



Bellrock Offshore Wind Farm

Wind Farm Development Area

Volume V

Invasive Non-native Species Mitigation Plan

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Glossary of Terminology

| Term | Definition |
|--|--|
| Applicant | Bellrock Offshore Wind Farm Limited, the legal entity submitting Section 36 Consent and Marine Licence applications for Bellrock Wind Farm Development Area. |
| Offshore Development Area | The area comprising: <ul style="list-style-type: none"> ▪ The Wind Farm Development Area; and ▪ The Offshore Transmission Development Area. |
| Bellrock Offshore Wind Farm (Bellrock Project) | An offshore wind farm capable of exporting up to 1.8 GW of renewable energy to the National Electricity Transmission System. The Wind Farm Development Area is located 120 km east of Stonehaven, and will connect to the National Electricity Transmission System at the proposed SSEN Transmission Hurlie substation, west of Stonehaven in Aberdeenshire. The Bellrock Offshore Wind Farm comprises of the following Development Areas: <ul style="list-style-type: none"> ▪ Wind Farm Development Area; ▪ Offshore Transmission Development Area; and ▪ Onshore Transmission Development Area. |
| Cable protection | Protective measure to minimise the effects of scour and hazards along the inter-array cables, and protecting these cables at infrastructure crossing points. |
| Commencement of construction | Commencement of construction to install the Wind Farm Infrastructure as authorised by the Wind Farm Development Area Section 36 Consent and Marine Licence (excluding site preparation works), being the earlier of: <ul style="list-style-type: none"> ▪ Intrusive pre-installation surveys; ▪ Placement on or installation in the seabed of anchors and associated scour protection, and mooring lines; ▪ Trench excavation for inter-array cables; or ▪ Trenching for, or laying of inter-array cables on or in the seabed. |
| Development Area | For consenting purposes, the area for which separate consents and/or Marine Licences will be sought by the Applicant, comprising: <ul style="list-style-type: none"> ▪ Wind Farm Development Area; ▪ Offshore Transmission Development Area; and ▪ Onshore Transmission Development Area. |
| Dynamic inter-array cable | The section of inter-array cable between the floating substructure and the seabed, which is designed to accommodate the dynamic movement of the floating substructure. |
| Floating offshore unit | The combined wind turbine generator and floating substructure. |
| Floating substructure | A floating structure which provides buoyancy and, in conjunction with the station keeping system, supports a superstructure (e.g. wind turbine generator or offshore substation), and maintaining its position within the structure's excursion limit. |

| Term | Definition |
|--|--|
| Inter-array cable | Armoured cable containing electrical and fibre optic cores, which link the wind turbine generators to each other and to the subsea cable hubs and/or the offshore substations and include dynamic inter-array cable and static inter-array cable sections. |
| Lowest Astronomical Tide | The lowest level that can be expected to occur under average meteorological conditions and under any combination of astronomical conditions. |
| Monitoring buoy | Used to monitor conditions such as wave and metocean conditions within the Wind Farm Development Area. |
| Offshore Transmission Development Area | The boundary within which the Offshore Transmission Infrastructure will be constructed, operated and maintained, and decommissioned (and includes the whole of the Wind Farm Development Area). |
| Operational life | The expected operational life of the Wind Farm Infrastructure from the Commercial Operation Date to the first floating offshore unit being decommissioned. |
| ScotWind | A Crown Estate Scotland leasing round for offshore wind projects in which the process enabled developers to apply for seabed rights to plan and build wind farms in Scottish waters. |
| Scour protection | Protective material positioned around anchors to avoid sediment being eroded as a result of the flow of water. |
| Static inter-array cable | The section of inter-array cable that is not designed to move. |
| Station keeping system | The system (including mooring lines and anchors) used to hold a floating offshore unit within its excursion limit and maintain the intended orientation of the floating offshore unit. |
| Subsea cable hub | A subsea device, with a gravel pad foundation, which allows the connection of multiple inter-array cables. |
| Towing | Transportation of a floating offshore unit or floating substructure between a port, and/or wet storage facility and/or the Wind Farm Development Area. |
| Wet storage | The temporary storage/anchorage of floating substructures and/or floating offshore units prior to their transportation to the Wind Farm Development Area. |
| Wind Farm Development Area | The boundary within which the Wind Farm Infrastructure will be constructed, operated and maintained, and decommissioned. |
| Wind Farm Infrastructure | Infrastructure located within the Wind Farm Development Area including wind turbine generators; floating substructures, station keeping systems and associated scour protection; inter-array cables and associated cable protection; subsea cable hubs; and ancillary infrastructure including buoys (including activities associated with the Wind Farm Infrastructure construction, operation and maintenance, and decommissioning). |
| Wind turbine generator | A wind turbine generator converts wind energy into electrical energy. The main components include rotor assembly (composed of three blades and a hub); nacelle (containing the generator, shaft and gearbox, power electronic converter and transformer); and a tower (containing lifting equipment and switchgear). |

Glossary of Abbreviations

| Term | Definition |
|-----------------|--|
| AFS | Anti-fouling system |
| AHV | Anchor handling vessel |
| BFMP | Bio-fouling management plan |
| BRB | Bio-fouling record book |
| CCP | Critical control point |
| CLV | Cable laying vessel |
| CTV | Crew transfer vessel |
| Defra | Department for Environment, Food & Rural Affairs |
| ECoW | Environmental clerk of works |
| EIA | Environmental Impact Assessment |
| EU | European Union |
| FOU | Floating offshore unit |
| FSS | Floating substructure |
| GB | Great Britain |
| HACCP | Hazard Analysis and Critical Control Points |
| HLV | Heavy lift vessel |
| HTV | Heavy transport vessel |
| IMO | International Maritime Organisation |
| INNS | Invasive Non-native species |
| INNSMP | Invasive Non-native Species Mitigation Plan |
| km | Kilometre |
| km ² | Square kilometre |
| MD-LOT | Marine Directorate – Licensing Operations Team |
| NBN | National Biodiversity Network |
| OFTDA | Offshore Transmission Development Area |
| ppt | Parts per thousand |
| PLGR | Pre-lay grapnel run |

| Term | Definition |
|-------------|--|
| ROV | Remotely operated vehicle |
| s.36 | Section 36 of the Electricity Act 1989 |
| SKS | Station keeping system |
| SOV | Service operation vessel |
| USV | Uncrewed service vessel |
| UK | United Kingdom |
| WFDA | Wind Farm Development Area |
| WTG | Wind turbine generator |

1 Introduction

1.1 Background

1. In 2021, Crown Estate Scotland launched the ScotWind¹ leasing round which released areas of seabed in Scottish waters for new commercial scale offshore wind developments to help Scotland achieve its net-zero emissions target by 2045. In January 2022, Bellrock Offshore Wind Farm Limited (the Applicant²) was successfully awarded development rights for an area of seabed, to develop the Bellrock Wind Farm Development Area (WFDA), which forms part of the Bellrock Offshore Wind Farm (the Bellrock Project).
2. The Bellrock Project comprises the following three Development Areas for which separate consents and/or licences will be sought by the Applicant:
 - The Bellrock WFDA within which the Bellrock Wind Farm Infrastructure will be constructed, operated and maintained, and decommissioned;
 - The Bellrock Offshore Transmission Development Area (OfTDA) within which the Bellrock Offshore Transmission Infrastructure will be constructed, operated and maintained, and decommissioned; and
 - The Bellrock Onshore Transmission Development Area, within which the Bellrock Onshore Transmission Infrastructure will be constructed, operated and maintained, and decommissioned.
3. This Invasive Non-native Species Mitigation Plan (INNSMP) accompanies the Bellrock WFDA Environmental Impact Assessment (EIA) Report submitted in support of applications for consent under Section 36 (s.36) of the Electricity Act 1989 and for a Marine Licence under the Marine and Coastal Access Act 2009, to be determined by the Scottish Ministers via the Marine Directorate – Licensing Operations Team (MD-LOT), for the Bellrock WFDA only. A separate INNSMP will be prepared to support the Bellrock OfTDA application.
4. This INNSMP applies to the construction (including site preparation), operation and maintenance (O&M), and decommissioning phases of the Wind Farm Infrastructure within the Bellrock WFDA. While this version, submitted alongside the s.36 Consent and Marine Licence application for the Wind Farm Infrastructure is primarily informed by the anticipated activities during the construction phase (including site preparation), potential O&M activities that may pose a risk of introducing or spreading invasive Non-native species (INNS) have also been assessed, with appropriate control measures identified. These activities and measures will be reviewed and updated, if necessary, prior to and during the commencement of the O&M phase to ensure they remain effective and

¹ The ScotWind leasing round was initiated based on the Sectoral Marine Plan for Offshore Wind Energy (Scottish Government, 2020a), which identified a number of sustainable areas for future commercial-scale offshore wind development, and provided the spatial strategy to support CES's ScotWind leasing round.

² The term 'Applicant' is used throughout this plan, reflecting the application stage of the Bellrock WFDA, and is interchangeable with the term 'Developer'.

proportionate. Decommissioning activities are also addressed in this version, however, the INNSMP will be reviewed and revised in advance of the commencement of decommissioning to align with the final Decommissioning Programme required under Section 105 of the Energy Act 2004, to ensure that suitable INNS management measures are in place, in advance of decommissioning.

5. This INNSMP will be updated post-consent to take account of any relevant s.36 Consent and Marine Licence conditions imposed where appropriate.
6. The development of this INNSMP has been informed by MD-LOT’s guidance on mitigation and monitoring plans, as set out in *Marine Licensing and Consenting: Offshore Renewables Energy Projects* (Scottish Government, revised October 2025). This guidance outlines expectations for the structure, content, and implementation of such plans to support s.36 and Marine Licence applications. As such, this INNSMP contains sufficient detail to support the assessment and determination of consent and does not require further update and approval prior to commencement of construction. Any future, updates, for example to support adaptive management during the O&M phase, will be made in accordance with relevant consent/licence conditions.
7. The development of this INNSMP has also considered the feedback provided by consultees in the Bellrock WFDA Scoping Opinion (**Appendix 1.2 Bellrock WFDA Scoping Opinion (Volume IV)**) as well as comments received from NatureScot during formal consultation on a draft of this INNSMP. **Table 1.1** provides a summary of consultee comments relevant to INNS.

Table 1.1: Summary of Consultee Comments from the Scoping Opinion Relevant to INNS

| Stakeholder | Comment | Cross-Reference |
|---------------------------|---|------------------------|
| NatureScot (MD-LOT, 2024) | We are generally content with the impacts identified in Section 6.5, noting one exception. Section 6.5.1 lists “Introduction of INNS from marine traffic” and Table 6.6 lists “Introduction of INNS from vessel traffic”. We advise the introduction of INNS from any source should be included, not just marine traffic. Other sources may include, for example, floating structures which may be towed into position and/or towed during maintenance activities (if required), and wet storage of floating structures (if required) ¹ . | Section 6 |
| | We are content with the impacts scoped in/out as per Section 6.6, with one exception. As discussed above, we advise that INNS should be scoped in from any source and not just marine traffic. This should be scoped in across pre/construction, operation and decommissioning phases. Although there are mitigation measures (i.e. management plans) which can help reduce the risks, there is still a lot of uncertainty around their effectiveness to reduce the spread of INNS. The Scoping Report states that it is assumed floating substructures/floating offshore units will be towed from a UK-based port and not internationally. However, there are INNS present in certain ports around the UK which could pose a risk if transferred elsewhere in UK waters. Moreover, the potential for offshore wind farms to act as stepping stones for INNS should be considered. This should be considered in the Bellrock EIA Report. | |

| Stakeholder | Comment | Cross-Reference |
|---|--|---------------------------------|
| NatureScot (INNSMP Consultation 2026) | We have reviewed the INNSMP (Document Number: RHDV_BEL_CST_REP_0006_002, Revision 0.2) which is detailed and clearly presented. We note the INNS pathways and activities included in Tables 6.2 and 6.3, control points and measures are summarised in Table 6.4 (site preparation works and construction activities) and Table 6.5 (operation and maintenance activities). Overall, we are content that the INNSMP covers all likely marine INNS pathways and that the proposed control measures are adequate. | INNSMP (all sections) |
| NatureScot (INNSMP Consultation 2026) | <p>Following our review of the INNSMP we provide the following comments that you may wish to consider:</p> <p>It is important that all plans are actionable, and whilst the Contingency Plan (section 6.6) is thorough, it does miss some key contacts details from a user’s perspective. For example, the Marine Directorate email for any Non-native species concerns is MarineNonNativeSpecies@gov.scot. NatureScot would request notification via ENQUIRIES@Nature.scot to ensure the operational area is informed as well as the main contact.</p> <p>Table 3.1 identifies relevant legislation, policy, and guidance. We suggest that Table 3.1 should also include reference to Section 14 of the Wildlife and Countryside Act 1981, (as amended by the Wildlife and Natural Environment (Scotland) Act) which includes two offences relating to the release and spread of INNS:</p> <ul style="list-style-type: none"> ▪ Allowing an animal to escape from captivity outwith its native range, and: ▪ Causing an animal to be in a place outwith its native range. <p>These offences include accidental transfer, for example where site operations have allowed the spread of an invasive Non-native species due to inadequate biosecurity.</p> <p>In addition to the actions set out in the Contingency Plan (section 6.6), it would also be beneficial to consider reporting Non-native species as well as invasive Non-native species. Non-native species, unlike INNS, should be reported via https://irecord.org.uk/.</p> <p>The recording and reporting procedures included in the Contingency Plan (section 6.6) don't appear to provide timeframes for the key actions identified. From Table 6.7, we would infer that the actions set out in Stage One (including notifying Marine Directorate), are to be undertaken immediately/as soon as possible.</p> | Section 3 and Section 6. |
| <p>Notes:</p> <p>¹ Wet storage is not part of the scope of this assessment, should wet storage be consented and undertaken in the future, the Critical Control Points (CCPs) and control measures associated with wet storage would be identified and managed as part of that consent process.</p> | | |

