

Buchan Offshore Wind

Offshore Scoping Report

Appendix B



No.	Receptor	Proposed Development Stage	Impact Pathway	Relevant Embedded Mitigation	Scoped In/Out	Justification	Aspects to be Considered in EIA				
							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
1	Physical and Coastal Processes	Construction	Temporary disturbance of the seabed leading to increases in suspended sediment concentrations, and associated deposition	EM1 EM2 EM9	Scoped In	The impact on the seabed of proposed construction works effects physical processes proximal to the works and has the potential to generate temporary increases in SSC. Such disturbance occurs where foundations, cables or anchors are installed into the seabed, noting that as a floating windfarm, dynamic IACs will be deployed.	✓	✓	✓	✓	✓
2	Physical and Coastal Processes	Construction	Alteration to seabed composition, structure, and morphology	EM1 EM2 EM3 EM9	Scoped In	The impact on the seabed of proposed construction works to install Wind Turbine Generator (WTG) mooring systems and other infrastructure (i.e. non burial cable protection measures) impacts upon physical processes proximal to the works and alters seabed composition, structure, and morphology. The requirement for seabed preparation activities including pre sweeping will also be considered.	✓	✓	✓	✓	✓
3	Physical and Coastal Processes	Construction	Localised alteration to the hydrodynamic, wave and sediment regimes and coastal processes	EM1 EM2 EM3 EM9	Scoped In	As demonstrated in previous EIA assessments for fixed foundations, OWFs typically have a low to negligible impact on the prevailing hydrodynamic, wave and sediment regimes including coastal processes during the construction phase. Due to the deployment of dynamic cables and anchoring systems through the water column across the array area and the use of non-cable protection measures along the IAC and ECC these effects are scoped in.	✓	✓	✓	✓	✓
4	Physical and Coastal Processes	Operation & Maintenance	Loss of seabed under the footprint of foundations and other seabed infrastructure e.g. cable protection measures;	EM1 EM2 EM3 EM9	Scoped In	The presence of cable protection measures and/or floating WTG moorings/anchors may alter the seabed morphology in or around the structures.	✓	✓	✓	✓	✓
5	Physical and Coastal Processes	Operation & Maintenance	Localised alteration of hydrodynamic and wave conditions across the site and indirect effects on the sediment transport regime and coastal processes	EM1 EM2 EM3 EM9	Scoped In	As demonstrated in previous EIA assessments for fixed foundations, OWFs typically have a low to negligible impact on the prevailing hydrodynamic, wave and sediment regimes including coastal processes during the operational phase. Due to the deployment of dynamic cables and anchoring systems through the water column across the array area and the use of non-cable protection measures along the IAC and ECC these effects are scoped in.	✓	✓	✓	✓	✓
6	Physical and Coastal Processes	Operation & Maintenance	Scour around infrastructure and associated sediment transportation and deposition leading to changes in seabed composition, structure, or morphology	EM1 EM2 EM3 EM9	Scoped In	Floating WTGs within a large array have the potential to cause localised effects on stratification and mixing with potential downstream effects on biological processes such as phytoplankton production.	✓	✓	✓	✓	✓
7	Physical and Coastal Processes	Operation & Maintenance	Impacts to seasonal stratification and the Buchan front.	N/A	Scoped In	Floating WTGs within a large array have the potential to cause localised effects on stratification and mixing with potential downstream effects on biological processes such as phytoplankton production.	✓	✓	✗	✗	✗
8	Physical and Coastal Processes	Decommissioning	Temporary increases in suspended sediment concentration during removal of wind farm infrastructure	EM8	Scoped In	The impact on the seabed of proposed decommissioning works impacts upon physical processes proximal to the works and has the potential to generate temporary increases in SSC.	✓	✓	✓	✓	✓

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							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
