Appendix 26, Annex A: Aids to Navigation Management Plan

Array EIA Report

2024

Revision	Comments	Author	Checker	Approver
FINAL	Final	Ossian OWFL	Anatec/RPS	RPS

Approval for Issue		
For and on behalf of Ossian OWFL	Paul Darnbrough	28 June 2024

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1. INTRODUCTION

1.1. PURPOSE

1. This outline Aids to Navigation Management Plan (ANMP) has been prepared by RPS and Ossian Offshore Wind Farm Limited (Ossian OWFL), a joint venture partnership between SSE Renewables (SSER) Limited, Copenhagen Infrastructure Partners (CIP), and Marubeni Corporation (hereafter referred to as 'the Applicant'), to support the Array Environmental Impact Assessment (EIA) Report for the Ossian Array (hereafter referred to as 'the Array').

2. The outline ANMP provides the details of the management of the aids to navigation (AtoN) associated with the Array, in accordance with relevant guidance, during the construction and operation and maintenance phases. An ANMP is likely to be required through Section 36 Consents and the Marine Licence as consent conditions and therefore this ANMP will be updated and submitted to Marine Directorate – Licensing Operations Team (MD-LOT) for approval post-consent.

3. This outline ANMP should be read alongside the outline LMP (volume 4, appendix 26) which specifies the types and locations of AtoN to be deployed as part of the Array. This document sets out management arrangements for those AtoN.

1.2. PROJECT OVERVIEW

4. The Array is located off the east coast of Scotland, approximately 80 km south-east of Aberdeen from the nearest point (see Figure 1.1).

5. The Array covers an area of approximately 859 km^2. It comprises up to 265 floating wind turbines and up to 15 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.