1.2 Purpose of the INNSMP

8. INNS can present a significant threat to Scotland's biodiversity, particularly in the marine and coastal environments, they have the potential to disrupt ecosystem functions and services, displace and outcompete native species, and alter marine and coastal habitats. Marine developments, including offshore wind farms, may create pathways for the introduction and subsequent spread of INNS through activities such as vessel movements, the installation of infrastructure, and the transfer of equipment and materials from port or wet storage areas to the Bellrock WFDA (including from any United Kingdom (UK) ports where INNS are present). As such, the effective management of INNS is essential to safeguarding ecological integrity and supporting wider goals relating to biodiversity conservation, such as the Scottish Government's commitment to halt biodiversity loss and be Nature Positive by 2030, and to have restored and regenerated biodiversity by 2045 (Scottish Government, 2024).
9. The potential for INNS to significantly impact Scottish biodiversity and the importance of effectively managing INNS was acknowledged by the Scottish Government (2013) in the *2020 Challenge for Scotland's Biodiversity*, which highlighted the need to manage pressures on Scottish ecosystems and introduced early strategic objectives to tackle INNS. The Scottish Government (2024) has subsequently built upon this foundation, with *Scotland's Biodiversity Strategy to 2045: Tackling the Nature Emergency*, which highlighted INNS as a key driver of global biodiversity loss and identified that effective management as critical to achieving the strategy's ambitious objectives.
10. This INNSMP has been developed to provide a systematic approach to the assessment and control of the INNS risk associated with the Bellrock Wind Farm Infrastructure. The INNSMP aligns with the Scottish Government's (2012) *Code of Practice on Non-native Species*, which sets out a clear framework of responsibilities centred around a three-tiered approach of prevention, rapid response, and control and containment.
11. The INNSMP aims to:
 - Prevent the introduction and spread of INNS from activities associated with the Bellrock Wind Farm Infrastructure through effective and adaptive risk management, including the adoption of mitigation measures;
 - Support compliance with relevant legislation, such as the Conservation of Offshore Marine Habitats and Species Regulations 2017;
 - Implement the policy principles and objectives that are set out in *The Great Britain Invasive Non-native Species Strategy: 2023 to 2030* (Department for Environment, Food and Rural Affairs (Defra), Scottish Government, and Welsh Government, 2023) which promotes a strategic and coordinated approach to INNS management across Great Britain (GB);
 - Apply a systematic risk assessment methodology, in line with Payne et al. (2014) to effectively identify INNS introduction and spread pathways and inform proportionate mitigation measures;
 - Support the delivery of national biodiversity goals, as outlined in Scotland's Biodiversity Strategy to 2045 (Scottish Government, 2024), through addressing INNS as a key driver of biodiversity loss; and

- Define roles, responsibilities, and procedures to support the INNSMP's implementation, monitoring, and continual improvement across all relevant development phases.
12. This INNSMP is intended to be a live working document and as such it will be actively updated by Bellrock Project representatives throughout the lifecycle of the project. It will be reviewed and revised as necessary to reflect evolving best practices, updated risk assessments, and any changes to legislation or policy relevant to INNS and their effective management. Further details are provided in **Section 6.7**.

1.3 Document Structure

13. The structure of this INNSMP is outlined in **Table 1.2**.

Table 1.2: Structure of the INNSMP

| Section | Title | Summary of Content |
|---------|---|---|
| 1 | Introduction | Provides an outline of the background of the Bellrock Project and specially the Bellrock WFDA, the purpose of the INNSMP, how it is structured. This section also sets out the context for INNS risk and their relevance to Scottish biodiversity. |
| 2 | Project Overview | Provides an overview of the Bellrock WFDA including information on the key infrastructure. |
| 3 | Legislation, Policy and Guidance | Describes legislation, policy and guidance relevant to this INNSMP. |
| 4 | Roles and Responsibilities | Outlines key roles and responsibilities in relation to the implementation of this INNSMP. |
| 5 | Methodology | Provides an overview of the risk-based approach used to identify, assess, and manage INNS pathways and impacts based on best practice guidance (Payne et al., 2014). |
| 6 | Bellrock WFDA – Invasive Non-native Species Mitigation Plan | Presents the WFDA-specific INNS management measures designed in accordance with Payne et al. (2014), including the identification of potential INNS pathways, and implementation of mitigation, biosecurity protocols, and monitoring across relevant project phases. |
| 7 | Reference List | Presents a list of cited legislation, policy, technical guidance, and literature used to inform this INNSMP. |

2 Project Overview

14. The Bellrock WFDA is located 120 kilometres (km) east from Stonehaven (116 km southeast from Peterhead), in Aberdeenshire, Scotland, and covers an area of 280 square kilometres (km²), as shown in **Figure A.1 (Appendix A)**.
15. A summary of the key infrastructure for the Bellrock WFDA is provided below:
 - Up to 132 wind turbine generators (WTG) with floating substructures (FSS) (together termed as an 'floating offshore unit' (FOU));
 - Station keeping systems (SKS) for each FSS, including mooring lines, anchoring systems and ancillary elements;
 - Scour protection for FSS anchoring points;
 - Approximately 300 km of IACs comprising static and dynamic sections of IACs linking the individual FOUs to subsea cable hub(s) or to the offshore substations³;
 - Associated cable protection as required;
 - Up to 18 subsea cable hubs; and
 - Ancillary infrastructure including buoys.
16. **Section 6** provides further detail on activities associated with the Bellrock WFDA.

³ Offshore substations will be consented as part of the OfTDA and will be assessed as part of the Bellrock OfTDA EIA Report. The OfTDA is also considered within the Bellrock WFDA EIA's cumulative effects assessments.

3 Legislation, Policy, and Guidance

17. This section summarises the key legislation, policy, and guidance documents relevant to the management of INNS within the context of the Bellrock WFDA. These documents establish the legal and regulatory framework, set out government policy objectives, and provide best practice recommendations that have informed this INNSMP. **Table 3.1** lists these documents alongside their relevance to this INNSMP. Any legislation referred to in this INNSMP is as subsequently amended and as currently in force as at the date of this document.

Table 3.1: Summary of Relevant Legislation, Policy, and Guidance

| Document Name | Relevance to the INNSMP |
|--|---|
| Legislation (Scotland/UK) | |
| The Conservation of Offshore Marine Habitats and Species Regulations 2017 | Supports management of Non-native species in the UK's offshore marine area (within which the Bellrock WFDA is located), primarily through provisions for monitoring, licensing, and controlling the introduction of new species. |
| Invasive Alien Species (Enforcement and Permitting) Order 2019 | Implements the European Union (EU) Invasive Alien Species Regulations (1143/2014) into UK law, prohibiting the handling, sale, or release of certain invasive species without permits across GB (including Scotland). |
| The Invasive Non-native Species (Amendment etc.) (EU Exit) Regulations 2019 and (EU Exit) (Scotland) (Amendment etc.) Regulations 2020 | Post-Brexit statutory instruments to maintain operability of retained EU legislation related to INNS, including species lists and related restrictions in the UK and Scotland. |
| Animal Welfare and Invasive Non-native Species (Amendment etc.) (EU Exit) Regulations 2020 | Regulations updating legislation on animal welfare and INNS controls following EU exit, ensuring continued enforcement across the UK. |
| Merchant Shipping (Control and Management of Ships' Ballast and Sediments) Regulations 2022 | Implements the International Maritime Organisation's (IMO) International Convention for the Control and Management of Ships' Ballast Water and Sediments (2004) into UK law. Requires applicable ships to manage and treat ballast water to reduce the risk of introducing or spreading INNS via ballast water discharge. |
| Merchant Shipping (Anti-Fouling Systems) Regulations 2024 | Implements the International Convention on the Control of Harmful Anti-Fouling Systems on Ships, 2001. Prohibits the use of certain toxic anti-fouling paints and coatings and enforces the use of safer, approved anti-fouling systems (AFS), helping to minimise the spread of marine INNS through hull biofouling. |
| Wildlife and Countryside Act (1981) (Section 14) (as amended by the Wildlife and | The Wildlife and Natural Environment (Scotland) Act 2011 amended Section 14 of the Wildlife and Country Act 1981, to include two offences relating to the release and spread of INNS: |

| Document Name | Relevance to the INNSMP |
|---|---|
| Natural Environment (Scotland) Act 2011 | <ul style="list-style-type: none"> ▪ Allowing an animal to escape from captivity outside its native range; and ▪ Causing an animal to be in a place outside its native range. <p>These offences include accidental transfer, for example where site operations have allowed the spread of an INNS due to inadequate biosecurity.</p> |
| Policy and Strategy | |
| 2020 Challenge for Scotland's Biodiversity (Scottish Government, 2013) | A Scottish Government biodiversity strategy highlighting INNS as a major threat to ecosystems and the economy, and setting out actions on prevention, early detection and control. |
| Scottish Biodiversity Strategy to 2045 (Scottish Government, 2024) | The updated, and current, national strategy for biodiversity, which includes a high-priority commitment to develop and implement a Scottish plan for INNS. It promotes integrated management across marine and terrestrial environments through prevention, surveillance, and control measures. |
| Scotland's National Marine Plan (Scottish Government, 2015) | The statutory marine planning framework that requires marine developments to minimise the risk of introducing INNS (Policy Gen 10). It guides applicants to address INNS risks in their development proposals. |
| The Great Britain Invasive Non-native Species Strategy (2015, updated 2023) (Defra, Scottish Government and Welsh Government, 2023) | A GB wide framework that sets priorities for managing INNS through prevention, early detection and rapid response, long-term management, and control measures. It applies across GB, including Scotland, and is structured around internationally recognised principles of INNS management. |
| Scottish Marine Assessment 2020 (Scottish Government, 2020b) | Evidence reports summarising marine environmental issues, including INNS pathways and impacts, informing marine policy and management. |
| Guidance and Codes of Conduct | |
| Scottish Code of Practice on Non-native Species (Scottish Government, 2012) | Guidance issued under the Wildlife and Countryside Act 1981 (Section 14C) detailing legal responsibilities and best practices to prevent INNS introduction and spread in Scotland. |
| Marine Biosecurity Planning Guidance (Payne et al., 2014) | Provides guidance on the utilisation of the Hazard Analysis and Critical Control Points (HACCP) approach to systematically identify and manage risks related to INNS through the construction (including site preparation), O&M, and decommissioning phase of the Bellrock Wind Farm Infrastructure. |
| Marine Licensing and Consenting: Offshore Renewable Energy Projects – Invasive Non-native Species Mitigation Plan (Scottish Government, revised October 2025) | This guidance outlines expectations for the structure, content, and implementation of such plans to support s.36 and Marine Licence applications. As such, this INNSMP contains sufficient detail to support the assessment and determination of consent and does not require further update and approval prior to commencement of construction. Any future, updates, for example to support adaptive management during the O&M phase, will be made in accordance with relevant consent/licence conditions. |
| Non-native Species Secretariat UK | The Non-native Species Secretariat develops and shares GB wide contingency plans, guidance, and best practice resources to support the prevention, control, and management of INNS, including those in marine environments. |

| Document Name | Relevance to the INNSMP |
|---|--|
| Guidelines for the Control and Management of Ships' Biofouling to Minimise the Transfer of Invasive Aquatic Species (IMO, 2023) | Issued by IMO, these voluntary guidelines provide best practices for the control and management of biofouling on ships' hulls and underwater surfaces. They aim to reduce the risk of introducing INNS via hull fouling during vessel movements between different marine environments. |

4 Roles and Responsibilities

18. The success of this INNSMP relies on its effective implementation which requires clear assignment of roles and responsibilities across all relevant parties. This section outlines these key roles and their associated responsibilities, relevant to INNS management, during the construction (including site preparation), O&M, and decommissioning phases of the Bellrock WFDA. **Table 4.1** sets out each role and associated responsibilities, ensuring that the relevant parties understand their obligations with respect to preventing the introduction and/or spread of INNS in line with the relevant legislation, policies, and best practice.

Table 4.1: Summary of Key Roles and Responsibilities Relevant to the INNSMP

| Role | Responsibility |
|---------------------------------|--|
| The Applicant | Responsible for the overall implementation of the INNSMP, including monitoring and/or clearance and disposal of INNS associated with the Bellrock WFDA, via the Applicant's contractors and/or subcontractors. Any persons acting on behalf of the Applicant are responsible for reporting any incidents involving INNS internally to the Environmental Clerk of Works (ECoW) and/or the Biosecurity Manager. |
| ECoW | Responsible for the independent quality assurance of this INNSMP, as well as monitoring contractor/subcontractor compliance with the INNSMP during all development phases of the Bellrock Wind Farm Infrastructure. The ECoW, acting on behalf of the Applicant, may assume the responsibility of reporting any incidents involving INNS externally to the Scottish Government's Marine Directorate. |
| Biosecurity Manager | Responsible for managing biosecurity associated with the Bellrock WFDA. The Biosecurity Manager is responsible for implementing the INNSMP, checking the Biosecurity Logbook, training staff in the control measures, ensuring that all contractors, subcontractors, and visitors are aware of the aspects of the INNSMP that apply to them, and reporting any unusual sightings to the appropriate contact. The Biosecurity Manager, acting on behalf of the Applicant, may assume the responsibility of reporting any incidents involving INNS externally to the Scottish Government's Marine Directorate. |
| Contractors and Sub-contractors | Responsible for the implementation of the INNSMP through adherence to the control measures identified within the INNSMP, including early notification of the presence (suspected and/or confirmed) of INNS to the Biosecurity Manager. |

5 Methodology

19. This section of the INNSMP outlines the risk-based methodology approach used to develop the INNSMP, for the Bellrock WFDA, following the approach set out in Payne et al. (2014). The methodology has been designed to identify potential pathways for the introduction and/or spread of INNS based on the characteristics of the site and activities being undertaken, assess the associated risks, and define effective control and monitoring measures. For the purpose of the INNSMP, the Bellrock WFDA is referred to as the 'site'.
20. The following sub-sections provide further detail of each stage of the process.