9	Marine Water and Sediment Quality	Construction (& Decommissioning)	Deterioration in water quality due to increased SSC	EM5 EM8 EM41	Scoped Out	<p>The impacts of SSC will be assessed on relevant receptors, such as within the following chapters:</p> <ul style="list-style-type: none"> • Physical and Coastal Processes (Chapter 6) • Benthic and intertidal Ecology (Chapter 7) • Fish and Shellfish Ecology (Chapter 9) • Offshore and Intertidal Ornithology (Chapter 10) • Marine Mammals and Other Megafauna (Chapter 11) <p>No impacts on designated shellfish waters or bathing waters are predicted. Shellfish waters are over 125 km from the Proposed Development and are thus not predicted to be impacted in any way, and the potential for increases in SSC from the Proposed development will not create or contribute to any effects on designated bathing water status.</p> <p>As such, deterioration in water quality due to increased SSC is scoped out from inclusion in a water and sediment quality EIA chapter as it will be fully assessed elsewhere in the EIA, and as part of the WFD assessment.</p>	x	x	x	x	x
10	Marine Water and Sediment Quality	Construction (& Decommissioning)	Deterioration in water and sediment quality due to the release of sediment-bound contaminants from disturbed sediments	EM5 EM8	Scoped Out	<p>The impacts of sediment bound contaminants will be assessed on relevant receptors, such as in the following chapters:</p> <ul style="list-style-type: none"> • Benthic and Intertidal Ecology (Chapter 8) • Fish and Shellfish Ecology (Chapter 9) <p>No impacts on designated shellfish waters or bathing waters are predicted. Shellfish waters are over 125 km from the Proposed Development and are thus not predicted to be impacted in any way, and the potential for release of sediment-bound contaminants from the Proposed development will not create or contribute to any effects on designated bathing water status.</p> <p>As such, Deterioration in water and sediment quality due to the release of sediment bound contaminants is scoped out from inclusion in a water and sediment quality EIA chapter as it will be fully assessed elsewhere in the EIA , and as part of the WFD assessment.</p>	x	x	x	x	x

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							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
11	Marine Water and Sediment Quality	Construction (& Decommissioning)	Deterioration in water clarity due to the release of drilling mud	EM5 EM8 EM44	Scoped Out	<p>There is a requirement to use drilling mud, such as bentonite (or another inert mud), in order to undertake horizontal directional drilling (HDD) at landfall, if required. This in turn may result in the release of drilling mud at the punch out point. The principal issue, for marine water and sediment quality receptors, relate to bentonite release to the water column comprise the potential for an increase in SSC (and as such turbidity) within the water column, as opposed to contamination.</p> <p>Impacts from release of bentonite drilling muds during HDD operations will be assessed on relevant receptors, such as in the following chapters:</p> <ul style="list-style-type: none"> •Benthic and Intertidal Ecology (Chapter 8) •Fish and Shellfish Ecology (Chapter 9) •Offshore and intertidal Ornithology (Chapter 10) •Marine Mammals and Other Megafauna (Chapter 11) <p>No impacts on designated shellfish waters or bathing waters are predicted. Shellfish waters are over 125 km from the Proposed Development and are thus not predicted to be impacted in any way, and the Proposed development will not create or contribute to any effects on designated bathing water status.</p> <p>As such, impacts from release of bentonite drilling muds during HDD operations is scoped out from inclusion in a water and sediment quality EIA chapter as it will be fully assessed elsewhere in the EIA. Potential effects on WFD receptors (i.e. within 3 NM) from release of bentonite drilling muds during HDD operations will be assessed within the WFD assessment that accompanies the EIAR.</p>	x	x	x	x	x
12	Marine Water and Sediment Quality	Construction (& Decommissioning)	Accidental pollution events (releases or spills of materials or chemicals)	EM5 EM6 EM8 EM41	Scoped Out	<p>Substances such as grease, oil, fuel, anti-fouling paints and grouting materials may be accidentally released or spilt into the marine environment. No discharges (continuous or intermittent) of chemicals or construction materials which may be toxic or persistent within the marine environment are proposed during the construction phase of the Proposed Development</p> <p>All vessels on the Proposed Development will be required through conditions of contract to apply good practice measures and comply with strict environmental controls set out in documentation (e.g. Project Environment Monitoring Programme (PEMP); Marine Pollution Contingency Plan (MPCP)) to be prepared and submitted post consent. Pollution events (incl. litter) will be reduced as far as is reasonably practicable and as such no significant effects are predicted to arise from this impact.</p> <p>Due to the implementation of control measures and small quantities of hydrocarbons and chemicals, it is proposed to scope this impact out of further consideration within the EIA.</p>	x	x	x	x	x

