Shetland Tidal Array Decommissioning Environmental and Protected Species Risk Assessment

Version 1.0

Document control

Title:	Shetland Tidal Array Decommissioning Environmental and Protected Species Risk Assessment
Document ID:	EnFAIT-0091
Version	Version 1.0
Prepared for:	Marine Scotland Licensing Operations Team
Author:	Kate Smith
Approved by:	Gary Connor
Release date:	8-Feb-23
Confidentiality:	COMMERCIAL IN CONFIDENCE

Revision history

Version	Release date	Purpose/summary of amendments
1.0	08/02/2023	First version, produced to support application for a Marine Licence and European Protected Species Licence

Notice

Contents

1 Non-technical summary

Nova Innovation has produced this Environmental and Protected Species Risk Assessment in support of an application to Marine Scotland Licensing Operations Team (MS-LOT) for a Marine Licence to decommission the three geared M100 turbines in the "Shetland Tidal Array" in the Bluemull Sound, Shetland.

A description of the activities associated with the decommissioning of the three M100 turbines is provided, and an assessment of the potential environmental effects. An assessment of the potential effects of the project nature conservation Marine Protected Areas (MPAs) and Priority marine Features (PMF) is provided.

This document also provides an assessment of the potential effects on "Natura" sites, including Special Areas of Conservation (SAC) and Special Protection Areas (SPA). The information in this document is therefore provided to inform MS-LOT's Habitats Regulations Appraisal (HRA) of the decommissioning activity under The Conservation (Natural Habitats, &c.) (EU Exit) (Scotland) (Amendment) Regulations 2019, including determining whether an "Appropriate Assessment" is required.

This document also supports an application to MS-LOT for a licence to disturb marine species that are subject to strict protection ("European Protected Species" – EPS), as described in Annex IV to Council Directive 92/43/EEC at Bluemull Sound, Cullivoe, Yell, Shetland.

Decommissioning will involve complete removal of each of the three M100 turbines (T1, T2 and T3) in turn. The turbine nacelle, substructure and cable will be removed from the seabed and taken to shore for recycling or disposal. The three M100-D direct drive turbines (T4, T5 and T6) and associated infrastructure (subsea hub and cables) in the Shetland Tidal Array will not be decommissioned and will remain *in situ* on the seabed.

Full details of the equipment to be decommissioned, and the vessels and equipment that will be used in decommissioning operations are provided in a Decommissioning Schedule and Method Statement, with a summary provided in this document.

Most of the procedures and stages to decommission the three M100 turbine involve routine tasks and operations carried out at the Shetland Tidal Array since 2016 under the existing Project licences, which include:

1. Shetland Islands Council Works Licence 2022/015/WL, issued by Shetland Island Council (SIC) under the Zetland County Council Act 1974 for offshore works associated with the Shetland Tidal Array.

2. Marine Licence MS-00009110 issued by MS-LOT under the Marine (Scotland) Act 2020, Part 4 for construction and operation of the Shetland Tidal Array. This licence also covers routine maintenance and moving turbines within the array.

3. Licence to Disturb Marine Species EPS/BS-00010173 issued by MS-LOT under the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). This licence covers installation of turbines and associated infrastructure (including associated activities) and reconfiguration of turbines within the array and associated activities.

Nova's previous experience of similar operations and the modular nature of the turbines means that small work vessels can be used and work will be carried out safely and efficiently. Decommissioning the three turbines and cables is expected to be completed over one vessel mobilisation, lasting approximately two weeks.

The activity is not expected to result in any adverse harm to the marine environment, but mitigation measures to avoid and reduce the potential environmental effects of activities associated with the decommissioning of the three M100 turbines are identified in this document. These include measures to avoid adverse effects on Priority Marine Features or site integrity of Natura sites, or MPAs, and measures to avoid any significant disturbance to EPS, such that the project will not be detrimental to the maintenance of the populations of relevant species at a favourable conservation status in their natural range.

2 Summary of decommissioning works

2.1 The proposed activities

The Shetland Tidal Array currently comprises six 100 kW tidal turbines (T1 to T6), a subsea hub and associated cables, located in Bluemull Sound, Shetland. The proposed activities will involve the complete removal from the seabed of the following infrastructure associated with the three geared M100 turbines (T1, T2 and T3):

1. Turbine nacelle and rotor (one per turbine)
2. Gravity-base substructure (one per turbine).
3. Power export cable (one per turbine).

Full details of the decommissioning activities and methodologies are set out in a Decommissioning Schedule and Method Statement[1] provided in support of Nova's application for a Marine Licence to decommission the three M100 turbines and cables. A summary is provided in Section 2.3 of this document.

Decommissioning will only involve the removal of T1, T2 and T3 and associated export cables. T4, T5 and T6 and associated infrastructure (subsea hub and cables) will not be decommissioned and will remain *in situ* on the seabed.

2.2 Location

The Shetland Tidal Array is located in the Bluemull Sound, between the Shetland Islands of Yell and Unst. The array site is east of the Ness of Cullivoe. Figure 2-1 shows the location of the tidal array lease area and cable corridor.

At the time of writing, the Shetland Tidal Array comprises the three M100 (geared) turbines (T1, T2 and T3) and three M100-D (direct drive) turbines (T4, T5 and T6). A subsea hub with export cable has also been installed, connected via jumper cables to the fifth and sixth M100-D turbines. In total there are five export cables back to the landfall at Cullivoe Pier. Figure 2-2 shows the "as-installed" positions of the turbines and cables in the array.

[1] Nova Innovation (2023). Shetland Tidal Array Decommissioning Schedule and Method Statement (T1-3).

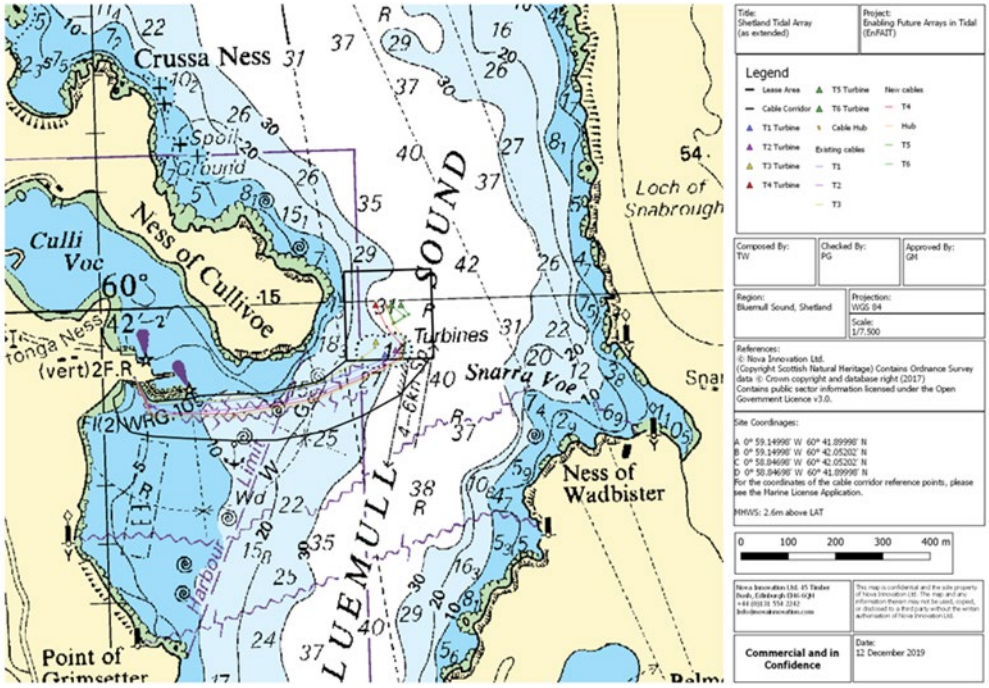

Figure 2-1: Project Location showing boundary of lease area and cable corridor

Source: Copyright © Nova Innovation 2023; Admiralty Chart

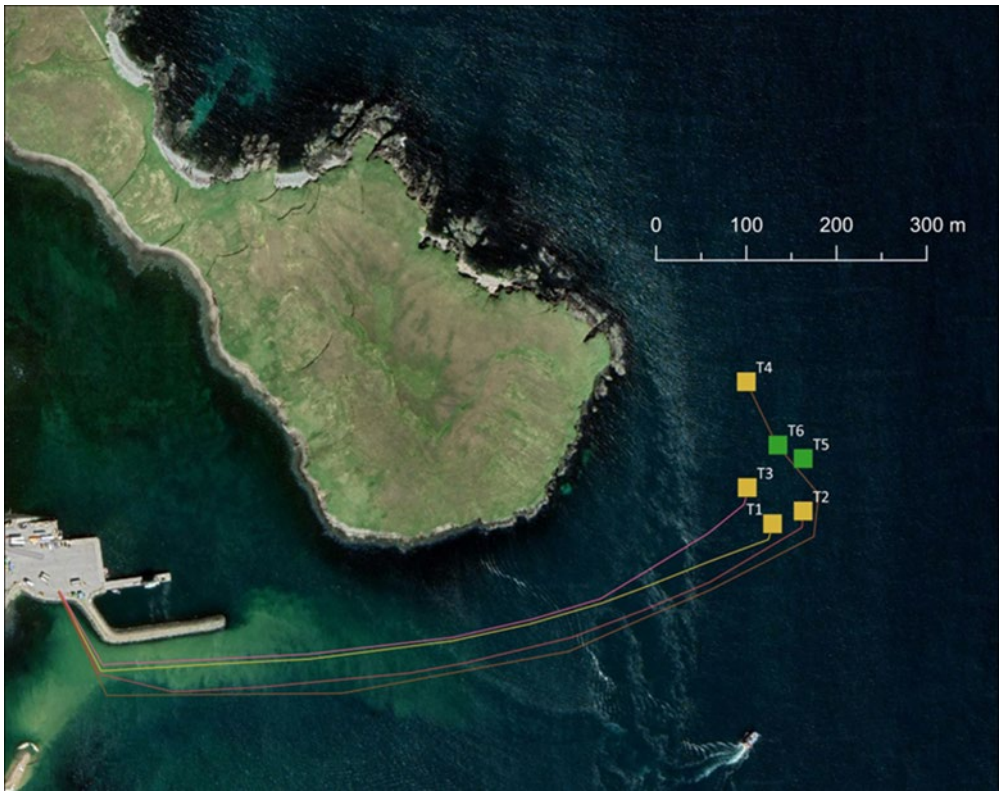

Figure 2-2: Shetland Tidal Array installed layout, including six turbines and five export cables.