5.1 Step One – Understand the Site

21. The first step in developing the INNSMP involves gaining a baseline understanding of the site's abiotic and biotic characteristics. This informs the identification of potential INNS introduction pathways and the subsequent development of suitable control and monitoring measures.
22. Abiotic factors that should be assessed include:
 - **Salinity:** Most marine fauna and flora cannot tolerate freshwater conditions for any length of time, therefore sites with greater freshwater influence are less hospitable for marine INNS. As such, the greatest risk of INNS establishment occurs when the water is fully saline (30 – 40 parts per thousand (ppt)); and
 - **Artificial infrastructure:** The presence, type, condition, and maintenance of artificial infrastructure, such as the FOU's and SKSs, influence the risk of INNS colonisation, as INNS typically preferentially settle on artificial structures rather than natural substrate.
23. Biotic factors that should be assessed include:
 - **Baseline presence of INNS:** Existing species records, survey reports, and national databases can indicate whether INNS are already present at the site. Even if there is no quantitative evidence indicating the presence of INNS at the site, the precautionary principle should be applied; and
 - **Ecological context:** The presence and condition of native species and habitats can influence the risk of INNS establishment, as disturbed and/or low-quality habitats are generally more vulnerable to invasion, as they offer reduced biotic resistance and increased opportunities for colonisation (Alidoost Salimi et al., 2021).
24. Based upon the above abiotic and biotic factors, a site can be assessed as being either a 'Low Risk' or a 'Significant Risk' site depending on the risk that the site poses in relation to the introduction or spread of INNS. **Table 5.1** provides an example of this approach.

25. Understanding both the abiotic and biotic features of the site is an essential process which allows the subsequent pathway analysis and control and monitoring measures.

Table 5.1: Example of a Low Risk and Significant Risk Site

| Low Risk Site | Significant Risk Site |
|--|---|
| <ul style="list-style-type: none"> ▪ There is a freshwater supply; ▪ There is a breakwater or wall around the majority of the site; and ▪ There are structures present that either have an anti-fouling coating or are removed from the water and air dried on a regular basis (e.g. every six to 12 months). | <ul style="list-style-type: none"> ▪ Water at the site is fully saline (30 – 40 ppt), with no or very limited freshwater influence; ▪ There are structures present that are not treated with an anti-foulant coating and/or are submerged for longer than six months at a time; and ▪ Fixed structures are present that can only be cleaned in-situ. |

5.2 Step Two – Understand How INNS can be Introduced or Spread

26. The second step in developing the INNSMP involves understanding how INNS may either be introduced to the site or spread to or from the site, as this is critical for assessing and effectively managing the biosecurity risks associated with INNS.
27. To identify pathways that pose a greater risk of introducing INNS, the guidance questions, and their corresponding risk levels, detailed in **Table 5.2**, should be used to help with the identification of pathways and the assessment of their potential risk.
28. In general, the greatest risk of introducing INNS to the site is when a vessel (particularly slow moving vessels) and/or equipment (such as a FOU) arrives at the site from another country, region or water body, with similar environmental conditions (e.g. seawater temperature and salinity) while it is covered in biofouling (i.e. anything more than a thin, green slime coating of the surface) or contains fauna or flora within other parts of its structure (such as ballast waters).
29. Another main risk of introducing INNS is from the arrival of a vessel and/or equipment with biofouling on the hull which has come from a site with a known INNS presence (as noted by NatureScot in **Table 1.1**).
30. For the purposes of this assessment, any pathway that falls within the ‘Low’ category in **Table 5.2** is assessed as ‘Low Risk’. Any activity that falls within the ‘Medium’ or ‘High’ categories is assessed as ‘Significant Risk’, as ‘Significant’ is considered as any risk which is moderate or high on the severity scale.

Table 5.2: Example Questions and Associated Risk Level to Consider when Creating an INNSMP

| Question Number | Question ¹ | Category | | |
|--|---|----------|--------|-----|
| | | High | Medium | Low |
| 1 | Has the vessel/equipment just arrived from the local area? | | | |
| 2 | Has the vessel/equipment had an anti-fouling coating applied to submerged structures within the last 12 months (or time recommended by manufacturer)? | | | |
| 3 | Are all the visible submerged surfaces free of biofouling (a green 'slime' is ok)? | | | |
| 4 | Do the visible submerged surfaces have more than a green 'slime' coating? | | | |
| 5 | Does the vessel/equipment have noticeable clumps of algae and/or animals clinging to the visible parts of the hull/rudder/propeller? | | | |
| 6 | Has the vessel/equipment just arrived from another country, region or water body with similar environmental conditions (e.g. seawater temperature)? | | | |
| 7 | Has the vessel/equipment just arrived from a water body known to have INNS present? | | | |
| 8 | Does the vessel/equipment spend long periods of time stationary at sites in between anti-fouling treatments? | | | |
| 9 | Is the vessel 'slow moving', such as a construction barge or drilling rig? | | | |
| Notes: ¹ Payne et al., 2014. | | | | |

5.3 Step Three – Identify Activities which Risk Introduction of INNS

31. The third step in developing the INNSMP involves the identification of the main activities that may pose a risk of either introducing and/or spreading INNS. This includes consideration of both activities within the site as well as activities that involve the movement of vessels, equipment, and/or infrastructure into or out of the site.
32. Some activities, especially those taking place in areas that are never in contact with seawater or in fully enclosed systems, may represent little to no risk. However, in general, the precautionary

principle should be applied and as such consideration should be given to all relevant activities which take place in or around the water and include both vessels and structures.

33. Payne et al. (2014) identified that an in-depth approach to identifying activities which risk introducing INNS is generally recommended particularly for large, complex site with many activities.

34. This in-depth approach helps to better quantify the risk associated with each identified activity. This approach also allows for more effective development of control measures, including where and when to apply them to achieve the best outcome. This approach is derived from the HACCP framework, as outlined in Payne et al. (2014). This approach is made up of the following steps:

- **Step 1 - List Site Activities:** Identify and compile all activities that have a reasonable risk of introducing INNS;
- **Step 2 - Describe the Activities:** Provide a short description of each activity, this description should cover:
 - Who: The individual or team involved;
 - What: The specific activity being carried out;
 - When: The timing and duration of the activity;
 - Where: The locations involved in the activity;
 - Why: The purpose or objective of the activity; and
 - How: The method or process used to carry out the activity;
- **Step 3 - Split Activities into Tasks:** Each activity should be split out into the component tasks. Each task should be briefly described with reference made to its sequence within the activity;
- **Step 4 - Establish Critical Control Points (CCP) and Control Measures:** Regarding each activity and its component tasks, the following shall be assessed:
 - Risk: Evaluate the likelihood of the task leading to the introduction or spread of INNS;
 - Justification: Provide reasoning to explain the significance of the identified risk;
 - CCPs: Identify where control measures are most effectively applied within the task;
 - Control Measures: Detail the specific biosecurity control measure that should be applied at the CCP to mitigate the risk; and
 - Who: Define the person or team responsible for the implementation of the control measure;
- **Step 5 - Develop an Action Plan:** An action plan shall be developed based on the CCP and control measures identified in Step 4. This plan should detail:
 - Who will implement the control measures;
 - What actions will be taken; and
 - Where the CCPs for each activity are, to ensure the control measures are implemented at the correct time.

5.4 Step Four – Biosecurity Control Measures

35. The fourth step in developing the INNSMP involves defining clear and effective control measures for the activities identified in Step 3 (**Section 5.3**) as having the potential to introduce or spread INNS. This methodology prioritises practical, proportionate, and effective measures that reflect the level of control available at the site and across the associated activities.
36. It is important that control measures are developed using these guiding principles:
- Effective: control measures must be effective at preventing and/or reducing the introduction or spread of INNS;
 - Simple: control measures must be easy to understand and implement;
 - Feasible: control measures must be feasible, accounting for staff capacity, time constraints, and available resource; and
 - Clear: control measures and instructions for their implementation must be easily communicated to staff, contractors/subcontractors, and stakeholders.
37. As detailed in Step 3 (**Section 5.3**) the design of control measures must also consider:
- Who is responsible for implementing the control measure;
 - What the control measure is and how it mitigates the risk;
 - Where should the control measure be implemented; and
 - When during the activity lifecycle the control measure needs to be implemented.
38. This methodology aligns with legal obligations to take reasonable steps to prevent the introduction of INNS and is intended to be adaptive over time. Control measures will be reviewed and refined, as appropriate, as new knowledge, technologies, and best practices emerge.

5.5 Step Five – Biosecurity Surveillance, Monitoring and Reporting Procedures

39. The fifth step in developing the INNSMP involves establishing a simple, clear, and proactive approach to detecting INNS at the earliest possible stage, as early detection significantly improves the chances of containment and potential eradication.
40. This is achieved through:
- Routine visual surveillance by staff and other regular site users who are familiar with the site's usual condition;
 - Training and awareness, ensuring that staff and other regular site users understand what to look out for, how to report any concerns, and why biosecurity matters;

- Encouraging a site-wide culture of vigilance, covering staff and all other regular site users, including contractors and subcontractors, to report unusual or unfamiliar species;
- Clear reporting procedures, including what to do, who to contact, and where to report sightings, especially in the case of high-risk or high-alert species; and
- Maintaining accurate records of any reported sightings, including photographic evidence where possible, and arranging identification by specialists if needed.

41. The operator of the site should also define:

- Who is responsible for conducting regular surveillance and maintaining records;
- How vessel owners and other stakeholders will be engaged and supported in reporting potential INNS; and
- What training will be provided, and how it will be reviewed and updated over time.

5.6 Step Six – Contingency Plan

42. The sixth step sets out how to prepare for and respond to potential failures in biosecurity measures that could lead to the introduction or spread of INNS. The primary aim of the contingency plan is to ensure that clear, rapid, and effective actions are in place and can be taken as soon as a potential issue is identified.

43. The contingency plan should be:

- Simple;
- Accessible; and
- Practical.

44. A simple and effective contingency plan should outline a clear sequence of practical actions to take in response to potential biosecurity breaches. These may result from external risks or from failures in the control measures previously developed for specific high-risk activities. In either case, the contingency plan should establish what needs to happen, when, and by whom. Actions should include:

- Rapid identification of 'suspect' species, including use of basic ID guides or collection of samples;
- A quick assessment or survey to determine the extent of any suspected INNS;
- Immediate communication to relevant stakeholders;
- Accessing expert advice on species identification, containment, and potential eradication;
- Physical containment, such as marking off affected areas;

- Temporary vessel movement restrictions and precautionary vessel cleaning requirements;
 - Ongoing monitoring of the site if the species is deemed low risk or has yet to be fully identified; and
 - A clearly defined escalation process in the event that a high-alert species is confirmed as present.
45. To ensure the contingency plan is as effective as possible at implementing the defined actions, the plan should also include:
- A list of key personnel and their responsibilities in the event of a biosecurity breach;
 - An inventory of any special equipment needed; and
 - Pre-agreed communication methods and contact details for alerting relevant parties quickly.

5.7 Monitoring and Review

46. This section outlines how to develop an effective monitoring and review process for the INNSMP.
47. Once the biosecurity plan is in place, a clear system must be established to log inspections, actions, and any INNS related findings (such as the Biosecurity Logbook). The establishment of this system will ensure prompt notification of the Biosecurity Manager in case of potential INNS introduction. The Biosecurity Logbook should include:
- Routine inspections and biosecurity actions taken;
 - Anti-fouling applications and/or vessel and equipment cleaning;
 - High-risk vessel inspections and follow-up actions; and
 - Awareness raising activities or training sessions.
48. It is essential that the INNSMP is regularly reviewed to ensure that it remains relevant and effective. At a minimum the INNSMP should be reviewed annually. However, if new activities, such as commencing new O&M operations or switching from installing one type of infrastructure to another, that have the potential to introduce or spread INNS, start to occur within site, the INNSMP should be reviewed immediately with control measures being implemented.

6 Bellrock WFDA – INNSMP

6.1 Step One – Understand the Site

49. To support the characterisation of the abiotic and biotic conditions within the Bellrock WFDA several data sources have been used, a summary of which is provided in **Table 6.1**.

Table 6.1: Summary of Data Sources Used to Characterise the Bellrock WFDA

| Data Source | Provider/Reference | Description/Use |
|---|------------------------------|--|
| Bellrock WFDA Benthic Survey (Appendix 7.1: Benthic Ecology Baseline (Volume IV)) | Ocean Ecology Limited (2023) | Drop down camera and grab sample surveys were conducted at 113 locations across the Bellrock WFDA, alongside environmental deoxyribonucleic acid water sampling at 10 locations. These surveys characterised the existing benthic environment and supported assessment of the presence/absence of marine INNS. |
| Bellrock WFDA Geophysical Survey (bathymetry and shallow geology) | TerraSond Limited (2023) | Geophysical surveys were undertaken to support characterisation of the physical marine environment. These included multibeam echosounder, side scan sonar, magnetometer, sub-bottom profiler, and single channel seismic. The data were used to map seabed features and substrate types, which inform the ecological context of the site and support interpretation of INNS pathways and settlement potential. |
| UK Atlas of Marine Renewable Energy | ABPmer (2008) | Provides modelled data on marine conditions including tidal currents and wave climate around the UK. Useful for characterising physical site conditions relevant to INNS. |
| National Biodiversity Network (NBN) Atlas | NBN Trust (2025) | UK wide biodiversity database that includes occurrence records for marine INNS. Useful for identifying the presence/absence of INNS within the Bellrock WFDA and ports within which Wind Farm Infrastructure will be present. |

50. As detailed in **Section 2**, the Bellrock WFDA is located 120 km from Stonehaven (116 km from Peterhead), in Aberdeenshire, Scotland, and covers an area of 280 km². As identified through the 2023 geophysical survey of the Bellrock WFDA the minimum and maximum water depths are approximately 70 m below the Lowest Astronomical Tide and 120 m below Lowest Astronomical Tide respectively, with the shallower depths generally found to the west of the WFDA. Across the WFDA, peak flows for mean spring tides of between 0.25 metres per second and 0.50 metres per second have been modelled (ABPmer, 2008). Hindcast data show an overall average H_{rms}^4 wave

⁴ H_{rms} , or root mean square wave height, is a statistical measure representing the average wave height in a wave record. It's a statistical measure that is calculated as the square root of the mean of the squares of individual wave heights, considering all waves, while H_s focuses on the larger waves. Therefore, H_s is often greater than H_{rms} for the same set of waves.

height of 1.27 m at a centre point within the Bellrock WFDA, with a maximum H_{rms} wave height of 6.41 m over the period 1980 to 2024. The overall average H_{max}^5 wave height value is 3.34 m and the maximum H_{max} value is 16.87 m.