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							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
13	Marine Water and Sediment Quality	Construction (& Decommissioning)	Deterioration in water and sediment quality and status due to the introduction of Invasive Non-Native Species (INNS)	EM5 EM7 EM8	Scoped Out	<p>Both within and beyond 3 NM, impacts of INNS will be assessed on relevant receptors, such as in the following chapters:</p> <ul style="list-style-type: none"> •Benthic and Intertidal Ecology (Chapter 8) •Fish and Shellfish Ecology (Chapter 9) <p>No impacts on designated shellfish waters or bathing waters are predicted. Shellfish waters are over 125 km from the Proposed Development and are thus not predicted to be impacted in any way, and the potential for the introduction of INNS from the Proposed Development will not create or contribute to any effects on designated bathing water status.</p> <p>As such, deterioration in water and sediment quality due to INNS is scoped out from inclusion in a water and sediment quality EIA chapter as it will be fully assessed elsewhere in the EIA. Impacts of INNS within 3 NM on water and sediment quality receptors will also be addressed in the WFD assessment that will accompany the EIA.</p>	x	x	x	x	x
14	Marine Water and Sediment Quality	Operation & Maintenance	Deterioration in water quality due to increased SSC	EM5 EM8 EM41	Scoped Out	<p>O&M activities may result in increases to SSC. The impacts of SSC will be assessed on relevant receptors, such as within the following chapters:</p> <ul style="list-style-type: none"> •Physical and Coastal Processes (Chapter 6) •Benthic and Intertidal Ecology (Chapter 8) •Fish and Shellfish Ecology (Chapter 9) •Offshore and intertidal Ornithology (Chapter 10) •Marine Mammals and Other Megafauna (Chapter 11) <p>No impacts on designated shellfish waters or bathing waters are predicted. Shellfish waters are over 125 km from the Proposed Development and are thus not predicted to be impacted in any way, and the potential for increases in SSC from the Proposed development will not create or contribute to any effects on designated bathing water status.</p> <p>As such, deterioration in water quality due to increased SSC is scoped out from inclusion in a water and sediment quality EIA chapter as it will be fully assessed elsewhere in the EIA, and as part of the WFD assessment. Impacts of SSC within 3 NM on water quality will be addressed in the WFD assessment that will accompany the EIA.</p>	x	x	x	x	x
15	Marine Water and Sediment Quality	Operation & Maintenance	Accidental pollution events (releases or spills of materials or chemicals)	EM5 EM6	Scoped Out	<p>There is a potential risk of the accidental spillage or release of materials such as grease and oils during maintenance work and from vessels associated with the Proposed Development during the O&M phase. Nevertheless, the impacts are likely to be short-lived and localised. In the event of an accidental chemical or oil spill, hydrocarbons would rapidly be dispersed or diluted. As well as this, all vessels on the Proposed Development will be required to comply with strict environmental controls set out in the Environmental Management Plan (EMP) and Marine Pollution Contingency Plan (MPCP) which will reduce the risk as far as practicable and set out provisions for responding to spills during O&M.</p> <p>Due to the implementation of control measures and small quantities of hydrocarbons and chemicals, it is proposed to scope this impact out of further consideration within the EIA.</p>	x	x	x	x	x