Source: Copyright © Nova Innovation 2023

Table 2-1 provides the as-installed coordinates for the six turbines in the Shetland Tidal Array and coordinates for the subsea cables are provided in Table 2-2.

Table 2-1: Shetland Tidal Array turbine and subsea hub positions (decimal degrees latitude and longitude).

	UTM V30 N/E		WGS84 GPS Lat/Long (Degrees and decimal minutes)					
	Northing	Easting	Deg	Min	N/S	Deg	Min	E/W
T1 Turbine	6730893	610079	60°	41.91	N	000°	59.02	W
T2 Turbine	6730908	610113	60°	41.92	N	000°	58.98	W
T3 Turbine	6730923	610049	60°	41.93	N	000°	59.05	W
T4 Turbine	6731051	610060	60°	41.99	N	000°	59.03	W
T5 Turbine	6730965	610113	60°	41.94	N	000°	58.98	W
T6 Turbine	6730980	610085	60°	41.96	N	000°	59.01	W
T5/6 Hub	6730970	610098	60°	41.95	N	000°	58.99	W

Table 2-2: Shetland Tidal Array turbine and export cable positions (decimal degrees latitude and longitude).

	UTM V30 N/E		WGS84 GPS Lat/Long (Degrees and decimal minutes)					
			Lat			Long		
	Northing	Easting	Deg	Min	N/S	Deg	Min	E/W
T1 Cable								
Turbine T1	6730893	610079	60°	41.91	N	000°	59.02	W
WP01	6730876	610075	60°	41.90	N	000°	59.02	W
WP02	6730851	610007	60°	41.89	N	000°	59.10	W
WP03	6730824	609939	60°	41.87	N	000°	59.17	W
WP04	6730806	609889	60°	41.87	N	000°	59.23	W
WP05	6730784	609807	60°	41.85	N	000°	59.32	W
WP06	6730765	609725	60°	41.85	N	000°	59.41	W
WP07	6730745	609564	60°	41.84	N	000°	59.59	W
WP08	6730739	609461	60°	41.84	N	000°	59.70	W
WP09	6730731	609335	60°	41.83	N	000°	59.84	W
SHORE	6730819	609287	60°	41.88	N	000°	59.89	W
T2 Cable								
Turbine T2	6730908	610113	60°	41.92	N	000°	58.98	W
WP01	6730889	610110	60°	41.91	N	000°	58.98	W
WP02	6730828	610009	60°	41.88	N	000°	59.10	W
WP03	6730798	609938	60°	41.86	N	000°	59.17	W
WP04	6730767	609856	60°	41.84	N	000°	59.27	W
WP05	6730741	609740	60°	41.83	N	000°	59.39	W
WP06	6730726	609677	60°	41.83	N	000°	59.46	W
WP07	6730714	609513	60°	41.82	N	000°	59.64	W
WP08	6730707	609414	60°	41.82	N	000°	59.75	W
WP09	6730710	609325	60°	41.82	N	000°	59.85	W
SHORE	6730819	609287	60°	41.88	N	000°	59.89	W

	UTM V30 N/E		WGS84 GPS Lat/Long (Degrees and decimal minutes)					
			Lat			Long		
	Northing	Easting	Deg	Min	N/S	Deg	Min	E/W
T3 Cable								
Turbine T3	6730923	610049	60°	41.93	N	000°	59.05	W
WP01	6730915	610048	60°	41.92	N	000°	59.05	W
WP02	6730883	610007	60°	41.90	N	000°	59.10	W
WP03	6730840	609939	60°	41.88	N	000°	59.17	W
WP04	6730809	609889	60°	41.87	N	000°	59.23	W
WP05	6730785	609813	60°	41.86	N	000°	59.31	W
WP06	6730768	609725	60°	41.85	N	000°	59.41	W
WP07	6730748	609564	60°	41.84	N	000°	59.59	W
WP08	6730742	609461	60°	41.84	N	000°	59.70	W
WP09	6730734	609335	60°	41.84	N	000°	59.84	W
SHORE	6730819	609287	60°	41.88	N	000°	59.89	W
T4 Cable								
Turbine	6731051	610060	60°	41.99	N	000°	59.03	W
WP01	6730991	610102	60°	41.96	N	000°	58.99	W
WP02	6730947	610152	60°	41.94	N	000°	58.93	W
WP03	6730860	610140	60°	41.89	N	000°	58.95	W
WP04	6730753	610053	60°	41.83	N	000°	59.05	W
WP05	6730703	609945	60°	41.81	N	000°	59.17	W
WP06	6730665	609735	60°	41.79	N	000°	59.40	W
WP07	6730668	609409	60°	41.80	N	000°	59.76	W
WP08	6730733	609326	60°	41.83	N	000°	59.85	W
SHORE	6730819	609287	60°	41.88	N	000°	59.89	W
T5/6 Cable								
T5/6 Hub	6730970	610098	60°	41.95	N	000°	58.99	W
WP01	6730931	610109	60°	41.93	N	000°	58.98	W
WP02	6730920	610130	60°	41.92	N	000°	58.96	W
WP03	6730870	610130	60°	41.90	N	000°	58.96	W
WP04	6730763	610043	60°	41.84	N	000°	59.06	W
WP05	6730713	609935	60°	41.81	N	000°	59.18	W
WP06	6730675	609725	60°	41.80	N	000°	59.41	W
WP07	6730678	609419	60°	41.80	N	000°	59.75	W
WP08	6730743	609336	60°	41.84	N	000°	59.84	W
SHORE	6730819	609287	60°	41.88	N	000°	59.89	W

Source: Copyright © Nova Innovation 2023

2.3 Overview of the decommissioning process

Recovery and removal of each of the three M100 turbines from the seabed in Bluemull Sound will take place in a series of carefully managed steps, as follows:

1. The nacelle is physically unlatched, electrically isolated, and lifted by the vessel from the turbine foundation to the surface. The cable is then disconnected at the surface and temporarily wet-stowed on the seabed while the nacelle is recovered to shore.
2. A lifting beam is lowered from the vessel and attached to the gravity-base substructure, which is lifted by the vessel and removed to shore.
3. The cable is recovered separately by the vessel, spooled onto a drum and taken to shore. Any cable protection is also removed with the cable.
4. The shore end of the cable is cut and pulled through the intertidal zone via the spool on the vessel.

Once onshore all components will be recycled, repurposed or disposed of in accordance with relevant recycling and waste disposal procedures.

All parts of the array will be removed from the seabed during decommissioning. The seabed and surrounding locality will return to their natural state with no permanent impact from the devices. The offshore site will be surveyed to confirm all equipment has been removed.

The decommissioning works are expected to be fully completed over one vessel mobilisation lasting approximately two weeks, in April-June 2023. Weather conditions or vessel availability may affect this planned schedule.

3 Existing licences and environmental assessments

3.1 Current project licences

Most of the procedures and stages to decommission the three M100 turbine set out in the preceding section involve routine tasks and operations that have been carried out at the Shetland Tidal Array since 2016 under the following existing Project licences:

1. Shetland Islands Council Works Licence 2022/015/WL, issued by Shetland Island Council (SIC) under the Zetland County Council Act 1974 for offshore works associated with the Shetland Tidal Array.

2. Marine Licence MS-00009110 issued by MS-LOT under the Marine (Scotland) Act 2020, Part 4 for construction and operation of the Shetland Tidal Array. This licence also covers routine maintenance and moving turbines within the array.

3. Licence to Disturb Marine Species[2] EPS/BS-00010173 issued by MS-LOT under the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). This licence covers installation of turbines and associated infrastructure (including associated activities) and reconfiguration of turbines within the array and associated activities.

3.2 Previous environmental assessments

A formal Environmental Impact Assessment (EIA) screening opinion provided in 2018 by MS-LOT on behalf of the Scottish Ministers for the six-turbine Shetland Tidal Array stated that:

> *"an Environmental Impact Assessment (EIA) will not be required to be undertaken in support of … [the proposed project]".*

However, MS-LOT did advise that certain information pertaining to the potential environmental impacts of the Project would be required to support Nova's application for a marine licence for the construction and operation phases of the Project. This information was provided in an Environmental Assessment Report (EAR), which included an assessment of the likely environmental effects of the construction and operation of the six-turbine array, and mitigation measures to avoid adverse impacts[3].

In 2018, MS-LOT also carried out an Appropriate Assessment (AA) of Nova's application for a marine licence for the construction and operation phases of the Shetland Tidal Array, under Regulation 48 of the Conservation (Natural Habitats, &c.) Regulations 1994)[4]. This AA concluded that, the Project would result in no adverse effect on the site integrity of the Yell Sound Coast Special Area of Conservation (SAC), the Hermaness, Saxa Vord and Valla Field Special Protection

[2] Species named on the licence are harbour porpoise (*Phocoena phocoena*); minke whale (*Balaenoptera acutorostrata*); Risso's dolphin (*Grampus griseus*); killer whale (*Orcinus orca*) and humpback whale (*Megaptera novaeangliae*).

[3] Nova Innovation (2018). Shetland Tidal Array Extension – Environmental Assessment Report. Available at https://marine.gov.scot/sites/default/files/extension_environmental_assessment_report_-_12_february_2018.pdf

[4] Marine Scotland (2018). Marine Scotland Licensing Operations Team's (MS LOT) assessment of the Project's implications for designated Special Areas of Conservation (SAC), Special Protection Areas (SPA) and proposed Special Protection Areas (pSPA) in view of the sites' Conservation Objectives. Application for a Marine Licence under the Marine (Scotland) Act 2010 for construction and operation of the extended Nova Tidal Array, Bluemull Sound, Shetland. Available at https://marine.gov.scot/sites/default/files/appropriate_assessment_-_05_april_2018.pdf

Area (SPA), and the Bluemull and Colgrave Sounds possible SPA either in isolation or in combination with other plans or projects.