51. The abiotic factors identified in **Section 5.1**, have been considered below.

- **Salinity:** Due to the Bellrock WFDA's distance from land the WFDA is determined to be fully marine and therefore has a salinity consistent with other offshore areas of the North Sea, where salinity typically ranges from 30 to 35 ppt; and
- **Artificial structures:** At the time of writing, there were no artificial structures installed within the Bellrock WFDA, as the Wind Farm Infrastructure has not yet been constructed. However, 119 marine archaeological anomalies have been identified within the Bellrock WFDA based on interpretation of geophysical survey data from 2023 for the Bellrock WFDA (MSDS Marine, 2025). Artificial structures will however be introduced to the site during the construction phase, when Wind Farm Infrastructure will be installed (**Section 2**).

52. The biotic factors identified in **Section 5.1**, have been considered below.

- **Baseline presence of INNS:** Baseline investigations did not record the presence of INNS within the Bellrock WFDA. Site-specific benthic surveys, including drop down camera, grab sampling, and environmental deoxyribonucleic acid sampling at selected locations, did not identify any INNS within the Bellrock WFDA (**Appendix 7.1: Benthic Ecology Baseline (Volume IV)**). In addition, a review of publicly available data sources, including the NBN Atlas, did not identify any existing records of marine INNS within the Bellrock WFDA (NBN Atlas, accessed 2025); and
- **Ecological context:** The Bellrock WFDA is characterised predominantly by sandy and muddy sand sediments, as confirmed by site-specific benthic survey data (**Appendix 7.1: Benthic Ecology Baseline (Volume IV)**). Three European Nature Information System level 5 biotopes were identified within the Bellrock WFDA:
 - *Owenia fusiformis* and *Amphiura filiformis* in Deep Circalittoral Sand or Muddy Sand (A5.272);
 - *Ampharete falcata* turf with *Parvicardium ovale* on Cohesive Muddy Sediment Near Margins of Deep Stratified Seas (A5.371); and
 - *Paramphinome jeffreysii*, *Thyasira spp.* and *Amphiura filiformis* in Offshore Circalittoral Sandy Mud (A5.376).

53. Due to the location of the Bellrock WFDA in relatively deep offshore waters, the lack of hard substrate, and the predominance of mobile sandy sediments, the area is considered to be of low suitability for colonisation by most marine INNS currently recorded in UK waters. Many marine INNS in UK coastal environments exhibit a preference for hard substrates or nearshore habitats, such as ports, harbours, and rocky reef systems, where they can more easily establish and spread.

⁵ The maximum wave height (H_{max}) is an estimate of the largest single wave that will occur in a particular tidal level. For measured wave heights, this will be the single largest distance measured from peak to trough.

The physical and ecological characteristics of the Bellrock WFDA therefore present an inherently low risk of natural colonisation by INNS under baseline conditions.

6.2 Step Two – Understand How INNS can be Introduced or Spread

54. A summary of the key vessels and infrastructure associated with the Bellrock WFDA is presented in **Table 6.2**, this table also provides information on the associated INNS introduction pathways, outlining the inherent risk factors. This forms the basis for the identification of activities undertaken in **Section 6.3**.

Table 6.2: Summary of the Potential Pathways for INNS to be Introduced or Spread within the Bellrock WFDA

| Project Element | Description | Pathways | Risk Factors |
|--|---|---|---|
| Vessels (construction (including site preparation), and decommissioning) | <p>A variety of vessel types will be used for construction activities (including site preparation works). Vessel types anticipated to be used during construction and decommissioning comprise:</p> <ul style="list-style-type: none"> ▪ Cable laying vessel (CLV)/cable installation vessel; ▪ CSV; ▪ Crew transfer vessel (CTV); ▪ Feeder barge; ▪ Guard vessel; ▪ Heavy lift vessel (HLV); ▪ Heavy transport vessel (HTV); ▪ Pre-lay grapnel run (PLGR) vessel; ▪ Remotely operated vehicle (ROV) support vessel; ▪ Scour Installation vessel (e.g. Fallpipe vessel); ▪ Service operation vessel (SOV); ▪ Survey vessel; ▪ Support vessel; and ▪ Tug/anchor handler. | <ul style="list-style-type: none"> ▪ Biofouling of submerged surfaces including hulls, intakes, and anchors; ▪ Ballast water discharge; and ▪ Biofouling on installation tools/equipment and transfer between sites. | <ul style="list-style-type: none"> ▪ Vessels may be sourced from other marine water bodies with similar environmental conditions; ▪ Long in-water duration also promotes colonisation; ▪ Extended static or slow-moving periods allow for biofouling to develop; ▪ Limited downtime for cleaning; ▪ Repeated port to site visits; ▪ Infrequent hull cleaning; and ▪ Ballast water not exchanged or treated properly. |
| Vessels (O&M) | <p>Vessel types anticipated to be used during O&M activities comprise:</p> <ul style="list-style-type: none"> ▪ Cable repair vessel ▪ Cable lay vessel; ▪ Tug/anchor handler; ▪ CTV; ▪ Guard vessel; ▪ HLV; ▪ Jack-up vessel; ▪ ROV support vessel; ▪ SOV; ▪ Survey vessel; ▪ Tow tug; and ▪ Uncrewed service vessel (USV). | <ul style="list-style-type: none"> ▪ Biofouling on submerged surfaces, including hulls, intakes, anchors; ▪ Ballast water discharge; and ▪ Biofouling on operation/maintenance equipment/tools and transfer between sites. | <ul style="list-style-type: none"> ▪ Vessels may be sourced from other water bodies with similar environmental conditions; ▪ Long in-water duration also promotes colonisation; ▪ Extended static or slow-moving periods allow for biofouling to develop; ▪ Limited downtime for cleaning; ▪ Repeated port to site visits; ▪ Infrequent hull cleaning; and ▪ Ballast water not exchanged or treated properly. |
| FOUs (construction, O&M, and decommissioning) | FSS and associated SKS. | <ul style="list-style-type: none"> ▪ Biofouling on submerged surfaces of the FSSs; and ▪ Biofouling on the SKS components. | <ul style="list-style-type: none"> ▪ Large, submerged surface areas for potential colonisation; ▪ Long in-water duration also promotes colonisation; and ▪ Lack of anti-fouling on the SKS components. |
| Subsea cable infrastructure (construction, O&M, and decommissioning) | Dynamic and static IACs, and subsea cable hubs. | <ul style="list-style-type: none"> ▪ Biofouling on dynamic and static IAC (where unburied); ▪ Seabed sediment and marine growth disturbance during cable installation/repair; ▪ Biofouling on equipment used for cable laying and burial or repair/maintenance activities; and | <ul style="list-style-type: none"> ▪ Long in-water duration promotes colonisation; ▪ Irregular inspections and cleaning on exposed surfaces; ▪ Submerged surface area for potential colonisation; and ▪ Dynamic IAC movement increases propagation potential. |

| Project Element | Description | Pathways | Risk Factors |
|-----------------------------------|--|--|--|
| | | <ul style="list-style-type: none"> ▪ Biofouling on subsea cable hubs. | |
| Cable protection/scour protection | Cable protection may include: <ul style="list-style-type: none"> ▪ Rock placement (berm or rock bags); ▪ Grout bags and cast-iron shells (articulated pipes); ▪ Artificial frond mats; and ▪ Concrete mattresses. Scour protection may include: <ul style="list-style-type: none"> ▪ Concrete mattresses; ▪ Rock placement (berm or rock bags); ▪ Grout bags; and ▪ Artificial frond mats. | <ul style="list-style-type: none"> ▪ INNS hitchhiking on imported materials; and ▪ Biofouling on the exposed surfaces on the cable protection. | <ul style="list-style-type: none"> ▪ Long in-water duration promotes colonisation; ▪ Submerged surface area for potential colonisation; and ▪ Materials sourced without biosecurity checks. |

6.3 Step Three – Identify Activities which Risk Introduction of INNS

55. As recommended by Payne et al. (2014) an in-depth approach has been adopted to identify activities which risk introducing INNS (as described in **Section 5.3**). As such, **Table 6.3** provides a summary of the key activities associated with the construction (including site preparation), O&M, and decommissioning development phases that have the theoretical potential to introduce INNS. The table also provides a brief description of each activity based on the who, what, when, where, why, and how methodology (Payne et al., 2014).
56. The activities have then been further assessed and broken down into their sequential component tasks, as presented in **Table 6.3**. This has been done to gain a more in-depth understanding of the process and the potential hazards of the activity, and the points at which INNS could be introduced. These component tasks were then used to inform the CCP and control measure assessment undertaken in **Section 6.4**.

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Table 6.3: Summary of the Key Activities Associated with the Site Preparation Works, Construction, O&M, and Decommissioning Phases of the Wind Farm Infrastructure with the Potential to Introduce INNS

| Development Phase | Activity | Description | Component Tasks |
|---|---|--|--|
| Construction (including site preparation) | Site preparation works including: <ul style="list-style-type: none"> ▪ Geophysical surveys, geotechnical surveys, and non-archaeological/archaeological diver/ROV surveys; ▪ Seabed preparation including sand wave levelling (if required), slope levelling for gravity-based anchors (if selected), boulder clearance, and pre-lay grapnel runs; ▪ Unexploded ordnance survey and/or clearance; ▪ Debris clearance; and ▪ Out of service cable/pipeline removal. | <ul style="list-style-type: none"> ▪ Who: Survey contractors/vessel operators; ▪ What: Surveys and clearance campaigns within the WFDA; ▪ When: Prior to the commencement of construction of the Wind Farm Infrastructure; ▪ Where: Within the WFDA; ▪ Why: To ensure seabed is prepared for installation for the Wind Farm Infrastructure; and ▪ How: Vessels such as towed survey, ROC survey, ROV intervention, and large AHV. | Mobilise vessels and required equipment. Transit from port to the WFDA. Undertake survey and clearance activities. Return to port on completion or for resupply, and demobilise vessels. |
| | Installation of the SKSs (anchors and mooring lines, and scour protection) | <ul style="list-style-type: none"> ▪ Who: Installation contractors/vessel operators; ▪ What: Deployment of the SKSs at designated locations in/on the seabed to ensure station keeping of the FOU's; ▪ When: Prior to respective FOU's being towed to the WFDA; ▪ Where: Within the WFDA at predefined locations for connection to the FOU's; ▪ Why: To secure the FOU's at their correct locations; and ▪ How: Deployment will take place via use of specific vessels in line with detailed mooring specifications. | Mobilise vessels and loadout required equipment at port. Transit to the WFDA. Deploy anchors, chains, and mooring lines. Test and survey moorings. Return to port and repeat until complete and demobilise vessel. |
| | Installation of the FOU's | <ul style="list-style-type: none"> ▪ Who: Installation contractors/vessel operators; ▪ What: Tow from port or wet storage and position FOU's at predefined locations for connection to the SKSs; ▪ When: After the installation of their respective SKSs; ▪ Where: Within the WFDA at predefined locations; ▪ Why: To allow for the installation of the FOU's; and ▪ How: Towed from port or wet storage to the WFDA and connected to their respective pre-installed SKSs. | Mobilise towing vessels and required equipment. Towing of the FOU's from port or /wet storage to the WFDA. Survey, installation and connection of FOU's to pre-installed SKSs. Repeat for all FOU then demobilisation of vessels and equipment. |
| | Installation of IACs, subsea cable hubs and cable protection | <ul style="list-style-type: none"> ▪ Who: Installation contractors/vessel operators; ▪ What: Installation of dynamic and static IACs, installation of the subsea cable hubs, and deployment of external cable protection primarily for unburied, and shallow buried, sections of static IACs; ▪ When: To start in advance of FOU installation (pre-lay) and/or once FOU's are in position. Cable protection to occur immediately after cable installation and/or at the same time; ▪ Where: Along pre-surveyed seabed routes between WTGs and the subsea cable hubs; ▪ Why: To connect WTGs and/or subsea cable hubs to the offshore substations for onward export to the National Electricity Transmission System, and to protect cables from damage; and ▪ How: Using specific vessels and specialist tools and equipment (e.g. ROV spread). | Mobilise vessels and required equipment. Transit to the WFDA. Deploy and install the subsea cable components. Deploy external cable protection at defined locations. Post-installation testing, repeat and demobilisation. |