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16	Marine Water and Sediment Quality	Operation & Maintenance	Deterioration in water and sediment quality and status due to the introduction of Invasive Non-Native Species (INNS)	EM5 EM7	Scoped Out	<p>There is potential for marine INNS to be introduced or transferred by vessels and towed structures during all phases of the Proposed Development.</p> <p>Both within and beyond 3 NM, impacts of INNS will be assessed on relevant receptors, such as in the following chapters:</p> <ul style="list-style-type: none"> •Benthic and Intertidal Ecology (Chapter 8) •Fish and Shellfish Ecology (Chapter 9) <p>No impacts on designated shellfish waters or bathing waters are predicted. Shellfish waters are over 125 km from the Proposed Development and are thus not predicted to be impacted in any way, and the potential for the introduction of INNS from the Proposed development will not create or contribute to any effects on designated bathing water status. Application of good practice measures during construction and operation phases, secured through approved documentation (e.g. INNS Biosecurity Plan and EMP) will ensure introduction of INNS is reduced as far as is reasonably practicable and as such no significant effects are predicted to arise from this impact.</p>	x	x	x	x	x
17	Benthic Subtidal and Intertidal Ecology	Construction	Direct Temporary Habitat Disturbance	EM4 EM9	Scoped In	There is potential for temporary, direct habitat disturbance during construction activities in the Array Area and along the Offshore ECC search area due to seabed preparation, cable laying, anchor and foundation installation and the use of jack up vessels or vessel anchoring.	✓	✓	✓	✓	✓
18	Benthic Subtidal and Intertidal Ecology	Construction	Increases in Suspended Sediment Concentrations (SSC) and Deposition	EM5 EM9	Scoped In	Temporary elevations in SSCs due to construction (i.e., cable installation) activities can lead to increased turbidity. These temporary elevations can result in changes to the underlying seabed levels, through deposition of the suspended material and changes to the surficial sediment type and smothering. Increases in SSC and associated deposition may have indirect, adverse impacts upon benthic receptors.	✓	✓	✓	✓	✓
19	Benthic Subtidal and Intertidal Ecology	Construction	Remobilisation of contaminated sediments	EM9	Scoped In	Through construction activities such as cable installation, contaminants in the sediment which would otherwise lay dormant could be disturbed and released back into the marine environment. Such contaminants can affect benthic species.	✓	✓	✓	✓	✓
20	Benthic Subtidal and Intertidal Ecology	Construction	Introduction of Invasive Non-Native Species (INNS)	EM5 EM7	Scoped In	INNS will require management due to increased vessel movements, potential ballast water expulsion within the study area, wet storage options, as well as the increase in hard structures within the seabed for colonisation. This impact is proposed to be Scoped In with further consideration of mitigation and control of invasive species measures in line with International Maritime Organisation (IMO, 2019). These standards and procedures will be incorporated into the EMP and are embedded in the project design.	✓	✓	✓	✓	✓
21	Benthic Subtidal and Intertidal Ecology	Construction	Accidental Pollution events	EM5 EM6	Scoped Out	Chemical and oil inventories on vessels working during construction stage will be small in size. In the event of an accidental chemical or oil spill, hydrocarbons would rapidly be dispersed or diluted. As well as this, all vessels on the Proposed Development will be required to comply with strict environmental controls set out in the EMP and Marine Pollution Contingency Plan (MPCP) which will minimise the risk and set out provisions for responding to spills during construction. Due to the implementation of control measures and small quantities of hydrocarbons and chemicals it is proposed to scope this impact out of further consideration within the EIA.	x	x	x	x	x
22	Benthic Subtidal and Intertidal Ecology	Operation & Maintenance	Direct Temporary Habitat Disturbance	EM4 EM9	Scoped In	There is potential for temporary direct habitat disturbance from mooring and/or anchoring lines moving across the seabed floor and creating scour.	✓	✓	✓	✓	✓

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23	Benthic Subtidal and Intertidal Ecology	Operation & Maintenance	Long Term Habitat Loss	EM4 EM9	Scoped In	Following the construction of the Proposed Development, there is potential for long-term habitat loss or alteration directly associated with the presence of, for example, WTG and OSP foundations, scour and cable protection.	✓	✓	✓	✓	✓
24	Benthic Subtidal and Intertidal Ecology	Operation & Maintenance	Increases in Suspended Sediment Concentrations (SSC) and Deposition	EM5 EM9	Scoped In	Temporary elevations in SSCs could occur due to remedial cable work and general anchor movement. These temporary elevations can result in changes to the underlying seabed levels, through deposition of the suspended material and changes to the surficial sediment type. Increases in SSC and associated deposition may have indirect, adverse impacts upon benthic receptors.	✓	✓	✓	✓	✓