In 2021, Nova produced a European Protected Species & Basking Shark Risk Assessment[5] to support an application for a licence to disturb marine species that are subject to strict protection ("European Protected Species" – EPS), as described in Annex IV to Council Directive 92/43/EEC during turbine and associated infrastructure installation and reconfiguration. This application was to replace a previous EPS licence issued for Project.

Whilst the previous environmental assessments for the Shetland Tidal Array focused on the construction and operational phases of the Project, they include information of relevance to decommissioning for the following reasons:

- Decommissioning the three M100 turbines and cables is effectively construction and installation operations in reverse. Impact pathways and potential environmental effects will be very similar.
- Many of the decommissioning procedures and activities are tasks and operations that have been carried out during routine maintenance at the Shetland Tidal Array since 2016, or are part of the licenced reconfiguration of turbines in the array. The corresponding environmental effects have therefore been assessed in the previous environmental assessments.

The Environmental and Protected Species Assessment presented in this document therefore draws on these previous assessments. It provides a comprehensive assessment of the potential environmental effects of the activities associated with the decommissioning of the three M100 turbines.

[5] Nova Innovation (2021). Shetland Tidal Array European Protected Species & Basking Shark Risk Assessment. Available at https://marine.gov.scot/sites/default/files/ni_2021_eps_risk_assessment_with_annexes.pdf

4 Protected sites and species

The Environmental and Protected Species Assessment presented in this document includes a general assessment of the potential environmental effects of decommissioning the three M100 turbines in the Shetland Tidal Array. In doing so, it considers the potential for effects on the following:

1. Priority Marine Features (PMF).
2. Natura sites including Special Areas of Conservation (SAC) and Special Protection Areas (SPA).
3. Nature Conservation Marine Protected Areas (MPA).
4. Protected species, including Nationally Protected Species (NPS) and European Protected Species (EPS).

The relevance of each of these to the Shetland Tidal Array are considered in the following sections, with specific sites, habitats and species identified.

4.1 Priority Marine Features

A number of Priority Marine Features could potentially occur within Bluemull Sound in the vicinity of the Shetland Tidal Array and therefore have the potential to be affected by the decommissioning of the three M100 turbines, including:

- Horse mussel beds
- Kelp beds
- Maerl beds
- Tide-swept algal communities
- Grey seal, *Halichoerus grypus*
- Harbour seal, *Phoca vitulina*
- Harbour porpoise, *Phocoena phocoena*
- Minke whale, *Balaenoptera acutorostrata*
- Risso's dolphin, *Grampus griseus*
- Killer whale, *Orcinus orca*

The potential effects of the proposed decommissioning works on the habitats and species listed above are considered in Sections 5 to 8 of this document.

Various other marine cetaceans listed as PMF may occur from time to time in Bluemull Sound, but based on site surveys and previous advice from NatureScot those listed above are the most likely to occur (see also Section 8 – EPS).

4.2 Natura sites

Previous consultation with NatureScot[6], and the Appropriate Assessment carried out by MS-LOT for Nova's application for a marine licence for the construction and operation phases of the Shetland Tidal Array informed the identification of Natura sites that could potentially be impacted by decommissioning the three M100 turbines. These sites and their qualifying features are listed in Table 4-1.

Table 4-1: Natura Sites potentially impacted by the decommissioning process.

Site	Qualifying features
Yell Sound Coast SAC	Harbour seal (*Phoca vitulina*); Otter (*Lutra lutra*).
Hermaness, Saxa Vord and Valla Field SPA	Fulmar (*Fulmarus glacialis*), breeding; Gannet (*Morus bassana*), breeding; Great skua (*Catharacta skua*), breeding; Guillemot (*Uria aalge*), breeding; Kittiwake (*Rissa tridactyla*), breeding; Puffin (*Fratercula arctica*), breeding; Red-throated diver (*Gavia stellata*), breeding; Shag (*Phalacrocorax aristotelis*), breeding.
Bluemull and Colgrave Sounds SPA	Red-throated diver (*Gavia stellata*), breeding.
Fetlar SPA	Arctic skua (*Stercorarius parasiticus*), breeding; Arctic tern (*Sterna paradisaea*), breeding; Dunlin (*Calidris alpina schinzii*), breeding; Fulmar (*Fulmarus glacialis*), breeding; Great skua (*Stercorarius skua*), breeding; Red-necked phalarope (*Phalaropus lobatus*), breeding; Seabird assemblage, breeding; Whimbrel (*Numenius phaeopus*), breeding.
Mousa SPA	Arctic tern (*Sterna paradisaea*), breeding.
Noss SPA	Gannet (*Morus bassanus*), breeding; Puffin (*Fratercula arctica*), breeding.
Otterswick & Graveland SPA	Red-throated diver (*Gavia stellata*), breeding.
Fair Isle SPA	Gannet (*Morus bassanus*), breeding; Puffin (*Fratercula arctica*), breeding.
Sule Skerry & Sule Stack SPA	Gannet (*Morus bassanus*), breeding.
North Rona & Sula Sgeir SPA	Gannet (*Morus bassanus*), breeding.
St Kilda SPA	Gannet (*Morus bassanus*), breeding.

The only one of the sites listed in Table 4-1 whose boundary overlaps spatially with the Shetland Tidal Array is Bluemull and Colgrave Sounds SPA. However, the mobile features of the other listed sites could use areas within Bluemull Sound for activities such as foraging or transiting. The

[6] Consultations carried out in relation to marine licence applications and on the draft Decommissioning Programme for Turbines 1 to 3 in the Shetland Tidal Array. Detailed in: Nova Innovation (2023). Shetland Tidal Array Decommissioning Consultation Summary (T1-3).

potential effects of decommissioning on the Natura sites listed above is considered in Section 7 this document.

4.3 Nature Conservation Marine Protected Areas

The Shetland Tidal Array is located circa 1.5 km to the north of the Fetlar to Haroldswick Nature Conservation Marine Protected Area (MPA). The MPA is designated for several biological and geological features, listed under Schedule 2 of the Fetlar to Haroldswick Nature Conservation Marine Protected Area Order 2016, as follows:

- Black guillemot (*Cepphus grylle*)
- Circalittoral sand and coarse sediment communities;
- Horse mussel beds
- Kelp and seaweed communities on sublittoral sediment
- Maerl beds
- Shallow tide-swept coarse sands with burrowing bivalves
- Marine Geomorphology of the Scottish Shelf Seabed

The sessile/static nature of most the MPA features means that there is limited scope for potential impacts during decommissioning. Turbine substructures will be recovered to shore from the decommissioning vessel at Belmont Pier on Unst which is within the boundary of the MPA, but impact pathways are very limited. Nevertheless, the potential effects of decommissioning on the MPA are considered in Section 7 this document.

4.4 Protected species

Consultation to date with NatureScot (previously SNH) in relation to the installation, operation and maintenance, reconfiguration and decommissioning of turbines and infrastructure within the Shetland Tidal Array included advice on the potential effects of these activities on protected species[7]. This previous advice and Nova's land-based surveys carried out continuously since November 2010 in Bluemull Sound have informed the identification of protected species that could potentially be affected by the proposed offshore decommissioning works at the Shetland Tidal Array. These are:

- Harbour porpoise (*Phocoena phocoena*).
- Minke whale (*Balaenoptera acutorostrata*).
- Risso's dolphin (*Grampus griseus*).
- Killer whale (*Orcinus orca*).

[7] E.g., see consultations with SNH and NatureScot in relation to STA marine licence and EPS applications and on the draft Decommissioning Programme for Turbines 1 to 3 in the Shetland Tidal Array, detailed in Nova Innovation (2023). Shetland Tidal Array Decommissioning Consultation Summary (T1-3). and Nova Innovation (2021). Shetland Tidal Array European Protected Species & Basking Shark Risk Assessment. https://marine.gov.scot/sites/default/files/ni_2021_eps_risk_assessment_with_annexes.pdf

- Humpback whale (*Megaptera novaeangliae*).

Other protected species could theoretically be present in Bluemull Sound, including a number of other species of cetacean and basking shark (*Cetorhinus maximus*), which are strictly protected, under Schedule 5 of the Wildlife and Countryside Act (as amended). However, the species listed above continue to be the only species recorded in Nova's monitoring programme.

Otter (*Lutra lutra*), also a feature of Yell Sound Coast SAC may be present around the intertidal and onshore works associated with decommissioning the three M100 turbines.

While Section 5 provides a comprehensive assessment of the potential environmental effects of the activities associated with the decommissioning of the three M100 turbines, Section 7 sets out a specific risk assessment of the potential for decommissioning to result in disturbance to the European Protected Species listed above.

5 Potential environmental effects of decommissioning

5.1 Preliminary assessment of potential environmental effects

Building on the existing environmental assessments for the construction and operational phases of the Shetland Tidal Array detailed in the preceding section, Nova carried out a preliminary environmental assessment to identify the potential environmental effects of decommissioning the three M100 turbines. This considered the key impact pathways and environmental receptors, and a preliminary assessment of the potential for significant effects to result. This preliminary environmental assessment is detailed in Table 5-1.

Table 5-1 Preliminary environmental assessment of the potential environmental effects of decommissioning the three M100 turbines in the Shetland Tidal Array.

Impact pathway	Receptor	Potential for significant effects?
Disturbance due to physical presence of vessel and decommissioning activity.	Mammals	Yes: to be assessed in more detail.
	Birds	Yes: to be assessed in more detail.
	Fish	No: previous assessments have not identified disturbance to fish during offshore works as a potential issue of concern.
Disturbance due to underwater noise and vibration generated by decommissioning activity.	Mammals Fish Benthic species	No: recovery of the turbines and export cables will not involve any noisy activities such as drilling. The temporary and short duration of the activities, the lack of noisy marine works and the use of a small Multicat vessel mean the potential for disturbance by noise or vibration generated during decommissioning is negligible. In previous advice on the draft Decommissioning Programme for the three M100 turbines, Scottish Natural Heritage (now NatureScot)[8] advised that "the works do not involve any activity that is likely to produce any underwater noise capable of significantly disturbing or causing injury to seals or cetacean species".
Damage and loss of benthic habitat during decommissioning.	Benthic habitats and species	Yes: to be assessed in more detail.
Increased sedimentation caused by decommissioning.	Benthic habitats and species	No: while short-term and temporary increases in turbidity and sedimentation may result from recovery of substructures and cables from the seabed, the tide swept nature of the area and hard substrate typical of the project area means that any sediment levels in the area are expected to be very low and any sediment remobilised during works will quickly disperse. No Priority Marine Features (or benthic features of the Fetlar to Haroldswick MPA) have been identified in previous surveys of the Project site. Surveys have been undertaken routinely at the site during all offshore operations since 2016.