| Development Phase | Activity | Description | Component Tasks |
|--|--|---|--|
| O&M | Routine inspections | <ul style="list-style-type: none"> ▪ Who: Maintenance team/vessel operators; ▪ What: Check infrastructure; ▪ When: On a planned schedule consistent with infrastructure requirements; ▪ Where: At specific Wind Farm Infrastructure installed within the WFDA; ▪ Why: To ensure safe, efficient, and continuous operation of infrastructure; and ▪ How: Via vessel-based surveys. | Mobilise vessel and required inspection equipment. |
| | | | Transit to the WFDA. |
| | | | Deploy divers and/or inspection equipment (ROVs). |
| | | | Undertake inspection activities. |
| | | | Recover all inspection equipment and demobilise. |
| | Environmental surveys (if required) (including deployment of temporary survey devices, such as monitoring buoys) | <ul style="list-style-type: none"> ▪ Who: Survey contractor/vessel operators; ▪ What: Conduct a range of environmentally surveys; ▪ When: Typically done in line with pre-defined monitoring schedules; ▪ Where: Within the WFDA; ▪ Why: To comply with monitoring schedules and/or to further develop understanding of the interactions of the Wind Farm Infrastructure within the environment; and ▪ How: Using a range of survey equipment, typically deployed from marine vessels. | Mobilise vessels and survey equipment. |
| | | | Transit to the WFDA. |
| | | | Deploy survey equipment. |
| | | | Conduct survey operations. |
| | | | Recover survey equipment, finish survey, and demobilise. |
| | Repairs and replacements | <ul style="list-style-type: none"> ▪ Who: Maintenance team/vessel operators; ▪ What: Carry out repairs and replacements for worn or damaged components; ▪ When: As defined by planned maintenance schedules or post fault detection; ▪ Where: At the relevant Wind Farm Infrastructure; ▪ Why: To restore system functionality; and ▪ How: Access via marine vessels, and specialist equipment. | Mobilise vessels and required equipment. |
| | | | Transit to the WFDA. |
| | | | Deployment of repair equipment. |
| | | | Perform repair or replacement. |
| | | | Equipment recovery and demobilisation. |
| | Painting and corrosion protection | <ul style="list-style-type: none"> ▪ Who: Maintenance team/vessel operators; ▪ What: Preparation/cleaning and re-coat structures to protect against corrosion; ▪ When: As per the O&M planned maintenance schedule, or reactively in response to inspection findings; ▪ Where: Above the waterline on exposed surfaces; ▪ Why: To help maintain structural rigidity and prolong structure lifespan; and ▪ How: Either via vessel-based access or vessel drops. Painting involves surface preparation/cleaning, followed by marine grade coatings. | Mobilise vessels and required painting and corrosion protection equipment and materials. |
| | | | Transit to the WFDA. |
| | | | Deployment of coating and surface preparation equipment. |
| | | | Surface preparation and coating application. |
| | | | Equipment recovery and demobilisation. |
| Removal of marine growth from sub-surface infrastructure | <ul style="list-style-type: none"> ▪ Who: Maintenance team/vessel operators; ▪ What: Remove biofouling from sub-surface infrastructure; ▪ When: Periodically, depending on fouling rates and inspection findings. Also, as part of preparation works for repair and replacement activities; ▪ Where: Below the waterline, typically in association with the FSSs, SKSs, and IACs; ▪ Why: To reduce drag, preserve system integrity and infrastructure lifespan, and allow for repair; and ▪ How: The removal of marine growth from sub-surface infrastructure is typically done via high-pressure water jets, mechanical scrapers, or brushes. | Mobilise vessels and required cleaning equipment. | |
| | | Transit to the WFDA. | |
| | | Deployment of cleaning equipment. | |
| | | Removal of marine growth. | |
| | | Equipment recovery and demobilisation. | |

| Development Phase | Activity | Description | Component Tasks |
|-------------------|--|---|---|
| Decommissioning | Decommissioning of the FOU's | <ul style="list-style-type: none"> ▪ Who: Decommissioning contractor/vessel operators; ▪ What: Disconnect and dismantle the FOU's; ▪ When: At the end of the WFDA operational life; ▪ Where: Within the WFDA, with Wind Farm Infrastructure being removed to port; ▪ Why: To return the WFDA to a pre-development state; and ▪ How: Reversal of the installation process, including transportation to port or wet storage and recycling or disposal, in line with the waste management hierarchy. | <ul style="list-style-type: none"> Mobilise vessels and required decommissioning equipment. Transit to the WFDA. Release of FOU's from the SKSs. Tow the FOU's to designated wet storage, or decommissioning port. Demobilisation of vessel and decommissioning equipment. |
| | Decommissioning of the SKSs | <ul style="list-style-type: none"> ▪ Who: Decommissioning contractor/vessel operators; ▪ What: Recover anchors, chains, and mooring lines, ensuring all SKS infrastructure is removed from the seabed, where possible. FOU driven piles are expected to be either fully removed or cut off below seabed level with a proportion remaining in-situ; ▪ When: At the end of the operational life, and once the FOU's have been removed; ▪ Where: Within the WFDA at the defined SKS deployment locations; ▪ Why: To return the WFDA to a pre-development state; and ▪ How: Reversal of the installation process, including transportation, and recycling or disposal at an appropriately licenced waste management facility. | <ul style="list-style-type: none"> Mobilise vessels and required recovery equipment. Transit to the WFDA. Recovery of the SKSs. On-deck handling and storage of recovered moorings. Demobilisation of vessels and equipment. |
| | Decommissioning of subsea cable infrastructure (including external cable protection) | <ul style="list-style-type: none"> ▪ Who: Decommissioning contractor/vessel operators; ▪ What: Remove all IACs, subsea cable hubs, and external cable protection measures (if appropriate); ▪ When: After electrical systems have been de-energised; ▪ Where: Within the WFDA along the defined IAC routes; ▪ Why: To fulfil decommissioning requirements and return the WFDA to a pre-development state; and ▪ How: The removal of subsea cables may involve exposing the buried cables, retrieving and cutting cable sections, followed by recycling or disposal of materials at an appropriately licenced waste management facility. | <ul style="list-style-type: none"> Mobilisation of vessels and decommissioning equipment. Transit to the WFDA. Removal of subsea cable infrastructure. Handling and storage of recovered subsea cable materials. Demobilisation of vessels and decommissioning equipment. |

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6.4 Step Four – Biosecurity Control Measures

57. Based upon the construction (including site preparation), O&M, and decommissioning activities, and their component tasks, identified in **Section 6.3**, an assessment, as presented in **Table 6.4** (construction), **Table 6.5** (O&M), and **Table 6.6** (decommissioning) has been undertaken in order to determine where CCPs lay within each activity and what control measures are required to reduce the risk of INNS introduction/spread to Low (non-significant) risk. Where possible, control measures have been introduced at any early stage in the activity to de-risk subsequent component tasks and prevent/reduce the risk of INNS introduction.
58. Where CCPs and control measures have been identified this reflects a commitment by the Applicant to ensure that these control measures are effectively applied during the relevant activity.
59. The construction (include site preparation), O&M, and decommissioning phase activities listed in **Table 6.4** (construction (including site preparation)), **Table 6.5** (O&M), and **Table 6.6** (Decommissioning) are of a similar nature, all being marine-based, and typically involving vessel mobilisation, transit, in-water operations, and demobilisation. As such the component tasks, associated CCPs, and control measures are all broadly aligned. Whilst this may appear repetitive, this consistency across development phases and activities is not redundant. Instead, it reflects the shared INNS pathways across the identified activities. Therefore, the consistent and repeated application of the control measures is essential to ensure robust and effective INNS risk management throughout the development phases. This approach aligns with the HACCP principles (Payne et al., 2014) and ensures risks are systematically controlled at the most appropriate stage of the activity.
60. The control measures detailed in **Table 6.4**, **Table 6.5** and **Table 6.6**, such as the use of effective AFSs and the implementation of ballast water management procedures have been developed based upon recognised international and national legislation, best practice, and guidance as follows:
- AFS control measures reflect the requirements of the Merchant Shipping (Anti-Fouling Systems) Regulations 2024, and the 2023 IMO Guidelines for the Control and Management of Ships' Biofouling to Minimise the Transfer of Invasive Aquatic Species (IMO, 2023); and
 - Ballast water control measures have again been developed and influenced by international and national legislation, with control measures designed to align with the International Convention for the Control and Management of Ships' Ballast Water and Sediments 2004 and its implementation in UK law through the Merchant Shipping (Control and Management of Ships' Ballast and Sediments) Regulations 2022.
61. As a result of the development of control measures aligned to international and national legislation, best practice, and guidance, these control measures are determined to be robust and effective at preventing and reducing the risk of INNS introduction.

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Table 6.4: Summary of the Critical Control Points and Control Measures Identified as Necessary for Site Preparation Works and Construction Activities

| Activity | Component Task | Risk (Is there a significant risk of this task introducing INNS? (Yes/No)) | Justification (Explain risk, if there is a risk, describe the risk) | Critical Control Point (Are control measures most effectively applied at this stage?) | Control Measure (What control measures can be applied to this task?) | Who (Who will carry out the control measure?) |
|---|---|--|---|--|---|--|
| Site preparation works including: <ul style="list-style-type: none"> Geophysical surveys, geotechnical surveys, and non-archaeological/archaeological diver/ROV surveys; Seabed preparation including sand wave levelling, slope levelling for gravity-based anchors (if selected), boulder clearance, and pre-lay grapnel runs; Unexploded ordnance survey and/or clearance; Debris clearance; and Out of service cable/pipeline removal. | Mobilise vessels and required equipment | Yes | <ul style="list-style-type: none"> Vessels and survey equipment may be biofouled from previous surveys/deployments. | Yes | <ul style="list-style-type: none"> Review vessel maintenance schedule and ensure that AFS maintenance is up to date; Conduct biofouling inspections and cleaning in accordance with the vessel's Biofouling Management Plan (BFMP)/maintenance schedule. Where applicable, maintain a Biofouling Record Book (BRB). Measures should follow relevant elements of the IMO (2023) guidance, where applicable; and Inspect, clean, and log all equipment on land at the mobilisation port prior to loading. Conduct additional inspections offshore, onboard the vessel as needed to manage fouling risk. | Survey contractor/vessel operator |
| | Transit from port to the WFDA | Yes | <ul style="list-style-type: none"> The risk of potential release of biofouling organisations has been effectively mitigated through the control measures associated with the prior task; However, INNS may be released through ballast water exchange if this risk is not properly managed; and External, submerged surfaces may become fouled during transit. | Yes | <ul style="list-style-type: none"> Comply with the Merchant Shipping (Control and Management of Ships' Ballast and Sediments) Regulations 2022 regarding ballast water management and exchange; Minimise anchorage exposure during transit, particularly in high-risk areas; and Log transit details. | Vessel operator |
| | Undertake survey and clearance activities | No | <ul style="list-style-type: none"> All survey equipment has been inspected and treated during mobilisation (Task 1). Therefore, deployment presents no new risk of INNS introduction if prior control measures have been implemented; Survey takes place in a defined location using pre-checked equipment (Task 1); and Survey equipment is in continuous controlled use. | No | <ul style="list-style-type: none"> None. | Survey contractor |
| | Return to port on completion (or for resupply) and demobilise vessels | Yes | <ul style="list-style-type: none"> On retrieval of the equipment, it may be biofouled and could transfer INNS to port or subsequent sites. | Yes | <ul style="list-style-type: none"> Conduct thorough inspection, cleaning, and maintenance of vessels per BFMP, BRB, and maintenance schedules upon arrival at port; and Inspect all installation equipment and tools after use, focusing on the removal of fouling and potential INNS (if present). Cleaning, disinfecting, and drying will be applied where practicable or where fouling or potential INNS are identified. Maintain records of inspections and any cleaning or disinfection to ensure traceability. | Survey contractor/vessel operator |
| Installation of the SKSs | Mobilise vessels and loadout required equipment at port | Yes | <ul style="list-style-type: none"> Submerged, external surfaces of the vessel may have biofouling; and Mobilised equipment required for works may have biofouling or residues from previous work in other water bodies. | Yes | <ul style="list-style-type: none"> Review vessel maintenance schedule and ensure that AFS maintenance is up to date; Conduct biofouling inspections and cleaning in accordance with the vessel's BFMP/maintenance schedule; Where applicable, maintain a BRB. Measures should follow relevant elements of the IMO (2023) guidance, where applicable; and Inspect, clean (if required), and log all SKS components and installation equipment on land at the mobilisation port prior to loading. Conduct additional inspections offshore, onboard the vessel as needed to manage fouling risk. Where long-term deployment or elevated fouling risk is identified, consider additional control measures (e.g. anti-fouling or enhanced inspection). | Installation contractor/vessel operator |

| Activity | Component Task | Risk (Is there a significant risk of this task introducing INNS? (Yes/No)) | Justification (Explain risk, if there is a risk, describe the risk) | Critical Control Point (Are control measures most effectively applied at this stage?) | Control Measure (What control measures can be applied to this task?) | Who (Who will carry out the control measure?) |
|---------------------------|--|--|---|--|--|--|
| | Transit to the WFDA | Yes | <ul style="list-style-type: none"> The risk of potential release of biofouling organisations has been effectively mitigated through the control measures associated with the Task 1; However, INNS may be released through ballast water exchange if this risk is not properly managed; and External, submerged surfaces may become fouled during transit. | Yes | <ul style="list-style-type: none"> Comply with the Merchant Shipping (Control and Management of Ships' Ballast and Sediments) Regulations 2022 and Management of Ships' Ballast Water and Sediments regarding ballast water management and exchange; Minimise anchorage exposure during transit, particularly in high-risk areas; and Log transit details. | Vessel operator |
| | Deploy anchors, chains, and mooring lines | No | <ul style="list-style-type: none"> Equipment (SKS components and installation equipment/tools) deployed during Task 3 has undergone thorough inspection, cleaning, and biofouling management during mobilisation (Task 1). This significantly reduces the risk of introducing INNS. | No | <ul style="list-style-type: none"> None. | N/A |
| | Test and survey moorings | No | <ul style="list-style-type: none"> Equipment used to test and survey moorings during Task 4 has undergone thorough inspection, cleaning, and biofouling management during mobilisation (Task 1). This significantly reduces the risk of introducing INNS. | No | <ul style="list-style-type: none"> None. | N/A |
| | Return to port and repeat until complete, and demobilise vessel | Yes | <ul style="list-style-type: none"> Biofouled external, submerged surfaces and/or equipment and tools may transfer INNS or future work locations and/or ports. | Yes | <ul style="list-style-type: none"> Conduct thorough inspection, cleaning, and maintenance of vessels per BFMP, BRB, and maintenance schedules upon arrival at port; and Inspect all installation equipment and tools after use, focusing on the removal of fouling and potential INNS (if present). Cleaning, disinfecting, and drying will be applied where practicable or where fouling or potential INNS are identified. Maintain records of inspections and any cleaning or disinfection to ensure traceability. | Installation contractor/vessel operator |
| Installation of the FOU's | Mobilise towing vessel and required equipment | Yes | <ul style="list-style-type: none"> Submerged, external surfaces of the vessel may have biofouling; and Mobilised equipment required for works may have biofouling or residues from previous work in other water bodies. | Yes | <ul style="list-style-type: none"> Review vessel maintenance schedule and ensure that AFS maintenance is up to date; Conduct biofouling inspections and cleaning in accordance with the vessel's BFMP/maintenance schedule. Where applicable, maintain a BRB. Measures should follow relevant elements of the IMO (2023) guidance, where applicable; and Inspect, clean, and log all equipment on land at the mobilisation port prior to loading. Conduct additional inspections offshore, onboard the vessel as needed to manage fouling risk. Where long-term deployment or elevated fouling risk is identified, consider additional control measures (e.g. anti-fouling or enhanced inspection). | Installation contractor/vessel operator |
| | Towing of the FOU's from port or /wet storage to the WFDA | Yes | <ul style="list-style-type: none"> The risk of potential release of biofouling organisations has been effectively mitigated through the control measures associated with the prior tasks; but INNS may be released through ballast water exchange if this risk is not properly managed. | Yes | <ul style="list-style-type: none"> Comply with the Merchant Shipping (Control and Management of Ships' Ballast and Sediments) Regulations 2022 and Management of Ships' Ballast Water and Sediments regarding ballast water management and exchange. | Vessel operator |
| | Survey, installation and connection of FOU's to pre-installed SKSs | No | <ul style="list-style-type: none"> The FOU's have been subject to control measures (Task 1) and have undergone thorough inspection, cleaning, and biofouling management. The pre-laid SKS has also been subject to control measures (activity: Installation of the SKSs). This significantly reduces the risk of introducing INNS. | No | <ul style="list-style-type: none"> None. | N/A |