25	Benthic Subtidal and Intertidal Ecology	Operation & Maintenance	Colonisation of structures	EM5 EM7	Scoped In	Man-made structures such as WTG and OSP foundations and any associated scour/cable protection on the seabed are expected to be colonised by marine organisms. This colonisation could result in an increase in local biodiversity and alterations to the near field benthic ecology of the area.	✓	✓	✓	✓	✓
26	Benthic Subtidal and Intertidal Ecology	Operation & Maintenance	Seabed alteration arising from changes in physical processes (e.g., scour, changes to sediment regimes/composition)	N/A	Scoped In	Introducing large structures onto the seabed can alter localised changes in tidal flow and waves which has the potential to result in changes in sediment transport pathways which could in turn impact the benthic ecology of the area.	✓	✓	✓	✓	✓
27	Benthic Subtidal and Intertidal Ecology	Operation & Maintenance	Introduction of Invasive Non-Native Species (INNS)	EM5 EM7	Scoped In	INNS will require management due to increased vessel movements, potential ballast water expulsion within the study area as well as the increase in hard structures within the seabed for colonisation. This impact is proposed to be scoped in with further consideration of mitigation and control of invasive species measures in line with International Maritime Organisation (IMO, 2019). These standards and procedures will be incorporated into the EMP and are embedded in the project design.	✓	✓	✓	✓	✓
28	Benthic Subtidal and Intertidal Ecology	Operation & Maintenance	Electromagnetic Fields (EMF) and th	EM5 EM9	Scoped In	EMF will be generated by subsea cables and will likely be detectable above background levels in close proximity to the cables. Seabed cables will be buried where possible, however portions of the dynamic cables will be present on the seabed or within the water column. Though monitoring to date at fixed bottom sites has not recorded any significant changes in invertebrate behaviour resulting from EMF exposure at existing offshore wind farms, due to the additional elements required for the floating design, and at the request of consultees, this impact will be scoped in for further assessment.	✗	✗	✓	✗	✓
29	Benthic Subtidal and Intertidal Ecology	Operation & Maintenance	Accidental Pollution events	EM5 EM6	Scoped Out	Chemical and oil inventories on vessels working during O&M will be small in size. In the event of an accidental chemical or oil spill, hydrocarbons would rapidly be dispersed or diluted. As well as this, all vessels on the Proposed Development will be required to comply with strict environmental controls set out in the EMP and MPCP which will minimise the risk and set out provisions for responding to spills during O&M. Due to the implementation of control measures and small quantities of hydrocarbons and chemicals it is proposed to scope this impact out of further consideration within the EIA.	✗	✗	✗	✗	✗
30	Benthic Subtidal and Intertidal Ecology	Decommissioning	Direct Temporary Habitat Disturbance	EM8	Scoped In	During decommissioning, as in construction, a certain level of habitat disturbance is to be expected. Impact pathways and effects are considered analogous to those described for the Construction phase above.	✓	✓	✓	✓	✓
31	Benthic Subtidal and Intertidal Ecology	Decommissioning	Long Term Habitat Loss	EM8	Scoped In	Removal of infrastructure is expected to be required as part of decommissioning, with the detail to be agreed through a decommissioning plan. Depending upon the agreed decommissioning plan and requirements at the time of decommissioning, some elements of the Proposed Development (e.g., scour protection) may remain in-situ. As such, the effects from long term habitat loss will be considered as part of the EIA.	✓	✓	✓	✓	✓

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32	Benthic Subtidal and Intertidal Ecology	Decommissioning	Increases in Suspended Sediment Concentrations (SSC) and Deposition	EM8	Scoped In	The removal of the Proposed Development infrastructure may result in sediment disruption leading to an increase in SSC in the water column and deposition on sediment on the seabed. Impact pathways and effects are considered analogous to those described for the construction phase above and will be considered as part of the EIA.	✓	✓	✓	✓	✓
