Lighthouse Board (NLB) via their AtoN Reporting Online Portal, or equivalent.

2.3 Temporary Removal of Structures

17. Major maintenance may necessitate periodic towing of floating wind turbines to port. Appropriate procedures and mitigation will be agreed with key stakeholders where a Significant Peripheral Structure (SPS) or Intermediate Peripheral Structure (IPS) (as defined in the pLMP) is removed, to maintain navigational safety.

3 DEFECTS TO AIDS TO NAVIGATION

3.1 Marine Aid to Navigation Defect

18. Upon discovery of a defect to an AtoN which includes marine navigation lights, fog signals or buoys the process illustrated in **Figure 3-1** would be initiated.

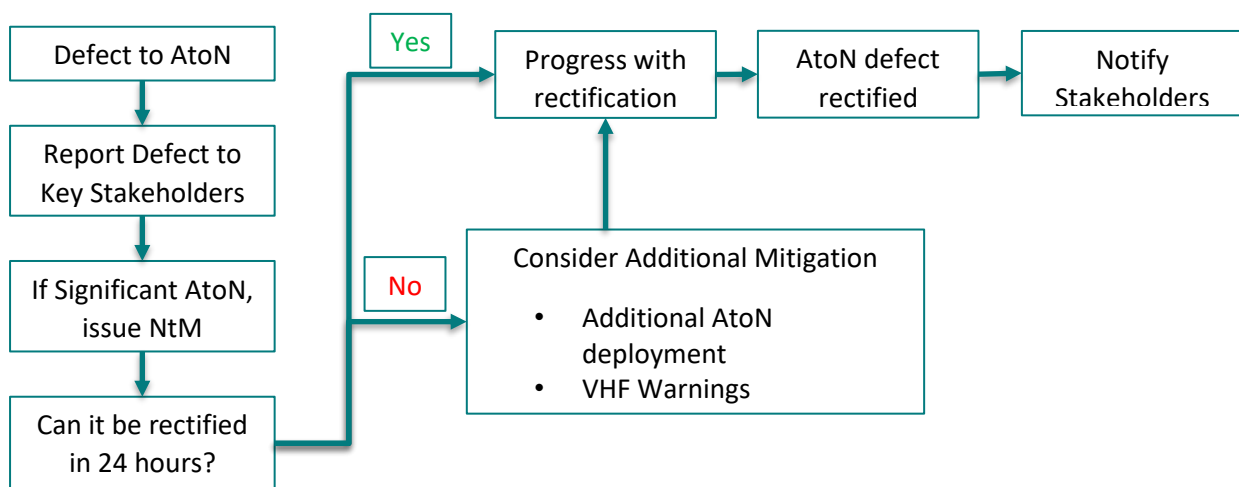


Figure 3-1: AtoN defect process

3.2 Guard Vessel Requirements

19. In the rare event of a significant loss of one or more AtoN, a guard vessel may be required to maintain navigational safety.
20. The following list summarises reasons which may require the deployment of a guard vessel. It should be noted that the following list is not exhaustive but provides broad expectations for the requirement of additional protection measures to be taken and will be reviewed and agreed post-consent. Liaison with NLB, and MCA would also take place as required in the event of the following scenarios developing;
- Loss of navigational light such as a Significant Peripheral Structure for greater than 72 hours;
 - Failure of sound signal for greater than 120 hours;
 - Loss of station of a cardinal buoy during the construction phase, including significant delay (greater than 72 hours) to it being restored; and
 - Deployment of an emergency buoy due to an unmarked hazard within the Array Area.

4 SUMMARY

21. This pAtoN MP provides a description of the measures that will be developed, agreed and implemented regarding requirements to install, maintenance and management of defects to marine AtoN. These measures will be subject to consultation and approval with NLB prior to commencement of activities.