| Activity | Component Task | Risk (Is there a significant risk of this task introducing INNS? (Yes/No)) | Justification (Explain risk, if there is a risk, describe the risk) | Critical Control Point (Are control measures most effectively applied at this stage?) | Control Measure (What control measures can be applied to this task?) | Who (Who will carry out the control measure?) |
|--|---|--|---|--|--|--|
| | Repeat for all FOU then demobilisation of vessels and equipment | Yes | <ul style="list-style-type: none"> Vessels and equipment used for the installation works may be fouled, and therefore risk transferring INNS to port or other work sites. | Yes | <ul style="list-style-type: none"> Conduct thorough inspection, cleaning, and maintenance of vessels per BFMP, BRB, and maintenance schedules upon arrival at port; and Inspect all installation equipment and tools after use, focusing on the removal of fouling and potential INNS (if present). Cleaning, disinfecting, and drying will be applied where practicable or where fouling or potential INNS are identified. Maintain records of inspections and any cleaning or disinfection to ensure traceability. | Installation contractor/vessel operator |
| Installation of IACs, subsea cable hubs and cable protection | Mobilise vessels and required equipment | Yes | <ul style="list-style-type: none"> External, submerged surfaces of the vessel may have biofouling; Equipment/tools required for cable infrastructure installation may have been used at other locations with similar environmental conditions and may have biofouling; and Prefabricated cable protection may be contaminated/fouled with organisms. | Yes | <ul style="list-style-type: none"> Review vessel maintenance schedule and ensure that AFS maintenance is up to date; Conduct biofouling inspections and cleaning in accordance with the vessel's BFMP/maintenance schedule. Where applicable, maintain a BRB. Measures should follow relevant elements of the IMO (2023) guidance, where applicable; and Inspect, clean, and log all equipment on land at the mobilisation port prior to loading. Conduct additional inspections offshore, onboard the vessel as needed to manage fouling risk. Where long-term deployment or elevated fouling risk is identified, consider additional control measures (e.g. anti-fouling or enhanced inspection). | Installation contractor/vessel operator |
| | Transit to the WFDA | Yes | <ul style="list-style-type: none"> The risk of potential release of biofouling organisations has been effectively mitigated through the control measures associated with Task 1; However, INNS may be released through ballast water exchange if this risk is not properly managed; and External, submerged surfaces may become fouled during transit. | Yes | <ul style="list-style-type: none"> Comply with the Merchant Shipping (Control and Management of Ships' Ballast and Sediments) Regulations 2022 and Management of Ships' Ballast Water and Sediments regarding ballast water management and exchange; Minimise anchorage exposure during transit, particularly in high-risk areas; and Log transit details. | Vessel operator |
| | Deploy and install the subsea cable components | No | <ul style="list-style-type: none"> No additional INNS risk is identified for this task, as the risk is addressed through the control measures implemented during Task 1. All relevant inspections, cleaning, and biofouling management are conducted prior to deployment, effectively mitigating the potential for INNS introduction. | No | <ul style="list-style-type: none"> None. | N/A |
| | Deploy external cable protection at defined locations | No | <ul style="list-style-type: none"> No additional INNS risk for this task, as the risk is managed through the control measures applied during Task 1. All relevant inspections, cleaning, and biofouling management are conducted prior to deployment, effectively mitigating the potential for INNS introduction. | No | <ul style="list-style-type: none"> None. | N/A |
| | Post-installation testing, repeat and demobilisation. | Yes | <ul style="list-style-type: none"> Post installation work, the vessel and equipment may have residue biofouling and will re-enter ports and/or be used on other sites. | Yes | <ul style="list-style-type: none"> Conduct thorough inspection, cleaning, and maintenance of vessels per BFMP, BRB, and maintenance schedules upon arrival at port; and Inspect all installation equipment and tools after use, focusing on the removal of fouling and potential INNS (if present). Cleaning, disinfecting, and drying will be applied where practicable or where fouling or potential INNS are identified. Maintain records of inspections and any cleaning or disinfection to ensure traceability. | Installation contractor/vessel operator |

Table 6.5: Summary of the Critical Control Points and Control Measures Identified as Necessary for O&M Activities

| Activity | Component Task | Risk (Is there a significant risk of this task introducing INNS? (Yes/No)) | Justification (Explain risk, if there is a risk, describe the risk) | Critical Control Point (Are control measures most effectively applied at this stage?) | Control Measure (What control measures can be applied to this task?) | Who (Who will carry out the control measure?) |
|--|---|---|---|--|--|--|
| Routine inspections | Mobilise vessel and required inspection equipment | Yes | <ul style="list-style-type: none"> Vessels and inspection equipment may be biofouled from previous works or time spent at port. | Yes | <ul style="list-style-type: none"> Review vessel maintenance schedule and ensure that AFS maintenance is up to date; Conduct biofouling inspections and cleaning in accordance with the vessel's BFMP/maintenance schedule. Where applicable, maintain a BRB. Measures should follow relevant elements of the IMO (2023) guidance, where applicable; and Inspect, clean (as required), and log all equipment on land at the mobilisation port prior to loading. Conduct additional inspections offshore, onboard the vessel as needed to manage fouling risk. | Maintenance team/vessel operator |
| | Transit to the WFDA | Yes | <ul style="list-style-type: none"> The risk of potential release of biofouling organisations has been effectively mitigated through the control measures associated with the prior task; However, INNS may be released through ballast water exchange if this risk is not properly managed; and External, submerged surfaces may become fouled during transit. | Yes | <ul style="list-style-type: none"> Comply with the Merchant Shipping (Control and Management of Ships' Ballast and Sediments) Regulations 2022 and Management of Ships' Ballast Water and Sediments regarding ballast water management and exchange; Minimise anchorage exposure during transit, particularly in high-risk areas; and Log transit details. | Vessel operator |
| | Deploy divers and/or inspection equipment (ROVs) | No | <ul style="list-style-type: none"> All equipment/tools required for routine inspection works have been inspected and clean (as required), during mobilisation (Task 1). Therefore, this task is unlikely to carry a risk of INNS introduction because of the prior CCPs and control measures. | No | None. | N/A |
| | Undertake inspection activities | No | <ul style="list-style-type: none"> Inspection activities will use pre-inspected and clean equipment (Task 1). | No | None. | N/A |
| | Recover all inspection equipment and demobilise | Yes | <ul style="list-style-type: none"> Used equipment may have biofouling present, which may be transferred to port or other sites. | Yes | <ul style="list-style-type: none"> Conduct thorough inspection, cleaning, and maintenance of vessels per BFMP, BRB, and maintenance schedules upon arrival at port; and Inspect all installation equipment and tools after use, focusing on the removal of fouling and potential INNS (if present). Cleaning, disinfecting, and drying will be applied where practicable or where fouling or potential INNS are identified. Maintain records of inspections and any cleaning or disinfection to ensure traceability. | Maintenance team/vessel operator |
| Environmental surveys (if required) (including deployment of temporary survey devices, such as monitoring buoys) | Mobilise vessels and survey equipment | Yes | <ul style="list-style-type: none"> Vessels and survey equipment may be biofouled from previous surveys/deployments. | Yes | <ul style="list-style-type: none"> Review vessel maintenance schedule and ensure that AFS maintenance is up to date; Conduct biofouling inspections and cleaning in accordance with the vessel's BFMP/maintenance schedule. Where applicable, maintain a BRB. Measures should follow relevant elements of the IMO (2023) guidance, where applicable; and Inspect, clean, and log all equipment on land at the mobilisation port prior to loading. Conduct additional inspections offshore, onboard the vessel as needed to manage fouling risk. | Survey contractor/vessel operator |
| | Transit to the WFDA | Yes | <ul style="list-style-type: none"> The risk of potential release of biofouling organisations has been effectively mitigated through the control measures associated with the prior task; | Yes | <ul style="list-style-type: none"> Comply with the Merchant Shipping (Control and Management of Ships' Ballast and Sediments) Regulations 2022 and Management of Ships' Ballast Water and Sediments regarding ballast water management and exchange; | Vessel operator |

| Activity | Component Task | Risk (Is there a significant risk of this task introducing INNS? (Yes/No)) | Justification (Explain risk, if there is a risk, describe the risk) | Critical Control Point (Are control measures most effectively applied at this stage?) | Control Measure (What control measures can be applied to this task?) | Who (Who will carry out the control measure?) |
|--------------------------|---|---|---|--|--|--|
| | | | <ul style="list-style-type: none"> However, INNS may be released through ballast water exchange if this risk is not properly managed; and External, submerged surfaces may become fouled during transit. | | <ul style="list-style-type: none"> Minimise anchorage exposure during transit, particularly in high-risk areas; and Log transit details. | |
| | Deploy survey equipment | No | <ul style="list-style-type: none"> All survey equipment has been inspected and treated during mobilisation (Task 1). Therefore, deployment presents no new risk of INNS introduction if prior control measures have been implemented. | No | None. | Survey contractor |
| | Conduct survey operations | No | <ul style="list-style-type: none"> Survey takes place in a defined location using pre-checked equipment (Task 1); and Survey equipment is in continuous controlled use. | No | None. | N/A |
| | Recover survey equipment, finish survey, and demobilise | Yes | <ul style="list-style-type: none"> On retrieval of the survey equipment, it may be biofouled and could transfer INNS to port or subsequent sites. | Yes | <ul style="list-style-type: none"> Conduct thorough inspection, cleaning, and maintenance of vessels per BFMP, BRB, and maintenance schedules upon arrival at port; and Inspect all installation equipment and tools after use, focusing on the removal of fouling and potential INNS (if present). Cleaning, disinfecting, and drying will be applied where practicable or where fouling or potential INNS are identified. Maintain records of inspections and any cleaning or disinfection to ensure traceability. | Survey contractor/vessel operator |
| Repairs and replacements | Mobilise vessels and required equipment | Yes | <ul style="list-style-type: none"> Vessels and equipment used for repair and replacement works may be biofouled from previous work or visited ports. | Yes | <ul style="list-style-type: none"> Review vessel maintenance schedule and ensure that AFS maintenance is up to date; Conduct biofouling inspections and cleaning in accordance with the vessel's BFMP/maintenance schedule. Where applicable, maintain a BRB. Measures should follow relevant elements of the IMO (2023) guidance, where applicable; and Inspect, clean, and log all equipment on land at the mobilisation port prior to loading. Conduct additional inspections offshore, onboard the vessel as needed to manage fouling risk. | Maintenance team/vessel operator |
| | Transit to the WFDA | Yes | <ul style="list-style-type: none"> The risk of potential release of biofouling organisms has been effectively mitigated through the control measures associated with the prior task; However, INNS may be released through ballast water exchange if this risk is not properly managed; and External, submerged surfaces may become fouled during transit. | Yes | <ul style="list-style-type: none"> Comply with the Merchant Shipping (Control and Management of Ships' Ballast and Sediments) Regulations 2022 and Management of Ships' Ballast Water and Sediments regarding ballast water management and exchange; Minimise anchorage exposure during transit, particularly in high-risk areas; and Log transit details. | Vessel operator |
| | Deployment of repair equipment | No | <ul style="list-style-type: none"> All maintenance equipment has been inspected and treated during mobilisation (Task 1). Therefore, deployment presents no new risk of INNS introduction if prior control measures have been implemented. | No | None. | Maintenance team |
| | Perform repair or replacement | No | <ul style="list-style-type: none"> Maintenance takes place in a defined location using pre-checked equipment (Task 1); and Maintenance equipment is in continuous controlled use. | No | None. | N/A |