[8] See: Nova Innovation (2023). Shetland Tidal Array Decommissioning Consultation Summary (T1-3).

Impact pathway	Receptor	Potential for significant effects?
Damage to benthic habitats by objects dropped during decommissioning.	Benthic habitats and species	No: Nova's decommissioning programme has been designed to ensure that all works will be carried out in safely and responsibly. Contingency has been incorporated into all decommissioning steps to safeguard against dropped objects. In the extremely unlikely event that any objects are dropped to the seabed, all material will be safely and fully retrieved. Benthic habitats at the site are typical of tide swept conditions and would be expected to recover quickly from any such events. No Priority Marine Features (or benthic features of the Fetlar to Haroldswick MPA) have been identified in previous surveys of the Project site.
Introduction of Invasive Non-Native Species (INNS) by vessels during decommissioning.	Benthic habitats and species	No: Vessels used in decommissioning will be based in the Northern Isles and operated by reputable companies with ISO 14001:2015 environmental management systems accreditation, sound environmental policies and their own biosecurity good practice measures.
Introduction of Invasive Non-native Species (INNS) due to contaminated equipment used during decommissioning.	Benthic habitats and species	No: equipment to be used in decommissioning will be sourced from Shetland or pressure washed / air dried prior to use in Bluemull Sound. Vessel operators for decommissioning will be reputable companies with ISO 14001:2015 environmental management systems accreditation, sound environmental policies and their own biosecurity good practice measures.
Spread of Invasive Non-native Species (INNS) due to contaminated project infrastructure during decommissioning.	Benthic habitats and species	Yes: to be assessed in more detail.
General risk of pollution through debris, waste material or chemicals entering the water during decommissioning.	Benthic habitats and species	No: chemicals or fuel are not stored on site or on vessels engaged in decommissioning. All debris or waste material (including that below MHWS) will be removed from the site at Cullivoe and disposed of responsibly. Only contractors with ISO 14001:2015 environmental management systems accreditation to be used in marine operations.
Unexpected pollution or breaches of environmental obligations.	Benthic habitats and species	No: any accidental pollution or breaches will be reported to Marine Scotland within 24 hours. A copy of the Shetland Pollution Contingency Plan is kept on site at Cullivoe and onboard all vessels engaged in Works. Measures in the Plan would be followed as required.

Those impact pathways and receptors for which the potential for significant effects could not be excluded, detailed in Table 5-1 are assessed in more detail in the next sections. Those for which there was no potential for significant effects are not assessed in any further detail.

5.2 Disturbance by vessel presence and decommissioning activity

There is the potential for some minor, short-term disturbance to marine mammals and birds if present at the site when decommissioning activity is underway. This includes species that are designated features of the SACs and SPAs listed in Section 4.2, or the black guillemot feature of the Fetlar to Haroldswick MPA, as well as those that are Priority Marine Features. In addition, offshore activity could disturb cetacean EPS listed in Section 4.4, while there is the potential for otter (*Lutra lutra*) to be present on the shore at Cullivoe during the cable recovery operations.

However, only a single small Multicat vessel will be on site during decommissioning. Bluemull Sound is also an active channel for shipping, with the Project site, including cable landfall, located next to a busy port (Cullivoe). Any additional vessel disturbance as a result of the proposed activities is unlikely to surpass normal background levels, or those during construction and maintenance. Works are expected to be completed over a two-week period in April-June 2023 so any disturbance to mammals and birds will be short-term and temporary in nature.

In previous advice on the draft Decommissioning Programme produced by Nova for the three M100 turbines, Scottish Natural Heritage (now NatureScot) noted that "the use of a multicat vessel is not unusual activity for these waters and the marine works proposed were extremely localised and temporary in nature".

Decommissioning is currently planned to be carried out during the breeding and pupping/calving season for some mammal species, including harbour seal and harbour porpoise and breeding/fledging season for many marine bird species, which could increase the risk of significant disturbance. However, Nova's long-running environmental monitoring programme for the Shetland Tidal Array indicates that Bluemull Sound is not a critical or important habitat for these species and life stages. Similar ongoing activity at the site since 2016 has not resulted in significant disturbance to adults or juveniles.

Nevertheless, precautionary mitigation measures will be implemented to further reduce any residual disturbance impacts during offshore operations to ensure that there will not be any significant disturbance to marine mammals and birds. These mitigation measures are detailed in Section 6.

The extremely limited nature of any intertidal or onshore works (limited to retrieving the shore end of each cable will have been previously disconnected and manually pulled through the onshore duct to lay on the beach) and the already busy nature of Cullivoe harbour area in which this activity will be carried out means that additional mitigation for otter is not required.

5.3 Damage/loss of benthic habitat

Removal of infrastructure including turbine substructures and cables from the seabed during decommissioning will result in some localised disturbance to benthic habitats and species. Turbines and cables will have become colonised by epifaunal species typical of the area, so this habitat will be lost during decommissioning. However, the highly tide swept nature of the seabed and availability of hard substrate in the area means that areas of seabed under the footprint of the decommissioned turbines and cables will quickly become recolonised resulting in no net loss of biodiversity.

No Priority Marine Features or benthic features of the Fetlar to Haroldswick MPA have been identified in any surveys at the Project site. Such surveys have been undertaken routinely at the site during all offshore operations since 2016. In previous advice on the draft Decommissioning Programme produced by Nova for the three M100 turbines, Scottish Natural Heritage (now NatureScot) noted that "any impact to benthic communities is likely to be extremely localised and temporary in nature".

Turbine substructures are recovered to shore form the decommissioning vessels at Belmont Pier, which is within the boundary of the Fetlar to Haroldswick MPA. However, there are no records of the MPA's designated benthic feature at this specific location, which is already a busy harbour, as the site of the main ferry crossing from Yell to Unst.

Nevertheless, precautionary mitigation measures will be implemented to further protect against damage to benthic habitats and species including PMFs and potential features of the MPA. These mitigation measures are detailed in Section 6.

5.4 Spread of INNS

Nova's standard biosecurity and good practice procedures, summarised in Table 5-1 and detailed in the Decommissioning Environmental Monitoring and Mitigation Plan[9], are sufficient to prevent against the inadvertent introduction or spread of INNS as a result of the following activities associated with decommissioning:

- Use of contaminated vessels during decommissioning.
- Use of contaminated equipment used during decommissioning.

However, turbines and cables will have become colonised by epifaunal species typical of the area, so there is a risk that this may include INNS. Biological material is removed as standard from turbine nacelles and substructures (on Cullivoe or Belmont Pier), to avoid dangerous handling conditions. If this biological material is contaminated with INNS, there is a risk that if the material re-enters the marine environment, that it could contribute to their spread. Precautionary mitigation measures will therefore be implemented to reduce this risk and the potential effects on Priority Marine Features and the benthic habitats of the Fetlar to Haroldswick MPA. These mitigation measures are detailed in Section 6.

[9] Nova Innovation (2023). Shetland Tidal Array Decommissioning Environmental Monitoring and Mitigation Plan (T1-3).

6 Mitigation measures

Nova is committed to best environmental practice and avoiding adverse environmental effects in all aspects of its business. Nova takes a hierarchical approach to prioritising actions to manage environmental risk, as follows:

1. Eliminate risks to the environment where possible, for example by design changes, elimination of an operation, or selection of a different working methodology.
2. Reduce the potential impact of those risks to the environment that cannot be eliminated.
3. Reduce the likelihood of those risks to the environment happening that cannot be eliminated.

Table 6-1 sets out all of the environmental mitigation measures that will be followed during the decommissioning works at the Shetland Tidal Array, based on this hierarchical approach. This includes specific mitigation measures to address particular impacts which could not be eliminated in Section 5, as well as general good environmental practice measures.

Table 6-1 Environmental mitigation and good practice management measures for the decommissioning works.

Mitigation or good practice measure	Purpose and effectiveness
All personnel will adhere to the Scottish Marine Wildlife Watching Code during all offshore decommissioning works. Vigilance will be maintained for cetaceans, seal pups or large numbers of newly fledged birds in proximity to the works. Copies of the code will be onboard all vessels engaged in Works and included in site briefings.	**Purpose: to minimise or prevent disturbance to mammals and birds during decommissioning.** Expected to be effective. Nova's long-running environmental monitoring programme indicates low numbers of birds and mammals in Bluemull Sound so presence of mammals or large numbers of birds would be unusual/noticeable. Measure is expected to be effective at preventing general disturbance to all species. Will also prevent disturbance that could constitute significant disturbance to EPS or features of SPAs or SACs, thus avoiding impacts on the FCS of populations of these species. Measure will also prevent adverse effects on species that are also Priority Marine features (see Section 4.1).