33	Benthic Subtidal and Intertidal Ecology	Decommissioning	Remobilisation of contaminated sediments	EM8	Scoped In	Through decommissioning activities such as cable and anchor removal, contaminants in the sediment which would otherwise lay dormant could be disturbed and released back into the marine environment. Such contaminants have the potential to affect benthic species. Impact pathways and effects are considered analogous to those described for the construction phase above and will be considered as part of the EIA for the decommissioning phase.	✓	✓	✓	✓	✓
34	Benthic Subtidal and Intertidal Ecology	Decommissioning	Colonisation of structures	EM5 EM7	Scoped In	Man-made structures such as the WTG and OSP foundations and associated scour/cable protection on the seabed are expected to be colonised by marine organisms. This colonisation could result in an increase in local biodiversity and alterations to the near field benthic ecology of the area and thus removal of infrastructure would affect the local biodiversity.	✓	✓	✓	✓	✓
35	Benthic Subtidal and Intertidal Ecology	Decommissioning	Introduction of Invasive Non-Native Species (INNS)	EM5 EM7	Scoped In	INNS will require management due to increased vessel movements, potential ballast water expulsion, as well as the colonisation of hard structures during operation. This impact is proposed to be Scoped In with further consideration of invasive species measures in line with International Maritime Organisation (IMO, 2019). These standards and procedures will be incorporated into the EMP and are embedded in the project design. Impact pathways and effects are considered analogous to those described for the construction phase above, and will be assessed as part of the EIA.	✓	✓	✓	✓	✓
36	Benthic Subtidal and Intertidal Ecology	Decommissioning	Accidental Pollution events	EM5 EM6	Scoped Out	Impact pathways, and effects are considered analogous to those described for the construction phase above. With the implementation of embedded mitigation including the EMP and MPCP it is possible to Scope Out this impact.	✗	✗	✗	✗	✗
37	Fish and Shellfish Ecology	Construction	Direct temporary habitat disturbance	EM4 EM5	Scoped In	There is the potential for temporary habitat loss and disturbance during construction activities including seabed preparation work, cable laying operations, anchor placement and jack up barges (where used). Construction activities can lead to direct impacts on disturbance of key habitat which could lead to effects on feeding and spawning activity through temporary displacement.	✓	✓	✓	✓	✓
38	Fish and Shellfish Ecology	Construction	Increases in Suspended Sediment Concentrations (SSC) and deposition	EM5 EM9	Scoped In	Construction activities, such as cabling, can lead to impacts such as increases in suspended sediment concentrations in the water column and also increased sediment deposition on the seabed. Sensitivity to suspended sediments varies between species, life history stage, and also depends on sediment composition, concentration and duration of event. Fish and shellfish may react through physical or reproductive decline (e.g., clogged gills) or it may impact upon migration and spawning events.	✓	✓	✓	✓	✓
39	Fish and Shellfish Ecology	Construction	Increases in underwater noise leading to mortality, injury, or behavioral effects	EM12 EM13	Scoped In	Underwater noise has the potential to result in behavioural changes, injury and mortality. Noise and vibration can arise from a number of sources and include cable laying, dredging, pile driving for anchor foundations and general vessel noise.	✓	✓	✓	✓	✓

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40	Fish and Shellfish Ecology	Construction	Introduction of Invasive Non-Native Species	EM7	Scoped Out	With vessel movements associated with construction of an OWF, there is the potential for introduction of INNS, typically via ballast water. Control measures in line with international standards (to include IMO Ballast Water Management Guidelines, 2019) will be embedded in the project design to de-risk and ensure the risk of any potential impact arising is reduced to as low as reasonably practicable.	x	x	x	x	x
41	Fish and Shellfish Ecology	Construction	Accidental pollution events	EM5 EM6	Scoped Out	Pollution incidents can impact fish and shellfish via a number of pathways including through contaminated water and sediment, eventual bioaccumulation up the food chain and immediate death through contact. The likelihood of any pollution incidents is reduced to as low as reasonably practicable due to the mitigation embedded within the project design, including specific control measures such as a Environment Management Plan (EMP) and a Marine Pollution Contingency Plan. This will ensure the risk of this potential impact arising is reduced to as low as reasonably practicable	x	x	x	x	x