| Activity | Component Task | Risk (Is there a significant risk of this task introducing INNS? (Yes/No)) | Justification (Explain risk, if there is a risk, describe the risk) | Critical Control Point (Are control measures most effectively applied at this stage?) | Control Measure (What control measures can be applied to this task?) | Who (Who will carry out the control measure?) |
|-----------------------------------|---|---|---|---|--|--|
| | Equipment recovery and demobilisation | Yes | <ul style="list-style-type: none"> During use maintenance equipment/tools may have been exposed to biofouling and/or seawater. As such, there is the potential risk of INNS transfer to port or subsequent sites. | Yes | <ul style="list-style-type: none"> Conduct thorough inspection, cleaning, and maintenance of vessels per BFMP, BRB, and maintenance schedules upon arrival at port; and Inspect all installation equipment and tools after use, focusing on the removal of fouling and potential INNS (if present). Cleaning, disinfecting, and drying will be applied where practicable or where fouling or potential INNS are identified. Maintain records of inspections and any cleaning or disinfection to ensure traceability. | Maintenance team/vessel operator |
| Painting and corrosion protection | Mobilise vessels and required painting and corrosion protection equipment and materials | Yes | <ul style="list-style-type: none"> Maintenance vessels and painting/corrosion protection equipment and tools may carry residual levels of biofouling or contaminants from previous sites. | Yes | <ul style="list-style-type: none"> Review vessel maintenance schedule and ensure that AFS maintenance is up to date; Conduct biofouling inspections and cleaning in accordance with the vessel's BFMP/maintenance schedule. Where applicable, maintain a BRB. Measures should follow relevant elements of the IMO (2023) guidance, where applicable; and Inspect, clean, and log all equipment on land at the mobilisation port prior to loading. Conduct additional inspections offshore, onboard the vessel as needed to manage fouling risk. | Maintenance team/vessel operator |
| | Transit to the WFDA | Yes | <ul style="list-style-type: none"> The risk of potential release of biofouling organisations has been effectively mitigated through the control measures associated with the prior task; However, INNS may be released through ballast water exchange if this risk is not properly managed; and External, submerged surfaces may become fouled during transit. | Yes | <ul style="list-style-type: none"> Comply with the Merchant Shipping (Control and Management of Ships' Ballast and Sediments) Regulations 2022 and Management of Ships' Ballast Water and Sediments regarding ballast water management and exchange; Minimise anchorage exposure during transit, particularly in high-risk areas; and Log transit details. | Vessel operator |
| | Deployment of coating and surface preparation equipment | No | <ul style="list-style-type: none"> All equipment has been inspected and treated during mobilisation (Task 1). Therefore, deployment presents no new risk of INNS introduction if prior control measures have been implemented. | No | None. | N/A |
| | Surface preparation and coating application | No | <ul style="list-style-type: none"> Task is site-specific and takes place in a defined location using pre-checked equipment (Task 1); and Equipment is in continuous controlled use. | No | None. | N/A |
| | Equipment recovery and demobilisation | Yes | <ul style="list-style-type: none"> On completion of the task tools and equipment may be wet and/or fouled and could transfer INNS to port or future sites. | Yes | <ul style="list-style-type: none"> Conduct thorough inspection, cleaning, and maintenance of vessels per BFMP, BRB, and maintenance schedules upon arrival at port; Inspect all installation equipment and tools after use, focusing on the removal of fouling and potential INNS (if present). Cleaning, disinfecting, and drying will be applied where practicable or where fouling or potential INNS are identified. Maintain records of inspections and any cleaning or disinfection to ensure traceability. | Maintenance team/vessel operator |
| | Removal of marine growth from sub-surface infrastructure | Mobilise vessels and required cleaning equipment | Yes | <ul style="list-style-type: none"> Vessels and sub-surface cleaning equipment (brushes, water jets scrapers, and ROVs) may be biofouled from previous work at different sites with similar environmental conditions. | Yes | <ul style="list-style-type: none"> Review vessel maintenance schedule and ensure that AFS maintenance is up to date; Conduct biofouling inspections and cleaning in accordance with the vessel's BFMP/maintenance schedule. Where applicable, maintain a BRB. Measures should follow relevant elements of the IMO (2023) guidance, where applicable; and |

| Activity | Component Task | Risk (Is there a significant risk of this task introducing INNS? (Yes/No)) | Justification (Explain risk, if there is a risk, describe the risk) | Critical Control Point (Are control measures most effectively applied at this stage?) | Control Measure (What control measures can be applied to this task?) | Who (Who will carry out the control measure?) |
|----------|---------------------------------------|---|---|--|--|--|
| | | | | | <ul style="list-style-type: none"> Inspect, clean, and log all equipment on land at the mobilisation port prior to loading. Conduct additional inspections offshore, onboard the vessel as needed to manage fouling risk. | |
| | Transit to the WFDA | Yes | <ul style="list-style-type: none"> The risk of potential release of biofouling organisations has been effectively mitigated through the control measures associated with the prior task; However, INNS may be released through ballast water exchange if this risk is not properly managed; and External, submerged surfaces may become fouled during transit. | Yes | <ul style="list-style-type: none"> Comply with the Merchant Shipping (Control and Management of Ships' Ballast and Sediments) Regulations 2022 and Management of Ships' Ballast Water and Sediments regarding ballast water management and exchange; Minimise anchorage exposure during transit, particularly in high-risk areas; and Log transit details. | Vessel operator |
| | Deployment of cleaning equipment | No | <ul style="list-style-type: none"> Cleaning equipment has been inspected and treated during mobilisation (Task 1); and Deployment alone does not release marine growth or risk INNS introduction risk. | No | None. | N/A |
| | Removal of marine growth | Yes | <ul style="list-style-type: none"> Despite cleaning equipment being confirmed as free from biofouling, this task dislodges and releases biofouling organisms/material into the water column. | Yes | <ul style="list-style-type: none"> Where possible, conduct cleaning operations during slack or low tidal flow conditions to minimise dispersal of dislodged material; Prioritise targeted cleaning techniques, such as high-pressure water jets, to reduce unnecessary disturbance; Avoid mechanical over-scouring of surfaces to limit the potential for future biofouling; Where feasible, use containment methods (e.g. mesh or netting) around the cleaning area to capture larger dislodged material; Remove equipment/components from the water, where possible, for ex-situ cleaning on the vessel's deck to allow controlled collection and disposal; Ensure all collected marine growth is disposed of following biosecurity and waste management protocols to prevent secondary INNS spread; and Maintain detailed records of cleaning activities, including methods and volumes of material removed. | Maintenance team |
| | Equipment recovery and demobilisation | Yes | <ul style="list-style-type: none"> On completion of the task used tools and equipment may be wet and/or fouled and could transfer INNS to port or future sites. | Yes | <ul style="list-style-type: none"> Conduct thorough inspection, cleaning, and maintenance of vessels per BFMP, BRB, and maintenance schedules upon arrival at port; and Inspect all installation equipment and tools after use, focusing on the removal of fouling and potential INNS (if present). Cleaning, disinfecting, and drying will be applied where practicable or where fouling or potential INNS are identified. Maintain records of inspections and any cleaning or disinfection to ensure traceability. | Maintenance team/vessel operator |

Table 6.6: Summary of the Critical Control Points and Control Measures Identified as Necessary for Decommissioning Activities

| Activity | Component Task | Risk (Is there a significant risk of this task introducing INNS? (Yes/No)) | Justification (Explain risk, if there is a risk, describe the risk) | Critical Control Point (Are control measures most effectively applied at this stage?) | Control Measure (What control measures can be applied to this task?) | Who (Who will carry out the control measure?) |
|------------------------------|---|---|---|--|--|--|
| Decommissioning of the FOU's | Mobilise vessels and required decommissioning equipment | Yes | <ul style="list-style-type: none"> Vessels and equipment may be biofouled from previous operations or as a result of time spent at port. | Yes | <ul style="list-style-type: none"> Review vessel maintenance schedule and ensure that AFS maintenance is up to date; Conduct biofouling inspections and cleaning in accordance with the vessel's BFMP/maintenance schedule. Where applicable, maintain a BRB. Measures should follow relevant elements of the IMO (2023) guidance, where applicable; and Inspect, clean, and log all equipment on land at the mobilisation port prior to loading. Conduct additional inspections offshore, onboard the vessel as needed to manage fouling risk. | Decommissioning contractor/vessel operator |
| | Transit to the WFDA | Yes | <ul style="list-style-type: none"> The risk of potential release of biofouling organisations has been effectively mitigated through the control measures associated with the prior task; However, INNS may be released through ballast water exchange if this risk is not properly managed; and External, submerged surfaces may become fouled during transit. | Yes | <ul style="list-style-type: none"> Comply with the Merchant Shipping (Control and Management of Ships' Ballast and Sediments) Regulations 2022 and Management of Ships' Ballast Water and Sediments regarding ballast water management and exchange; Minimise anchorage exposure during transit, particularly in high-risk areas; and Log transit details. | Vessel operator |
| | Release of FOU's from the SKSs | Yes | <ul style="list-style-type: none"> FOU's and SKSs have been in-situ for long periods of time and therefore are likely to have some degree of biofouling present. Disturbance and/or disassembly of these structures may therefore release biofouling organisms into the wider environment. | Yes | <ul style="list-style-type: none"> Conduct pre-work inspections of the FOU's and SKSs to determine the degree of biofouling present, conduct removal of marine growth works if needed; If possible, conduct works in slack or low tidal flow conditions; Minimise physical disturbance through best practice decommissioning procedures; and Visually monitor for significant biofouling release. | Decommissioning contractor |
| | Tow the FOU's to designated port for decommissioning | No | <ul style="list-style-type: none"> The previous control measures implemented at CCPs for this activity will address the potential for biofouling release from the FOU's during towing operations. | No | None. | N/A |
| | Demobilisation of vessel and decommissioning equipment | Yes | <ul style="list-style-type: none"> Vessels and equipment used for the decommissioning of the FOU's may be fouled, and therefore risk transferring INNS to port or other work sites. | Yes | <ul style="list-style-type: none"> Conduct thorough inspection, cleaning, and maintenance of vessels per BFMP, BRB, and maintenance schedules upon arrival at port; and Inspect all installation equipment and tools after use, focusing on the removal of fouling and potential INNS (if present). Cleaning, disinfecting, and drying will be applied where practicable or where fouling or potential INNS are identified. Maintain records of inspections and any cleaning or disinfection to ensure traceability. | Decommissioning contractor/vessel operator |
| Decommissioning of the SKSs | Mobilise vessels and required recovery equipment | Yes | <ul style="list-style-type: none"> Vessels and recovery gear may carry biofouling or residual water from previous operations. | Yes | <ul style="list-style-type: none"> Review vessel maintenance schedule and ensure that AFS maintenance is up to date; Conduct biofouling inspections and cleaning in accordance with the vessel's BFMP/maintenance schedule. Where applicable, maintain a BRB. Measures should follow relevant elements of the IMO (2023) guidance, where applicable; and Inspect, clean, and log all equipment on land at the mobilisation port prior to loading. Conduct additional inspections offshore, onboard the vessel as needed to manage fouling risk. | Decommissioning contractor/vessel operator |

| Activity | Component Task | Risk (Is there a significant risk of this task introducing INNS? (Yes/No)) | Justification (Explain risk, if there is a risk, describe the risk) | Critical Control Point (Are control measures most effectively applied at this stage?) | Control Measure (What control measures can be applied to this task?) | Who (Who will carry out the control measure?) |
|--|---|--|---|--|--|--|
| | Transit to the WFDA | Yes | <ul style="list-style-type: none"> The risk of potential release of biofouling organisations has been effectively mitigated through the control measures associated with the prior task; However, INNS may be released through ballast water exchange if this risk is not properly managed; and External, submerged surfaces may become fouled during transit. | Yes | <ul style="list-style-type: none"> Comply with the Merchant Shipping (Control and Management of Ships' Ballast and Sediments) Regulations 2022 and Management of Ships' Ballast Water and Sediments regarding ballast water management and exchange; Minimise anchorage exposure during transit, particularly in high-risk areas; and Log transit details. | Vessel operator |
| | Recovery of the SKSs | Yes | <ul style="list-style-type: none"> SKSs have been in-situ for extended periods of time and are therefore likely to have some degree of biofouling. Biofouling may be released when the SKSs are disturbed and brought to the surface. | Yes | <ul style="list-style-type: none"> Conduct pre-work inspections of the SKSs to determine the degree of biofouling present, conduct removal of marine growth works if needed; If possible, conduct works in slack or low tidal flow conditions; Minimise physical disturbance through best practice decommissioning procedures; and Visually monitor for significant biofouling release. | Decommissioning contractor |
| | On-deck handling and storage of recovered moorings | Yes | <ul style="list-style-type: none"> Recovered SKS components are likely to be fouled due to their long-term deployment. | Yes | <ul style="list-style-type: none"> On retrieval materials should be inspected for biofouling; If cleaning occurs on-deck all collected marine growth shall be disposed of following biosecurity and waste management protocols to prevent secondary INNS spread; Alternatively, cleaning of the SKS components can take place at a land-based facility; and Store appropriately to limit cross-contamination. | Decommissioning contractor |
| | Demobilisation of vessels and equipment | Yes | <ul style="list-style-type: none"> Vessels and equipment used for the decommissioning of the SKSs may be fouled, and therefore risk transferring INNS to port or other work sites. | Yes | <ul style="list-style-type: none"> Conduct thorough inspection, cleaning, and maintenance of vessels per BFMP, BRB, and maintenance schedules upon arrival at port; Inspect all installation equipment and tools after use, focusing on the removal of fouling and potential INNS (if present). Cleaning, disinfecting, and drying will be applied where practicable or where fouling or potential INNS are identified. Maintain records of inspections and any cleaning or disinfection to ensure traceability. | Decommissioning contractor/vessel operator |
| Decommissioning of the subsea cable infrastructure (including external cable protection) | Mobilisation of vessels and decommissioning equipment | Yes | <ul style="list-style-type: none"> Vessels and cable infrastructure removal equipment may be biofouled from previous works and/or from time spent at port. | Yes | <ul style="list-style-type: none"> Review vessel maintenance schedule and ensure that AFS maintenance is up to date; Conduct biofouling inspections and cleaning in accordance with the vessel's BFMP/maintenance schedule. Where applicable, maintain a BRB. Measures should follow relevant elements of the IMO (2023) guidance, where applicable; and Inspect, clean, and log all equipment on land at the mobilisation port prior to loading. Conduct additional inspections offshore, onboard the vessel as needed to manage fouling risk. | Decommissioning contractor/vessel operator |
| | Transit to the WFDA | Yes | <ul style="list-style-type: none"> The risk of potential release of biofouling organisations has been effectively mitigated through the control measures associated with the prior task; However, INNS may be released through ballast water exchange if this risk is not properly managed; and | Yes | <ul style="list-style-type: none"> Comply with the Merchant Shipping (Control and Management of Ships' Ballast and Sediments) Regulations 2022 and Management of Ships' Ballast Water and Sediments regarding ballast water management and exchange; Minimise anchorage exposure during transit, particularly in high-risk areas; and Log transit details. | Decommissioning contractor/vessel operator |