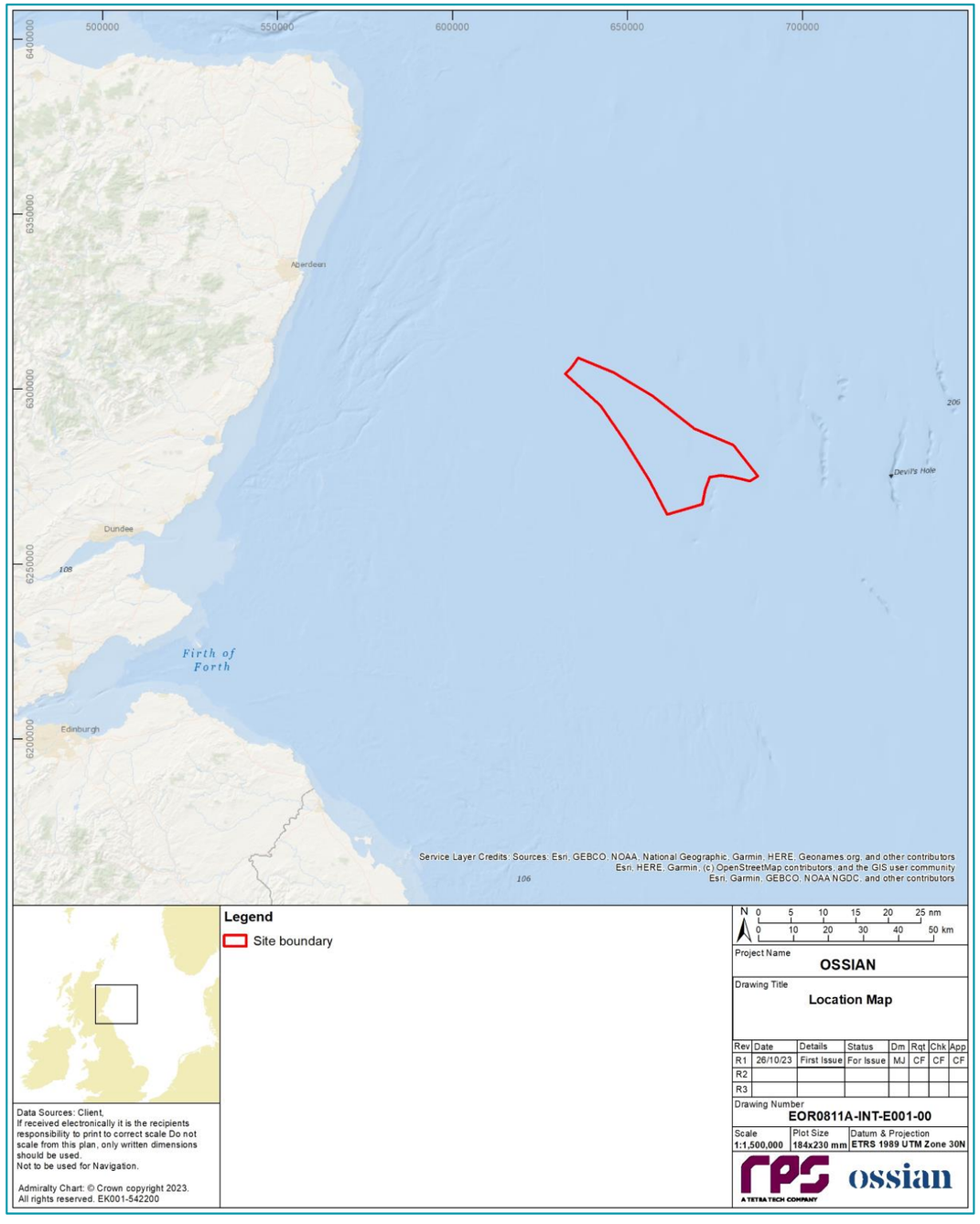

Figure 1.1: Location of the Array

1.3. CONSENT CONDITIONS

6. Table 1.1 lists the consent consents relating to the management of AtoN. The information in this table will be populated once consents are received.

Table 1.1: The Array Consents

Reference	Consent Condition
[To be added post-consent]	

2. MAINTENANCE OF AIDS TO NAVIGATION

7. The following subsections summarise the maintenance associated with the AtoN that will be installed at the Array.

2.1. MONITORING OF AIDS TO NAVIGATION ON STRUCTURES

8. Monitoring of AtoN on structures for both the functionality and availability of AtoN shall be undertaken throughout the construction and operation and maintenance phases. Downtime shall be monitored remotely during the operation and maintenance phase (via the SCADA system) and visually[1] during the construction phase. From this the overall availability shall be calculated (see section 2.4). Monitoring shall include general maintenance to ensure marine growth etc. does not impact functionality.

2.2. MONITORING OF AIDS TO NAVIGATION ON CONSTRUCTION BUOYAGE

9. During the construction phase, remote monitoring shall alert the operative to the failure of a marine AtoN. Upon discovery of an extinguished AtoN, the emergency procedures outlined in section 3 shall be initiated.

2.3. TESTING

10. Following the commissioning of all marine AtoN, they shall all be tested at least once per annum. Sound signals shall be equipped with functionality whereby they can be manually overridden in order to carry out annual testing.

2.4. AVAILABILITY

11. 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 shall be used to ensure that any faults can be rectified as soon as possible.

12. For navigational buoyage visual confirmation shall be undertaken by on-site vessels (where possible).

13. The data collected through remote monitoring of AtoN shall be used to calculate the overall availability of AtoN to ensure that IALA availability standards are being adhered to. Availabilities will be reported to the Northern Lighthouse Board (NLB) via their AtoN Reporting Online Portal (https://nlbhq.nlb.org.uk/latonsonline).

2.5. TEMPORARY REMOVAL OF STRUCTURES WITH KEY LIGHTS

14. Major maintenance will necessitate the periodic towing of floating wind turbines to port. Appropriate procedures/mitigations will be agreed with NLB where a Significant Peripheral Structure (SPS) or Intermediate Peripheral Structure (IPS) (as defined in the LMP) is removed from the Array, in order to maintain navigational safety.

3. EMERGENCY PROCEDURES

3.1. LOSS OF AIDS TO NAVIGATION

3.1.1. MARINE AIDS TO NAVIGATION

15. Upon discovery of the loss of an AtoN which includes marine navigation lights, fog signals or buoys (or part thereof), the protocol illustrated in Figure 3.1 shall be initiated.

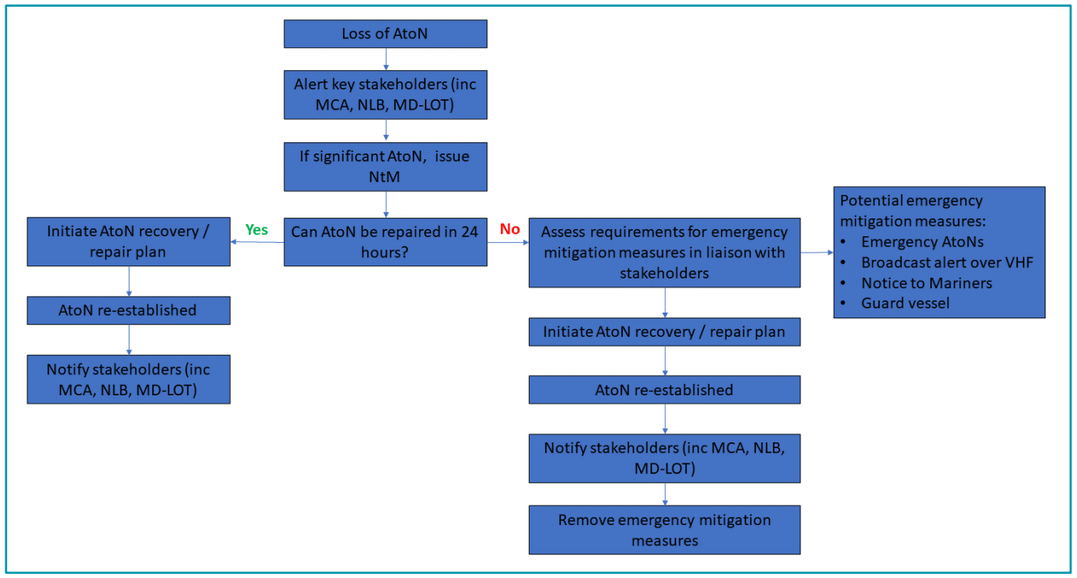

Figure 3.1: Protocol for the Loss of an Aid to Navigation

[1] Undertaken weekly likely, from a guard vessel or crew transfer vessel (CTV).