42	Fish and Shellfish Ecology	Operation & Maintenance	Direct temporary habitat disturbance	EM4 EM9	Scoped In	There is the potential for temporary habitat loss and disturbance during O&M activities including scour resulting from movement of mooring lines attached to anchors, and any remedial cable or other O&M works. Such impacts could lead to effects on feeding and spawning activity through temporary displacement.	✓	✓	✓	✓	✓
43	Fish and Shellfish Ecology	Operation & Maintenance	Long term habitat loss	EM9	Scoped In	The potential for long term habitat loss arises from physical placement of structures on the seabed which will reduce habitat availability. This has the potential to impact substrate dependent fish and shellfish, including those with substrate specific spawning behaviours (i.e., herring and sandeel).	✓	✓	✓	✓	✓
44	Fish and Shellfish Ecology	Operation & Maintenance	Increases in Suspended Sediment Concentrations (SSC) and deposition	EM5	Scoped In	O&M activities such as remedial cable work, can lead to increases in suspended sediment concentrations in the water column and also increased sediment deposition on the seabed. Sensitivity to suspended sediments varies between species, life history stage and also depends on sediment composition, concentration and duration of event. Fish and shellfish may react through physical or reproductive decline (e.g., clogged gills) or it may impact upon migration and spawning events.	✓	✓	✓	✓	✓
45	Fish and Shellfish Ecology	Operation & Maintenance	Increases in underwater noise arising from operational turbines and moorings, and vessel activity	EM12 EM13	Scoped In	Underwater noise resulting from operational WTGs is known to have a low frequency and pressure level (Andersson et al., 2011). Floating foundation turbines have also been shown to generate sound from moorings (Risch et al., 2023) Noise generated from maintenance vessel traffic is likely to be low, not dissimilar from background and unlikely to affect fish.	✓	✓	✓	✓	✓
46	Fish and Shellfish Ecology	Operation & Maintenance	Colonisation of structures/infrastructure and increases in local biodiversity	EM5 EM7	Scoped In	Increased biodiversity from colonisation of structures can lead to an increased food source for fish, attracting them to the area. This can enhance feeding and reproductive success, and the infrastructure introduced may provide additional habitat opportunities for fish, including refugia from predation.	✓	✓	✓	✓	✓
47	Fish and Shellfish Ecology	Operation & Maintenance	Introduction of Invasive Non-Native Species (INNS)	EM7	Scoped Out	With vessel movements associated with operation and maintenance of an OWF, there is the potential for introduction of INNS, typically via ballast water. Control measures in line with international standards (to include IMO Ballast Water Management Guidelines, 2019) will be embedded in the project design to de-risk and ensure the risk of any potential impact arising is reduced to as low as reasonably practicable.	x	x	x	x	x

No.	Receptor	Proposed Development Stage	Impact Pathway	Relevant Embedded Mitigation	Scoped In/Out	Justification	Aspects to be Considered in EIA				
							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
48	Fish and Shellfish Ecology	Operation & Maintenance	Electromagnetic Fields (EMF) and thermal effects of cables	EM9	Scoped In	<p>Inter-array and export cables produce EMF which has the potential to affect the behaviour of certain sensitive species. Typically, these effects are limited to the immediate vicinity of the cable area and the resulting impacts are considered minor (Normandeu et al., 2011). However unprotected dynamic cables in water column can present EMF to pelagic species. Previous monitoring of other fixed foundation OWFs has revealed no behavioural effects resulting from EMF as any EMF produced is of a small magnitude and any embedded mitigation measures (such as cable burial) would reduce this by increasing the distance from EMF to sensitive species.</p> <p>Large data gaps and limited understanding exists relating to EMF impacts from cables suspended in the water associated with floating offshore wind (Gill and Desender, 2020; Hutchison et al., 2018). More understanding is required and the establishment of thresholds of EMF for species is required (Maxwell et al., 2022). It is recognised that any effects of EMF from inter-array cabling may be less than export cables, due to the lower voltages (ORE Catapult and Xodus Group 2022).</p> <p>The cable route, within the defined ECC Search Area is unlikely to be within an important area for migrating elasmobranchs, and also represents a small area of available habitat for sharks and rays.</p> <p>It is also known that salmonids and anguillids use geomagnetic fields to orientate during early life history and for migration as adults (Hutchison et al., 2021).</p>	x	x	✓	x	x