Mitigation or good practice measure	Purpose and effectiveness
No drilling or piling to be carried out during decommissioning, avoiding significant underwater noise or vibrations.	**Purpose: to minimise or prevent disturbance to marine wildlife during decommissioning.** Expected to be effective. The lack of activities generating noise and vibrations avoids potential for disturbance to wildlife including the harbour seal feature of Yell Sound Coast SAC, EPS and mammal species that are also Priority Marine features.
Use of a small workboat for all offshore decommissioning works.	**Purpose: to minimise or prevent disturbance to marine wildlife during decommissioning.** Expected to be effective. The use of a small boat, similar to those that operate in the area will minimise any additional disturbance caused by the short term and temporary decommissioning works.
A pre-decommissioning drop-down survey will be conducted to confirm the condition of turbines and cables.	**Purpose: to ensure that decommissioning can be carried out in an environmentally responsible manner.** Expected to be effective. If any issues or hazards that could risk safe and responsible decommissioning are identified, works will be rescheduled until such time as issues or hazards have been rectified.
The pre-decommissioning drop-down survey will confirm that benthic habitats or species on the recommended Priority Marine Features (PMF) continue to be absent from the site.	**Purpose: to avoid damage to sensitive benthic habitats including PMF and benthic features of the Fetlar to Haroldswick MPA during decommissioning.** Expected to be effective. All previous surveys show that benthic habitats throughout the site are typical of tide swept areas with no PMFs or benthic features of the Fetlar to Haroldswick MPA present. In the unlikely event that any PMF or MPA feature is identified, MS-LOT and NatureScot will be notified and the need for further mitigation measures agreed.
A drop-down video survey of the seabed will be carried out after decommissioning to confirm that all equipment and infrastructure has been removed from the seabed.	**Purpose: to ensure benthic habitats return to their natural state following decommissioning.** Expected to be effective. The tide swept nature of the seabed and availability of hard substrate means that areas of seabed under the footprint of the decommissioned equipment will quickly become recolonised resulting in no net loss of biodiversity.
All lifting equipment used in decommissioning will be appropriately certified and all lifts and offshore operations risk assessed to minimise the risk of dropped objects during deployment and retrieval.	**Purpose: to avoid damage to benthic habitats during decommissioning through accidentally dropped objects.** Expected to be effective. Nova has been safely carrying out similar operations at the site since 2016 with no dropped objects. MS-LOT will be notified within 24 hours in the event of a dropped object event.

Mitigation or good practice measure	Purpose and effectiveness
Northern Isles-based vessels used for marine operations, to minimise potential for transfer of Invasive Non Native Species (INNS).	**Purpose: to prevent accidental spread of INNS as a result of decommissioning.** Expected to be effective. Decommissioning vessel operators will be reputable companies with ISO 14001:2015 environmental management systems accreditation, sound environmental policies and their own biosecurity good practice measures.
All decommissioning equipment to be used below MHWS will be free from biofouling. Temporary moorings (e.g., chains) will either be sourced from Shetland or will be pressure washed or air dried prior to use in Bluemull Sound.	**Purpose: to prevent accidental spread of INNS as a result of decommissioning.** Expected to be effective. Decommissioning vessel operators will be reputable companies with ISO 14001:2015 environmental management systems accreditation, sound environmental policies and their own biosecurity good practice measures.
Visual inspections for INNS will be carried out when turbines and substructures are removed from the water, following standard procedures in Nova's Biosecurity Plan (see Annex A). Laminated INNS ID cards to be used during inspections, with copies also kept on board vessels.	**Purpose: to prevent accidental spread of INNS as a result of decommissioning.** Expected to be effective. Biological material is removed as standard (on Cullivoe or Belmont Pier), to avoid dangerous handling conditions. If inspections identify INNS, care will be taken to avoid contaminated material entering the marine environment. Any INNS identified will be reported to Shetland Islands Council, Marine Scotland and NatureScot.
All debris or waste material (including that below MHWS) will be removed from the site at Cullivoe or Belmont and disposed of responsibly (recycled where possible).	**Purpose: to prevent damage to, or contamination of, the environment by debris or waste generated during decommissioning.** Expected to be effective. Once onshore all material will be repurposed, recycled or disposed of in accordance with waste disposal and recycling procedures.
No chemicals or fuel storage on site or on vessels engaged in decommissioning.	**Purpose: to prevent contamination of the environment through accidental spills or leaks.** Expected to be effective. If situation changes, materials will be stored appropriately including use of bunding if necessary.
Copy of Shetland Contingency Plan kept on site at Cullivoe and onboard all vessels engaged in Works. Measures in the Plan to be followed as appropriate.	**Purpose: to ensure appropriate and timely action in the event of an accidental spill.** Expected to be effective. All procedures in the plan are pre-determined and agreed. Any accidental pollution or breaches to be reported to Marine Scotland within 24 hours.

This table is held alongside all Project consent documentation in site files at Cullivoe and in Nova's offices and included in the operational documentation provided to offshore contractors working on behalf of Nova. All relevant operational procedures relating to environmental protection and best practice are included as standard in site briefings for Nova personnel and sub-contractors.

7 Likely significant effects on protected sites

7.1 Natura sites

As part of the determination process for Nova's existing licences for the Shetland Tidal Array, Habitats Regulations Assessments (HRA) including Appropriate Assessments (AA) have been carried out under Regulation 48 of the Conservation (Natural Habitats, &c.) Regulations 1994). Most recently in 2018, MS-LOT carried out an AA of Nova's application for a marine licence for the construction and operation phases of the Shetland Tidal Array. This concluded that, the Project would result in no adverse effect on the site integrity of the Yell Sound Coast Special Area of Conservation (SAC), the Hermaness, Saxa Vord and Valla Field Special Protection Area (SPA), and the Bluemull and Colgrave Sounds possible SPA either in isolation or in combination with other plans or projects. Nova is of the view that this conclusion remains valid for the decommissioning of the three M100 turbines, for the following reasons:

- Decommissioning the three M100 turbines and cables is effectively construction and installation operations in reverse. Impact pathways and potential environmental effects will be very similar as were assessed in MS-LOT's AA.
- Many of the decommissioning procedures and activities are tasks and operations that have been carried out during routine maintenance at the Shetland Tidal Array since 2016 or are part of the licenced reconfiguration of turbines in the array.

Most of the potential environmental effects of decommissioning are covered by MS-LOT's AA. However, they have been revisited and updated in this assessment, with appropriate mitigation identified to avoid significant effects, as follows:

1. All personnel will adhere to the Scottish Marine Wildlife Watching Code during offshore decommissioning works. This will minimise any disturbance to the harbour seal feature of the Yell Sound Coast SAC and bird features of the SPAs listed in Section 4.2 during offshore works.
2. The localised nature and limited duration of the decommissioning works and use of a small workboat (Multicat) will minimise any disturbance to the harbour seal feature of the Yell Sound Coast SAC and bird features of the SPAs listed in Section 4.2 during offshore works.
3. No drilling or piling will be carried out during decommissioning, avoiding significant underwater noise or vibrations which could disturb the harbour seal or otter features of the Yell Sound Coast SAC.

The mitigation measures above will ensure that decommissioning the three M100 turbines will have no adverse effect on the features of any Natura sites.

7.2 Fetlar to Haroldswick Nature Conservation MPA

The mitigation measures identified to avoid significant effects on the marine bird features of SPAs detailed in the preceding section will ensure that decommissioning the three M100 turbines will have no adverse effect on the black guillemot feature of the Fetlar to Haroldswick Nature Conservation MPA.

The sessile/static nature of the other features of the MPA means that there is limited scope for potential impacts during decommissioning. Turbine substructures will be recovered to shore from

the decommissioning vessel at Belmont Pier on Unst which is within the MPA boundary. However, this assessment has identified appropriate mitigation measures to avoid significant effects to these benthic features of the MPA, as well as benthic habitats and species more generally. These mitigation measures are as follows:

1. A pre-decommissioning drop-down video survey will be conducted to confirm the condition of turbines and cables. This will ensure that decommissioning can be carried out in an environmentally responsible manner that will not result in damage to benthic habitats.

2. The pre-decommissioning drop-down video survey will also confirm that there are no benthic features of the MPA present (or other Priority Marine Features). In the unlikely event that any PMF or MPA feature is identified, MS-LOT and NatureScot will be notified and the need for further mitigation measures agreed.

3. A drop-down video survey of the seabed will be carried out after decommissioning to confirm that all equipment and infrastructure has been removed from the seabed. This will ensure that benthic habitats return to their natural state following decommissioning.

4. All lifting equipment used in decommissioning will be appropriately certified and all lifts and offshore operations risk assessed to minimise the risk of dropped objects during deployment and retrieval. This will prevent against damage to benthic habitats and species.

5. Northern Isles-based vessels will be used for marine operations. This will minimise the potential for transfer of Invasive Non Native Species (INNS) which could affect the benthic features of the MPA, as well as benthic habitats and species more generally.

6. All decommissioning equipment to be used below MHWS will be free from biofouling. Temporary moorings (e.g., chains) will either be sourced from Shetland or will be pressure washed or air dried prior to use in Bluemull Sound. This will minimise the potential for transfer of INNS which could affect the benthic features of the MPA, as well as benthic habitats and species more generally.

7. Visual inspections for INNS will be carried out when turbines and substructures are removed from the water, following standard procedures in Nova's Biosecurity Plan. If inspections identify INNS, care will be taken to avoid contaminated material entering the marine environment. Any INNS identified will be reported to Shetland Islands Council, Marine Scotland and NatureScot. This will minimise the potential for transfer of INNS which could affect the benthic features of the MPA, as well as benthic habitats and species more generally.

8 EPS risk assessment

8.1 Previous Shetland Tidal Array EPS risk assessments

In previous advice provided to MS-LOT, SNH (now NatureScot) advised that installation works (including cable and turbine installation and relocation and associated vessel activities) associated with the Shetland Tidal Array (extended) may cause a disturbance to marine EPS and therefore would require an EPS licence to avoid an offence under the Conservation (Natural Habitats) Regulations 1994 (as amended). This advice which remains relevant to the current risk assessment and licence application is provided in Annex B.

MS-LOT has issued several such licences to Nova for the Shetland Tidal Array to cover potential disturbance to EPS during installation and reconfiguration of turbines and associated infrastructure within the array and associated activities. Applications for these licences included risk assessments, most recently in 2021, when Nova produced a European Protected Species & Basking Shark Risk Assessment[10] to support an application for an EPS licence to cover potential disturbance during further turbine installation and reconfiguration within the array.

Decommissioning the three M100 turbines and cables is effectively construction and installation operations in reverse. Potential disturbance effects to EPS during decommissioning will therefore be very similar as were assessed in the 2021 EPS Risk Assessment. Nova is therefore of the view that this assessment remains valid for the decommissioning of the three M100 turbines.