16. A requirement of AtoN management within Scottish waters is to report navigational failures to the NLB. This is done through the NLB online reporting system (see section 2.4). This is an online database administrated by NLB in order to assist wind farm operators (as the local authority for the wind farm AtoN) to fulfil their responsibility to maintain records of AtoN availability and to provide summaries of these to NLB. This should be undertaken by the Marine Coordination Centre in the event of any failures or loss of availability.

17. In the rare event of a significant loss of one or more AtoN, a guard vessel may be required to maintain navigational safety. Section 3.2 provides an indicative list of the trigger points that would require the Applicant to liaise with the NLB and potentially implement additional emergency mitigations which may also require informing the Maritime and Coastguard Agency (MCA).

3.2. GUARD VESSEL TRIGGER POINTS

18. It is the responsibility of the operator to maintain the AtoN and provide any back-up solutions in the event of an AtoN failure. This may include:

- repair of a broken AtoN;
- replacement of a lost AtoN; and
- provision of a guard vessel.

19. Table 3.1 summarises the Emergency Mitigation Measure Provision Agreement in place, which identifies the party that will be responsible for the repair or replacement of AtoN (including those on structures and navigational buoys).

Table 3.1: Summary of Emergency Mitigation Measures

Emergency Mitigation Measure	Organisation Responsible for Providing the Required Mitigation Measure	Relevant Contact Details			Service Provision
		Address	Phone	Fax	
[To be added post-consent]					

20. The following list summarises trigger points which have been deemed to require consultation with the NLB in which further mitigation may be required should a key navigational aid fail. It should be noted that the following list of trigger points is not intended to be exhaustive but is to provide broad expectations for the requirement of additional protection measures to be taken and will be reviewed/agreed post-consent.

- loss of key (i.e. Significant Peripheral Structure (SPS)) navigational light (navigational mark or fixed structure) for greater than 72 hours;
- failure of sound signal for greater than 120 hours;
- loss of station of cardinal navigational mark, including significant delay (greater than 72 hours) to it being restored;
- AtoN repeatedly failing to meet IALA availability standards;
- deployment of an emergency buoy due to an unmarked hazard within the Array
- throughout significant maintenance works where an increase in navigational risk is posed

3.3. AVIATION LIGHTING

21. The Air Navigation Order (2016) states "*in the event of the failure of any light which is required by this article to be displayed by night the person in charge must repair or replace the light as soon as reasonably practicable*." (HM Government, 2016).

22. It is accepted that there may be occasions when meteorological or sea conditions prohibit the safe transport of personnel for repair tasks. Furthermore, there may be fault conditions that are wider ranging and would take longer to diagnose or repair. In such cases, international standards and recommended practices require the issue of a Notice to Airmen (NOTAM).

23. The CAA considers the operator of an offshore wind farm as an appropriate person for the request of a NOTAM relating to the lighting of their wind farm (CAA, 2016). Should the anticipated outage be greater than 36 hours, the Applicant shall request a NOTAM to be issued by informing the NOTAM section of the UK Aeronautical Information Service as soon as possible via the CAA's Airspace Regulation – AROps@caa.co.uk/0207 453 6599.

24. Upon completion of the remedial works, the Aeronautical Information Service shall be notified as soon as possible to enable a cancellation to be issued.

25. If an outage is expected to last longer than 14 days, then the CAA shall also be notified directly to discuss any issues that may arise and longer-term strategies.

26. In order to expedite the dissemination of information during active aviation operations the Applicant may also establish a direct communication method with aviation operators in the area. The information provided shall be the same as the information provided in the NOTAM and where possible include a NOTAM reference.

4. DECOMMISSIONING

27. The lighting and marking requirements throughout the decommissioning phase have not yet been finalised. However, it is agreed that the required lighting and marking of the Array during, and following decommissioning, shall be agreed in consultation with the NLB and the CAA at least six months prior to the decommissioning works.

5. REFERENCES

CAA (2016). *CAP 764 Policy and Guidelines on Wind Turbines.* London: CAA.

CAA (2021). *CAP 393 Regulations Made Under Powers in the Civil Aviation Act 1982 and the Air Navigation Order 2016*. London: CAA.

HM Government (2016). *The Air Navigation Order 2016.* Available at: The Air Navigation Order 2016 (legislation.gov.uk). Accessed on: 21 June 2024.

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