| Activity | Component Task | Risk (Is there a significant risk of this task introducing INNS? (Yes/No)) | Justification (Explain risk, if there is a risk, describe the risk) | Critical Control Point (Are control measures most effectively applied at this stage?) | Control Measure (What control measures can be applied to this task?) | Who (Who will carry out the control measure?) |
|----------|---|---|---|--|--|--|
| | | | <ul style="list-style-type: none"> ▪ External, submerged surfaces may become fouled during transit. | | | |
| | Removal of cable infrastructure | Yes | <ul style="list-style-type: none"> ▪ Removal of cables and external cable protection may dislodge and release biofouling. | Yes | <ul style="list-style-type: none"> ▪ If possible, conduct works in slack or low tidal flow conditions; ▪ Minimise physical disturbance through best practice decommissioning procedures; and ▪ Visually monitor for significant biofouling release. | Decommissioning contractor |
| | Handling and storage of recovered cable materials | Yes | <ul style="list-style-type: none"> ▪ Recovered cable infrastructure and external protection systems are likely to be fouled due to their long-term deployment. | Yes | <ul style="list-style-type: none"> ▪ On retrieval materials should be inspected for biofouling; ▪ If cleaning occurs on-deck avoid rinsing overboard; and ▪ Store appropriately to limit cross-contamination. | Decommissioning contractor/vessel operator |
| | Demobilisation of vessels and decommissioning equipment | Yes | <ul style="list-style-type: none"> ▪ Vessels and equipment used for the decommissioning of cable infrastructure may be fouled, and therefore risk transferring INNS to port or other work sites. | Yes | <ul style="list-style-type: none"> ▪ Conduct thorough inspection, cleaning, and maintenance of vessels per BFMP, BRB, and maintenance schedules upon arrival at port; and ▪ Inspect all installation equipment and tools after use, focusing on the removal of fouling and potential INNS (if present). Cleaning, disinfecting, and drying will be applied where practicable or where fouling or potential INNS are identified. Maintain records of inspections and any cleaning or disinfection to ensure traceability. | Decommissioning contractor/vessel operator |

6.5 Step Five – Biosecurity Surveillance, Monitoring and Reporting Procedures

62. INNS training and awareness will be tailored according to personnel roles and responsibilities:
- Key personnel directly involved in inspections, maintenance, vessel operations, or environmental management will receive training on INNS identification, biosecurity procedures, and reporting procedures. This training will include access to identification guides;
 - General site personnel will receive briefings or toolbox talks to raise awareness of biosecurity risks, encourage vigilance, and explain how to report any unusual sightings. These sessions will form part of broader environmental and safety inductions; and
 - Training and awareness will be designed to develop a culture of continuous learning and proactive biosecurity management, ensuring that everyone on-site understands the importance of early detection and reporting.
63. INNS surveillance will be integrated into operational activities undertaken by project personnel, including contractors, subcontractors, staff, and vessel masters, and will be delivered through three complementary approaches:
- Targeted inspections at CCPs: as set out in the Bellrock WFDA HACCP tables (**Section 6.4**). This includes pre- and post-mobilisation vessel biofouling inspections, aligned with the vessels BFMP, and checks on equipment prior to deployment;
 - Integrated INNS checks during routine inspections: such as planned preventative maintenance or reactive inspections, for example inspections of the SKSs and FSSs. These inspections are not dedicated INNS surveys, but the personnel carrying out these inspections will remain alert for potential INNS and report any suspicious findings to the Biosecurity Manager; and
 - Opportunistic observations: through the embedded culture of INNS vigilance that this INNSMP aims to foster across the Bellrock WFDA, personnel present on-site will remain vigilant and report any potential INNS to the Biosecurity Manager.
64. Recording and reporting procedures:
- Any suspected INNS or unusual biofouling should be photographed and, if safe and practical, biological samples should be taken to aid formal identification;
 - All observations should be sent as soon as possible to the Biosecurity Manager for review and expert identification, if deemed necessary;
 - Confirmed or suspected INNS will be reported to the Marine Directorate and NatureScot by the Biosecurity Manager, see **Section 6.6** for further details; and
 - In the event that a Non-native species is identified, which is not invasive, a report will be submitted via <https://irecord.org.uk/>.

6.6 Contingency Plan

65. Despite robust identification of activity specific CCPs and associated control measures to prevent the introduction and/or spread of INNS, there is always the potential for biosecurity measures to fail. In these situations, a rapid and coordinated response is critical to minimise the environmental and operational impact of INNS.
66. This contingency plan outlines clear, simple, and actionable steps that shall be followed in the event of a suspected or confirmed introduction of an INNS. The contingency plan is designed to be easy to follow, clearly assign responsibilities, and ensure early communication with the relevant authorities.
67. The contingency plan will be activated if any of the following scenarios occur:
- A suspected INNS is discovered on a marine vessel, the Wind Farm Infrastructure, or within the WFDA;
 - A marine vessel with unexpected and/or heavy biofouling not identified during the initial risk assessment is identified post-arrival;
 - Notification from authorities or third parties of a high alert INNS in the vicinity of the WFDA; or
 - The unscheduled arrival, or weather-driven deviation, of a marine vessel, results in the use of emergency anchoring by an unassessed marine vessel within the WFDA.
68. The contingency plan has been developed around a staged framework, with key actions associated with each stage, as detailed in **Table 6.7**. Roles responsible for the completion of the relevant actions are also detailed, however, it is important to note that the Applicant has overall responsibility for the implementation of this INNSMP. The stages identified in **Table 6.7** will be worked through sequentially if the contingency plan is activated. The actions detailed under each stage will be carried out immediately (or as soon as practicable to do so) in order to maximise the effectiveness of the contingency plan.

Table 6.7: Summary of the Key Actions Associated with Each Stage of the Contingency Plan

| Action | Responsibility |
|--|--|
| Stage One – Suspected Arrival of a High Alert Species | |
| Isolate the affected vessel or structure (if possible) - this could include restricting access or holding the affected vessel in a designed area. | Biosecurity Manager/Contractors and Subcontractors |
| Collect biological samples and/or photographic evidence to allow for full identification. | Biosecurity Manager/Contractors and Subcontractors |
| Notify the Marine Directorate and NatureScot and send photograph/sample as advised. (MarineNonNativeSpecies@gov.scot and ENQUIRIES@Nature.scot) | Biosecurity Manager/ECOW |

| Action | Responsibility |
|--|---|
| Log the incident in the Biosecurity Logbook and inform all other relevant site users. | Biosecurity Manager |
| Stage Two – Presence of High Alert Species Confirmed | |
| Undertake immediate containment measures, focused on restricting movement of vessels and equipment from the affected area. | Biosecurity Manager/Contractors and Subcontractors |
| Carry out a rapid visual survey (e.g. ROV) to inform understanding of presence of INNS. | Biosecurity Manager/Contractors and Subcontractors |
| Notify relevant stakeholders, including Marine Directorate, NatureScot, and local harbour authorities. For the purposes of this plan, local harbour authorities include those that provide berthing, lay-up, or operational support to project vessels during site preparation, construction, O&M, and decommissioning phases. | Biosecurity Manager/ECoW |
| Notify all relevant contractors and vessel operators that work within the site. | Biosecurity Manager |
| Ensure all other vessels have effective AFSs in place, maintenance schedules are adhered to, and the control measures are implemented. | Biosecurity Manager |
| Stage Three – Eradication and/or Long-term Management | |
| Follow guidance for species specific eradication and/or control, likely provided by Marine Directorate, post notification of confirmed INNS presence. | Applicant, and all persons working on their behalf within the WFDA. |
| Review and revise biosecurity protocols based on incident findings. | Biosecurity Manager |
| Report findings, including whether INNS have been successfully eradicated or successfully controlled/managed, and lessons learned to all relevant stakeholders. | Biosecurity Manager/ECoW |

6.7 Monitoring and Review

6.7.1 Monitoring and Implementation of the Plan

69. Routine monitoring and record keeping will be undertaken to ensure the effective implementation of this INNSMP. The Biosecurity Manager will maintain a Biosecurity Logbook which will document the following:

- Routine inspections of vessels and infrastructure for evidence of INNS;
- Biosecurity measures taken if the INNS are suspected or confirmed onsite; and
- Awareness raising actions undertaken with personnel and contractors.

6.7.2 Plan Review

70. To ensure that the INNSMP remains fit for purpose, a full review will take place annually. This review time frame is considered appropriate to capture modifications to existing activities, or new activities that pose a low risk (**Sections 5.1 and 5.2**) of INNS introduction. In addition, if activities that are considered to carry a high risk of INNS introduction are started within the WFDA across any stage of the development (site preparation works, construction, O&M, and decommissioning), an ad-hoc review of the INNSMP will be undertaken to assess the activities and identify CCPs and control measures, as needed, to effectively mitigate the risk.

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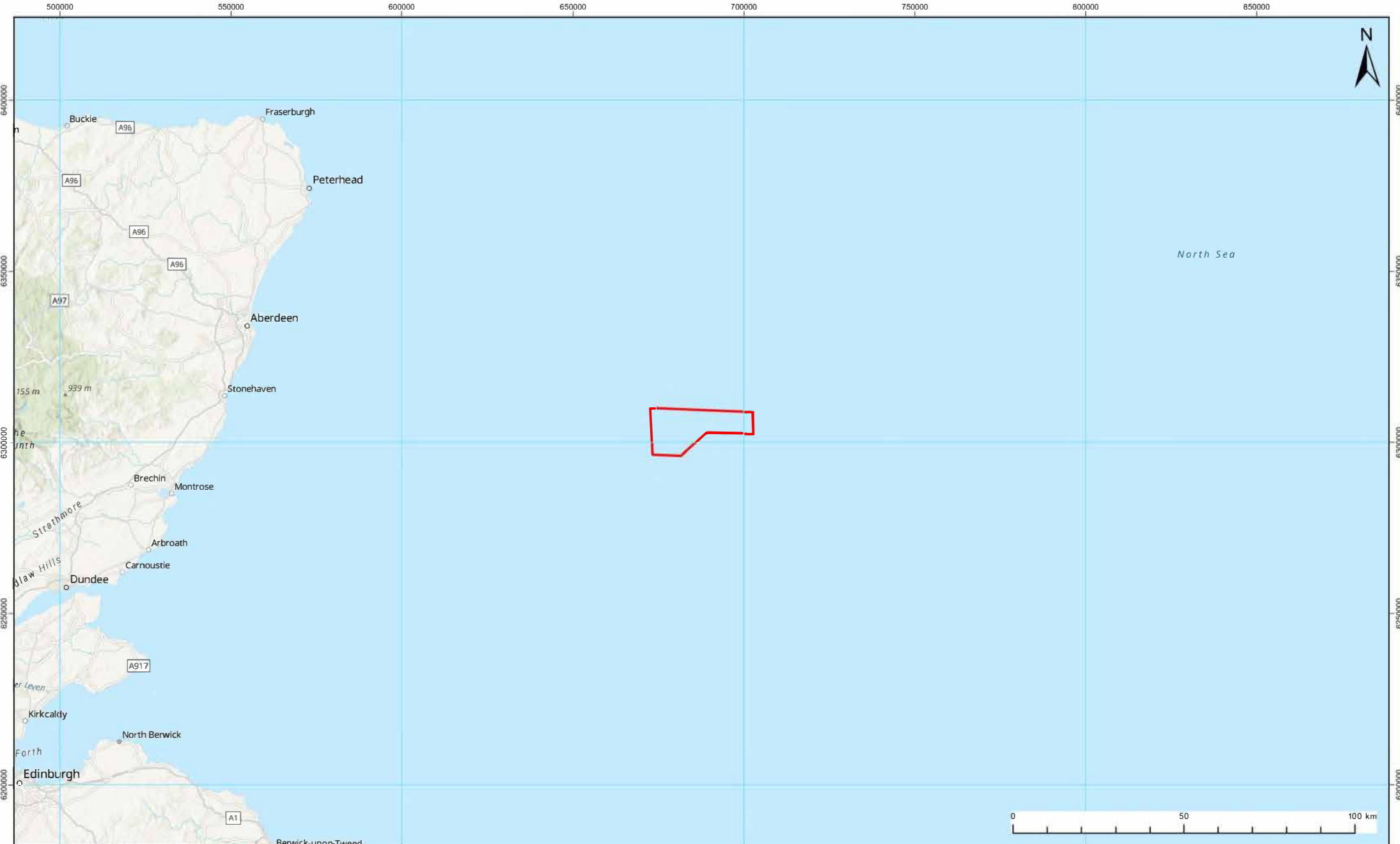
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Appendix A: Figures

Figure A.1: Location of the Bellrock Wind Farm Development Area

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Legend:
 Bellrock Wind Farm Development Area

| 1 | 31/03/2026 | Final | DL | ES | BMCG |
|--|------------|--------|---------------------------|-----|------|
| REV | DATE | STATUS | DRW | CHK | APR |
| Coordinate System: WGS 1984 UTM Zone 30N | | | | | |
| Source: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, USGS, © Haskoning UK Ltd, 2026. | | | | | |
| | | | Scale @ A3 1:1,000,000 | | |

| | |
|---|--|
| Figure Title: Location of the Bellrock Wind Farm Development Area | |
| Project: Bellrock Wind Farm Development Area (WFDA) | Report: Invasive Non-Native Species Mitigation Plan |
| Drawing No.: RHDV_BEL_CST_REP_0003_138 | Figure A.1 |

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