Nevertheless, the 2021 EPS Risk Assessment has been revisited and updated to ensure it remains fit for purpose to support an application for a licence to disturb marine species that are subject to strict protection ("European Protected Species" – EPS), as described in Annex IV to Council Directive 92/43/EEC during decommissioning of the three M100 turbines and associated infrastructure in the Shetland Tidal Array.

In addition, the current EPS licence (EPS/BS-00010173) which covers potential disturbance to EPS during reconfiguration of turbine 4 to 6 in the array expires on 30 April 2023 but this work has not yet been carried out. In addition to covering the decommissioning activity in 2023, a new licence is required for potential disturbance to EPS during turbine reconfiguration also planned to take place during 2023.

8.2 Species likely to be disturbed

Consultation to date with NatureScot (previously SNH) in relation to the installation, operation and maintenance, reconfiguration and decommissioning of turbines and infrastructure within the Shetland Tidal Array included advice on the potential effects of these activities on protected species[11]. This previous advice and Nova's land-based surveys carried out continuously since November 2010 in Bluemull Sound[12] have informed the identification of protected species that

[10] Nova Innovation (2021). Shetland Tidal Array European Protected Species & Basking Shark Risk Assessment. Available at https://marine.gov.scot/sites/default/files/ni_2021_eps_risk_assessment_with_annexes.pdf

[11] E.g., see consultations with SNH and NatureScot in relation to STA marine licence and EPS applications and on the draft Decommissioning Programme for Turbines 1 to 3 in the Shetland Tidal Array, detailed in Nova Innovation (2023). Shetland Tidal Array Decommissioning Consultation Summary (T1-3). and Nova Innovation (2021). Shetland Tidal Array European Protected Species & Basking Shark Risk Assessment. https://marine.gov.scot/sites/default/files/ni_2021_eps_risk_assessment_with_annexes.pdf

[12] Nova Innovation (2022). Shetland Tidal Array Monitoring Report: Land-based bird and mammal surveys. Available at: https://marine.gov.scot/node/23283

could potentially be affected by the proposed offshore decommissioning works at the Shetland Tidal Array. These are:

- Harbour porpoise (*Phocoena phocoena*).
- Minke whale (*Balaenoptera acutorostrata*).
- Risso's dolphin (*Grampus griseus*).
- Killer whale (*Orcinus orca*).
- Humpback whale (*Megaptera novaeangliae*).

A single record of basking shark, *Cetorhinus maximus*, has been recorded in vantage point surveys. In advice to MS-LOT in March 2018 (provided in Annex B), SNH (now NatureScot) advised that, since there had only been one basking shark observation in Bluemull Sound since Nova's monitoring began in 2010, a basking shark licence to address potential disturbance during installation or operational collision risk would not be required. There have subsequently been no further records of the species in Bluemull Sound, so this advice that the Shetland Tidal Array will not have a negative impact on the conservation status of basking sharks and a licence to address potential disturbance will not be required remains valid.

Otter (*Lutra lutra*), also a feature of Yell Sound Coast SAC may be present around the intertidal works associated with decommissioning the three M100 turbines. However, these works will be limited to retrieving the shore end of each cable, so will be very spatially and temporally restricted. This, combined with the fact that the cable landfall is in the Cullivoe harbour area, which is already busy with significant activity means that retrieving the shore end of each cable will not disturb otter.

8.3 Numbers of animals likely to be disturbed

Table 8-1 details a range of metrics which provide a semi-quantitative indication of the numbers of animals of the five EPS identified in the previous section, likely to be disturbed as a result of the proposed activities. These metrics have been calculated using data gathered during the vantage point surveys carried out in Bluemull Sound between November 2010 and March 2022[13,14] and subsea video monitoring around turbines[15,16].

Table 8-1 Metrics providing a semi-quantitative indication of the numbers of animals of the five EPS likely to be disturbed as a result of the proposed activities.

Species	Metrics for numbers of animals likely to be disturbed
Harbour porpoise, *Phocoena phocoena*	- 749 animals recorded in 1184 hours of survey effort spanning 12 years. - Recorded in 5.8% of scans (184 scans out of 3192). - When present in Bluemull Sound, occurs in small family groups of 3-4 individuals. - Occurs in Bluemull Sound throughout the year. - Species not observed around turbines in subsea video footage.
Killer whale, *Orca orcinus*	- 18 animals recorded in 1184 hours of survey effort spanning 12 years. - Recorded in 0.06% of scans (2 scan out of 3192).

[13] Nova Innovation (2021). Shetland Tidal Array Monitoring Report: Vantage point surveys.
[14] Nova Innovation (2022). Shetland Tidal Array Monitoring Report: Land-based bird and mammal surveys.
[15] Nova Innovation (2021). Shetland Tidal Array Monitoring Report: Subsea video monitoring.
[16] Nova Innovation (2022). Shetland Tidal Array Monitoring Report: Land-based bird and mammal surveys.

Species	Metrics for numbers of animals likely to be disturbed
	- Records comprise a pod of 10 animals in January 2017 and a pod of 8 animals in July 2021. - Species not observed around turbines in subsea video footage.
Risso's dolphin, *Grampus griseus*	- 25 animals recorded in 1184 hours of survey effort spanning 12 years. - Recorded in 0.06% of scans (2 scans out of 3192). - Records comprise one pod of 5 animals in August 2015 and one pod of 20 animals in March 2016. - Species not observed around turbines in subsea video footage.
Humpback whale, *Megaptera novaeangliae*	- 2 animals recorded in 1184 hours of survey effort spanning 12 years. - Recorded in 0.03% of scans (1 scan out of 3192). - Record comprises a mother and calf in February 2016. - Species not observed around turbines in subsea video footage.
Minke whale, *Balaenoptera acutorostrata*	- 6 animals recorded in 1184 hours of survey effort spanning 12 years. - Species recorded in 0.16% of scans (5 scans out of 3192). - Records comprise 1 animal in November 2010, 1 animal in November 2017, 1 further animal in November 2017, 1 animal in September 2020 and 1 animal in June 2021. - Species not observed around turbines in subsea video footage.

Nova's vantage point surveys have demonstrated that the presence and numbers of individuals of the EPS likely to be disturbed as a result of the proposed activities in Bluemull Sound is highly stochastic and difficult to predict with so few sightings. Occurrence of all species is extremely rare, with the exception of harbour porpoise, which occurs in low numbers year-round (individuals or groups of less than 5 animals).

Based on Nova's long-term environmental monitoring data, key life history characteristics of the species, and the nature of the decommissioning and reconfiguration activities planned in 2023, including scale, duration and methodologies that will be used, the numbers of individuals likely to be disturbed is estimated to be very to extremely low for all species. The activities likely to disturb species will be very time-limited and carried out quickly efficiently over a few days.

Population estimates for the five EPS based on the relevant UK Marine Mammal Management Units (MU) (where available) are provided in Table 8-2. Whilst almost all marine mammal species found in UK waters are part of a much larger biological population whose range extends beyond UK waters into the waters of other States and/or the High Seas, the Management Units provide a pragmatic approach to contextualise predicted impacts of various activities.

Table 8-2 Population estimates (based on UK Marine Mammal Management Units) for the five EPS likely to be disturbed as a result of the proposed decommissioning activities.

Species	Management Unit	Abundance in MU (CV)	MU 95% confidence interval
Harbour porpoise	North Sea	346,601 (0.09)	289,498 – 419,967
Killer whale	No Management Unit for UK waters		
Risso's dolphin	Celtic & Greater North Seas	8,687 (0.63)	2,810 – 26,852
Humpback whale	No Management Unit for UK waters		
Minke whale	Celtic & Greater North Seas	10,288 (0.26)	6,210 – 17,042

As stated above, uncertainty and variation in the presence and numbers of the above species in Bluemull Sound and wider uncertainty about the geographical extent and population demographics of many of the species, the number of individuals likely to be affected by the proposed activities is uncertain but estimated to be very to extremely low. It is highly unlikely that there will be any

disturbance to EPS during decommissioning and reconfiguration works at the Shetland Tidal Array. Nevertheless, precautionary mitigation measures will further reduce this likelihood, detailed in the next section.

8.4 Mitigation measures

The following mitigation will further reduce the risk that the proposed decommissioning of the three M100 turbines in the Shetland Tidal Array and the planned reconfiguration of turbines 4 to 6 will result in disturbance to EPS:

1. All personnel will adhere to the Scottish Marine Wildlife Watching Code during offshore decommissioning works. This will minimise any disturbance to the EPS during offshore works associated with turbine decommissioning or reconfiguration.

2. The localised nature and limited duration of the decommissioning and reconfiguration works and use of a small workboat (Multicat) will minimise any disturbance to EPS.

3. No drilling or piling will be carried out during decommissioning, avoiding significant underwater noise or vibrations which could disturb EPS[17].

In addition to the above specific mitigation measures it is important to note that Nova has gained experience through multiple deployments, retrievals, maintenance and decommissioning operations at the Shetland Tidal Array. A consequence of this experience is that any potential disturbance to EPS as a result of the turbine decommissioning and reconfiguration activities will be minimized through quick and efficient operations. Decommissioning the three M100 turbines and export cables is expected to take less than 2 weeks to complete. Reconfiguration of turbines 4 to 6 is expected to be completed in a similar timescale.

These mitigation measures are deemed by Nova to be adequate and appropriate to reduce the risk of disturbance to EPS to levels that meet the third “EPS test”; namely that the proposed activities will not be detrimental to the Favourable Conservation Status of the EPS concerned. In support of this conclusion, SNH stated in advice to MS-LOT in March 2018 (Annex B), that it is **unlikely that there will be any significant disturbance, and the project will not be detrimental to the maintenance of the populations of relevant cetacean species at a favourable conservation status in their natural range**. This advice related to turbine installation and reconfiguration works at the Shetland Tidal Array (as extended), so Nova considers it is valid and relevant for the proposed activities detailed in this risk assessment.

8.5 Consideration of designated sites

With the exception of harbour porpoise and minke whale, there are no designated sites in the UK for any of the species of EPS identified in this report. The nearest designated site for harbour porpoise is the Inner Hebrides and the Minches SAC on the west coast of Scotland, while the Southern Trench nature conservation MPA, designated for minke whale is located off the Aberdeenshire coast.

Assessments of the potential effects of the proposed activities on other designated sites are provided in Section 7.

[17] In advice to MS-LOT in March 2018 (provided in Annex B), Whale and Dolphin Conservation (WDC) stated that the lack of pile-driving means that their concerns are reduced for the Shetland Tidal Array.

8.6 Satisfactory alternatives

Tidal turbines transform the kinetic energy of the tides in the marine environment into electricity. As a Scottish company, Nova Innovation considered a range of locations in Scotland when identifying the preferred site for developing what eventually became the Shetland Tidal Array. Key factors influencing the site identification process were the available tidal energy resource, access to a grid connection, availability of local infrastructure and supply chain, and hard constraints (including environmental). Early dialogue with SNH in the site identification process identified Bluemull Sound as an area of lower environmental sensitivity since, at the time, it was not located within any Natura 2000 sites (SPAs or SACs, including possible or candidate sites).

The deployment of the Shetland Tidal Array incorporating a greater number of larger turbines was considered. There are economies of scale involved in building larger turbines and deploying more of them; hence the huge arrays of giant, multi-MW turbines being deployed in offshore wind farms. Many marine energy developers are developing MW-scale machines and multi-MW projects for precisely this reason. However, Nova Innovation has adopted a different approach: deploying a small array of small-scale turbines minimises the associated environmental, engineering and financial risks.

Ongoing activity at the Shetland Tidal Array, including the proposed activities detailed within this risk assessment and associated EPS licence application are constrained to take place within the area bounded by the seabed lease issued to Nova Innovation by The Crown Estate (now Crown Estate Scotland). As such, there are no suitable alternative locations for the proposed activities.

The proposed activities comprising decommissioning of the three M100 turbines and export cables, and reconfiguration of turbines 4 to 6 within the Shetland Tidal Array, will be carried out in 2023. The spatial extent and duration of these works will be extremely limited, reducing the potential for any sustained source of disturbance. Further, Nova's environmental monitoring in Bluemull Sound has demonstrated that the presence of EPS in Bluemull Sound is highly stochastic, with no clear seasonal patterns. In particular, the most frequently occurring EPS, harbour porpoise, occurs in low numbers year-round, so there are no times of the year in which operations could be targeted to avoid the risk of disturbance.

Nova considered using larger deployment vessels, such as the dynamically positioned (DP) vessels typically used in the offshore oil and gas and offshore wind industries and favoured by several tidal energy developers deploying at EMEC. Utilising larger DP vessels reduces some project risks since these vessels can operate in a wide variety of tidal flow, sea state and weather conditions. However, Nova's small-scale, modular turbines allow us to use smaller multicat vessels. These are frequently used in the waters around Shetland, for example by the fish farming industry. Using smaller vessels minimises the likelihood of disturbance to protected species.

Nova also considered using drilling or piling to secure turbines to the seabed. Such techniques are commonly used in the offshore wind industry and by other marine energy developers but can result high inputs of anthropogenic noise to the marine environment which can lead to disturbance to marine species. By employing gravity foundations, secured to the seabed by weight alone, we minimise the risk of disturbing species including EPS.

8.7 Case for Imperative Reasons of Overriding Public Interest

The Climate Change Act 2019 commits Scotland to net-zero emissions of all greenhouse gases by 2045. In 2020 the Scottish Government published an update to Scotland's 2018-2032 Climate

Change Plan[18] setting out the pathway to achieving this target. This report highlighted government's continued support for the Scottish tidal energy sector and its role in achieving net zero, while also creating high quality jobs, contributing to the green recovery from the Covid-19 pandemic. The Scottish Government continues to champion the tidal energy sector, supporting the research, development, and demonstration that will maintain Scotland's competitive advantage and potentially deliver significant domestic and export-led economic benefit. Recent Scottish Government investment of £2million in Nova Innovation and its turbine technology has further strengthened this commitment to support the Scottish tidal energy sector[19], for which the Shetland Tidal Array is a flagship project.

As the world's first offshore tidal energy array, Nova Innovation's Shetland Tidal Array project has been, and will continue to be, a landmark project in demonstrating the commercial and ecological viability of tidal power. All offshore work involves a degree of risk, and it will not be possible to exploit Scotland's vast marine energy resources without some risk of disturbance to marine protected species. However, the proposed approach of deploying and monitoring small-scale projects which grown incrementally, in line with the knowledge base, allows this risk to be minimised and controlled.

The proposed activities will enable Nova to build on the success to date of the Shetland Tidal Array and further progress the development of learning and the knowledge base on key engineering and environmental aspects of tidal energy. This will continue to build and strengthen the evidence base to de-risk future larger-scale tidal energy projects. It will also enable the further development and dissemination of good practice in engineering, and environmental assessment and management, delivering wider benefits to the whole marine renewable energy sector.

Decommissioning the three M100 turbines and reconfiguration of turbines 4 to 6 will improve the knowledge base available for future tidal energy projects.

[18] Scottish Government (2020). Securing a green recovery on a path to net zero: climate change plan 2018–2032 – update.

[19] Awarded by Scottish Enterprise see Two million VOLT sparks Scottish tidal energy scale up (novainnovation.com)

Annex A Shetland Tidal Array Biosecurity Plan

Summary of Biosecurity Risk of Shetland Tidal Array

a. This Biosecurity Plan for Nova Innovation's Shetland Tidal Array has assessed the risk of introducing non-native species from outside of the Shetland regional area as very low. This is because:
   - all vessels used in operations are local to the Northern Isles;
   - vessels not based in Shetland are operated by reputable companies with their own environmental policy statements and good practice procedures;
   - turbines and sub-structures are transported to Shetland overland;
   - measures are in place to minimise biofouling of epibiota on turbines and substructures.

b. The overall risk of activities contributing to the further spread of non-native species already present in Shetland has been assessed as low. This is because:
   - although the turbines and substructures within the array provide an artificial habitat for colonisation, significant similar habitat is already present in Bluemull Sound due to aquaculture sites;
   - the tide-swept nature of the Shetland Tidal Array site is likely to limit the settlement of non-native species larvae.

c. This plan has identified a series of mitigation measures, mostly relating to monitoring and surveillance and good biofouling management to ensure that the overall biosecurity risk of the Shetland Tidal Array is low.

A.1 Introduction

A.1.1 Development name

Shetland Tidal Array, Bluemull Sound, Shetland.

A.1.2 Description of operation

At full build-out the current phase of the Shetland Tidal Array will comprise six 100kW Nova M100 turbines. During 2019/2020, three additional turbines will be added to the existing three-turbine array. A subsea cable hub will be deployed, along with inter-array cabling between the three new turbines and an additional export cable from the subsea hub to Cullivoe Pier. Following a period of operation, the three additional turbines within the array will be reconfigured to inform the sector's understanding for optimal array design and turbine layout as part of the Horizon 2020 EnFAIT project.

A.1.3 Site location

The Shetland Tidal Array is situated in Bluemull Sound, between the islands of Unst and Yell, indicated in Figure A1. The Project is located in a water depth of 30 to 40m offshore from the west coast of the Ness of Cullivoe, a narrow 1 km long headland to the north-east of Yell.

Figure A1 Location of the Shetland Tidal Array (indicated by yellow star).

Bluemull Sound is an active channel for shipping and the Shetland Tidal Array site is located less than 1km from a busy, multiuse harbour at Cullivoe, comprising a pier and small boat marina. In 2017, Cullivoe was the 12th largest whitefish landing port in the UK [20]. It is also used as a base by a number of aquaculture operators (mussels and salmon). The small marina currently provides berthing facilities for 14 boats, with plans to expand these facilities along with those at Cullivoe Pier.

A.1.4 Biosecurity plan period

The Biosecurity Plan covers the period 1 May 2019 to 2035 with regular reviews as appropriate. This Site Biosecurity Plan will be supplemented with Operation Biosecurity Plans, as necessary, for any specific activities that fall out with those considered within this plan. None are currently anticipated but this will be kept under review.

A.1.5 Responsible persons for biosecurity management

a. Management of Biosecurity Plan and overview of biosecurity: Kate Smith, Nova Environmental Manager.
b. Management of biosecurity operations on site: Tom Wills, Nova Offshore Manager (or delegated operations manager for a particular task).

A.2 Environmental factors affecting biosecurity

A.2.1 Salinity and environmental conditions

Bluemull Sound is a fully saline site. A number of small burns and land run-off enter the Sound but tidal currents and mixing mean that any effects on salinity are very localized and unlikely to extend beyond the intertidal zone.

[20] Napier I (2017). Shetland Fisheries Statistics 2017. Report produced by the University of the Highlands and Islands, pp35.

A.2.2 Seabed habitat

The seabed in Bluemull Sound at the Shetland Tidal Array site is rocky with little overlying sediment due to tidal scour. The array is located in an area of strong tidal streams which can reach velocities exceeding 3 m/s. This habitat typically supports a community of foliose seaweeds and encrusting animals typical of such tide-swept conditions, with sparse faunal communities dominating in the deeper, most tide-swept parts of the site.

A.2.3 Artificial habitat and biofouling

Although the Shetland Tidal Array provides artificial habitat for potential colonisation by non-native species, significant similar habitat is already present in Bluemull Sound due to aquaculture sites. The species and taxa most commonly observed to colonize the surfaces of structures in the Shetland Tidal Array are mussels, barnacles and kelp[21].

A.2.4 Non-native species present in Shetland

The northerly location of Shetland and lower water temperatures compared to the mainland UK may inhibit the spread of certain non-native species from the south. Despite this, a number of marine non-native species have been recorded around Shetland, detailed in Table A1, compiled from a variety of sources[22] [23] [24]. The known locations of these species in Shetland are detailed, along with an indication of the likelihood that the Shetland Tidal Array could contribute to their spread within Shetland.

Table A1 Non-native species already recorded in Shetland and relevant to the Shetland Tidal Array.

Species	Records in Shetland	Habitat details and relevance to Shetland Tidal Array
Fragile green sponge fingers, *Codium fragile ssp. Fragile*	Throughout Shetland	Occurs on rock from the mid to lower shore and shallow subtidal. Not relevant to STA, depth and tide-swept nature of site make colonisation unlikely.
Japanese weed, *Dasysiphonia japonica*	Throughout Shetland	Lower intertidal species. Not relevant to STA, depth and tide-swept nature of site make colonisation unlikely.
Hook weed, *Bonnemaisonia hamifera*	Throughout Shetland	Not relevant to STA, already widespread throughout Shetland. GBNNS consider environmental & economic threat is low.
Harpoon weed, *Asparagopsis armata*	Throughout Shetland	Not relevant to STA, already widespread throughout Shetland. GBNNS consider environmental & economic threat is low.
Wireweed, *Sargassum muticum*	West coast of mainland	Occurs on rock, cobbles and boulders from the mid to lower shore and shallow subtidal. Not relevant to STA, depth makes colonisation unlikely.

[21] Vezza R (2019). An anti-biofouling strategy for operators: A systems approach for the tidal energy industry. Ph.D. thesis, University of Edinburgh, University of Exeter and University of Strathclyde.

[22] Collin SB, MacIver K & Shucksmith R. (2015). A Biosecurity Plan for the Shetland Islands, pp66.

[23] Collin SB, Tweddle JF & Shucksmith RJ (2015). Rapid assessment of marine non-native species in the Shetland Islands, Scotland. BioInvasions Records 4: 147-155.

[24] Shelmerdine RL, Mount B & Shucksmith RJ (2017). The most northerly record of feral Pacific oyster *Crassostrea gigas* (Thunberg, 1793) in the British Isles. BioInvasions Records 6(1): 57–60.

Species	Records in Shetland	Habitat details and relevance to Shetland Tidal Array
Orange-tipped sea squirt, *Corella eumyota*	Yell	Occurs in shallow waters in harbours, marinas and on manmade structures. Could colonise structures of STA, maintain surveillance.
Bryozoan, *Schizoporella japonica*	Throughout Shetland	Widespread throughout Shetland on manmade structures Not relevant to STA, already widespread. GBNNS consider environmental & economic threat is low.
Bryozoan, *Fenestrulina delicia*	Sullom Voe	Only a single record in Shetland. Unlikely to colonise STA. GBNNS consider environmental & economic threat is low.
Bryozoan, *Bugula simplex*	Lerwick	Colonises marinas, harbours and boat hulls. Could colonise structures of STA, maintain surveillance. GBNNS consider environmental & economic threat is low.
Orange-striped anemone, *Diadumene lineata*	The Vadills, Mainland	Only a single historical record in Shetland Vadills (coastal lagoons) from 2003. Unlikely to colonise STA.
Darwin barnacle, *Austrominius modestus*	Throughout Shetland	Not relevant to STA, already widespread throughout Shetland. GBNNS consider environmental & economic threat is low.
Japanese skeleton shrimp, *Caprella mutica*	Throughout Shetland	Found in areas of human activity on natural and artificial substrata. Limited dispersal potential. Could colonise structures of STA, maintain surveillance.
Pacific oyster, *Crassostrea gigas*	Sandsound Voe, Mainland	Only two specimens found in Shetland in 2016, on mussel lines. Unlikely to colonise STA due to tide-swept conditions.

A number of other non-native species could potentially be present in the waters around Shetland, without having been formally recorded. Of likely pertinence are those species recorded in Orkney since the spread in distribution of non-native species generally follows a south to north pattern. A number of non-natives not yet recorded in Shetland were recorded in a recent rapid assessment survey of Orkney in 2017. As with species detailed in the table above, not all of these non-native species will be of environmental or economic concern, but it is good practice to maintain watching brief over these and other non-native species not yet record in Shetland.

A.3 Vessels using the site and engaged in operations

Local multi-category ('multicat') workboat vessels of the type shown in Figure A2, and small workboats are utilised for all operations associated with the Shetland Tidal Array, including deployments, retrievals and maintenance.

All vessels used in operations are based in the Northern Isles. Those not based in Shetland itself are operated by reputable companies with sound environmental policies and good practice procedures. Turbines and substructures are shipped to site overland via lorry and northern isles freight service.

Figure A2 Representative vessel utilised for Shetland Tidal Array operations. *Source Leask Marine*.

A.4 Site activities which risk introducing or spreading non-native species

The nature of biosecurity risks for the Shetland Tidal Array, associated activities and mitigation measures are detailed in Table A2.

Table A2 Activities associated with the Shetland Tidal Array, biosecurity risk and mitigation measures.

Activity and nature of risk	Mitigation measures	Risk level
Use of vessels for site operations: Risk of introducing or spreading non-native species	- Turbines and substructures are shipped to Shetland by road. - Northern Isles-based vessels used for marine operations. - The operators used for provision of multicat vessels follow their own biosecurity good practice, under an environmental policy statement[25]. - An 'Operations Biosecurity Plan' will be produced for use of any vessels not based in Northern Isles (not currently anticipated).	Very low to low
Installation of turbines, substructures, cables and offshore hub: Risk of introducing or spreading species, provision of artificial habitat for colonisation	- Turbines, substructures, cables and hub not previously deployed subsea elsewhere. - Temporary moorings (e.g., chains) used during deployment will be sourced from Shetland or pressure washed / air dried prior to use in Bluemull Sound. - An anti-fouling strategy is in place involving use of anti-fouling coatings on turbines, substructures and hub. - Visual inspections when turbines or substructures removed from water - contingency action will be taken if necessary.	Low to medium

As detailed in Table B2, the introduction of artificial habitat to Bluemull Sound could provide new habitat for colonisation by non-native species. However, the risk that this would contribute significantly to the further spread of species already present in Shetland is considered low, for a number of reasons:

[25] Leask Marine (2019). Environmental Policy Statement. See https://www.leaskmarine.com/about/company-policy-statements/

a. In general, the sheltered habitats of marinas, ports and harbours seems to favour the establishment of non-native species, over habitats in more wave or tide-exposed conditions such as Bluemull Sound.
b. In a recent rapid assessment of non-native species in Orkney, whilst a number of non-natives species were found to be colonising structures in harbour and marinas, none were found on marine renewable energy devices sampled.
c. Devices are periodically removed from the water for maintenance, during which any biofouling is removed.
d. Additional mitigation and good biosecurity measures will be applied to the STA, detailed in the next section.

The biosecurity risk for the Shetland Tidal Array is likely to be considerably lower than that associated with other activities in the area such as national and international shipping, marinas, recreational boating and aquaculture. The use of local vessels means the risk of introducing non-native species from outside of Shetland is minimal, though they could contribute to the spread of species already present in Shetland. The presence of turbines and substructures in the Sound creates artificial habitat for potential colonisation by non-native species already present in Shetland. However, similar habitat is available on nearby aquaculture installations.

A.5 Biosecurity control measures

The full range of biosecurity control measures to reduce the risk of the Shetland Tidal Array contributing to the spread or introduction of non-native species are listed below:

a. The Site Biosecurity Plan will be reviewed on any changes being made to the Construction Method Statement to ensure its conclusions remain valid.
b. An 'Operations Biosecurity Plan' will be produced, as necessary, for any specific activities that fall outside those described within this plan. None are currently anticipated but this will be kept under review.
c. The Site Biosecurity Plan will be kept under review and updated, as necessary.
d. None of the turbines, substructures, cables or subsea hub will previously be deployed subsea elsewhere.
e. Turbines and substructures are shipped to Shetland by road.
f. Northern Isles-based vessels used for marine operations.
g. The operators used for provision of multicat vessels follow their own biosecurity good practice, under an environmental policy statement[14].
h. Any temporary moorings (e.g., chains) used during deployment will either be sourced from Shetland, or pressure washed or air dried prior to use in Bluemull Sound.
i. An anti-fouling strategy is in place for the project, which includes use of anti-fouling coatings on turbines, substructures and offshore hub.
j. Turbines and substructures will undergo visual inspections when removed from the water. Contingency action will be taken if necessary (see Section A.7).

A.6 Site surveillance and reporting procedures

Turbines and substructures will undergo visual inspections when removed from Bluemull Sound. Any non-native species identified will be reported to Shetland Islands Council, Marine Scotland and Scottish Natural Heritage in the first instance. Records of inspections and any instances of non-native species

will be kept within the site biosecurity logbook, maintained and managed by Nova's Environmental Manager. A hard copy of the biosecurity logbook will be kept on-site at Nova's site office at Cullivoe.

A.7 Contingency plan

Visual inspections will be carried out following removal of turbines or sub-structures from Bluemull Sound. Inspections will take place at either Cullivoe or Belmont Pier. Laminated 'pest ID cards', held on site at Cullivoe will assist staff carrying out the inspections in identifying particularly invasive non-natives. Not all non-native species will require further action, since many are already well-established in Shetland, or have minimal likely environmental or economic impacts.

If visual inspections of turbines and substructures indicate the presence of a non-native species, this will be reported to Shetland Islands Council, Marine Scotland and NatureScot in the first instance, for discussion on whether further action is required.

Biological material is removed as standard when turbines or sub-structures are removed from Bluemull Sound, for health and safety reasons, to avoid dangerous handling conditions. This takes place *in situ* at Belmont or Cullivoe pier usually by pressure washing. If inspections have suggested that invasive non-native species may be present, care will be taken during pressure washing to avoid contaminated material entering the marine environment.

Any contingency action taken will be recorded in the site biosecurity logbook kept in Nova's site office at Cullivoe Pier.

A.8 Location of biosecurity logbook

The Shetland Tidal Array biosecurity logbook will be maintained and managed by Nova Innovation's Environmental Manager. A hard copy will be kept on-site in Nova's Cullivoe office.

A.9 Biosecurity plan review process

This Site Biosecurity Plan will be reviewed and updated if necessary; for example, if the Construction Method Statement is amended at any point (not anticipated). The Plan will be reviewed in May 2021 followed by every two years, or sooner if required. More frequent reviews may be triggered by an identified higher risk, such as change in vessel use or record of an invasive non-native species elsewhere in Shetland, for which containment may be required.

Annex B Previous consultation on EPS disturbance

Scottish Natural Heritage consultation response to Nova Innovation's Marine Licence application, 2 March 2018.

Whale and Dolphin Conservation consultation response to Nova Innovation's Marine Licence application, 16 March 2018.