49	Fish and Shellfish Ecology	Operation & Maintenance	Accidental pollution events	EM5 EM6	Scoped Out	<p>Pollution incidents can impact fish and shellfish via a number of pathways including through contaminated water and sediment, eventual bioaccumulation up the food chain and immediate death through contact. The likelihood of any pollution incidents is reduced to as low as reasonably practicable due to the mitigation embedded within the project design, including specific control measures such as a EMP and a Marine Pollution Contingency Plan. This will ensure the risk of this potential impact arising is reduced to as low as reasonably practicable.</p>	x	x	x	x	x
50	Fish and Shellfish Ecology	Operation & Maintenance	Secondary entanglement (e.g. within discarded fishing gear)	EM14	Scoped In	<p>There is the potential for any structure to cause entanglement of gear, particularly cables in the water. The Array Area is in an area of relatively low fishing, however the ECC search area covers an area of higher fishing activity. Ghost fishing has the potential to attract predators to the area, and also an increase in secondary entanglement of fish in the area.</p> <p>Fisheries liaison and other standard mitigation will allow recording of lost / snagged gear in relation to the project, although the likelihood of active gear being entangled directly on the project during operation is low. The Applicant will explore whether specific mitigation for detecting unreported entangled fishing gear e.g., frequency and method of mooring inspections, use of tension detectors, etc.) is feasible to reduce or prevent ghost fishing and entanglement. Any mitigation measures would be captured and delivered through post consent plans such as the Operation and Maintenance Plan, but it is considered this impact can be mitigated to reduce risk to as low as reasonable practicable through such means.</p>	✓	✓	✓	✓	✓
51	Fish and Shellfish Ecology	Decommissioning	Direct temporary habitat disturbance	EM8	Scoped In	<p>During decommissioning, as in construction, a certain level of habitat disturbance is to be expected. Impact pathways and effects are considered analogous to those described for the Construction phase above.</p>	✓	✓	✓	✓	✓

No.	Receptor	Proposed Development Stage	Impact Pathway	Relevant Embedded Mitigation	Scoped In/Out	Justification	Aspects to be Considered in EIA				
							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
52	Fish and Shellfish Ecology	Decommissioning	Long term habitat loss	EM8	Scoped In	Though full removal of infrastructure is predicted upon decommissioning, the detail is expected to be agreed through a decommissioning programme. Depending upon the agreed decommissioning programme, and requirements at the time of decommissioning, some project elements (e.g. scour protection) may not be removed. As such, impact pathways and effects for long term habitat loss are considered analogous to those described for the operational phase above for this impact.	✓	✓	✓	✓	✓
53	Fish and Shellfish Ecology	Decommissioning	Increases in Suspended Sediment Concentrations (SSC) and deposition	EM8	Scoped In	The removal of the infrastructure both fixed (IRC platform and OSP) and floating would result in sediment disruption from cabling, anchor / mooring line, and fixed infrastructure (IRC platform and OSP) removal leading to an increase in SSC in the water column and deposition on the seabed. Impact pathways and effects are considered analogous to those described for the construction phase above.	✓	✓	✓	✓	✓
54	Fish and Shellfish Ecology	Decommissioning	Increases in underwater noise leading to mortality, injury, or behavioral effects	EM8	Scoped In	Although noise would not be expected to be as loud as construction (i.e., no piling operations) a certain level of noise will be expected when decommissioning the Proposed Development. Impact pathways and effects are considered analogous to those described for the Construction phase above.	✓	✓	✓	✓	✓
55	Fish and Shellfish Ecology	Decommissioning	Introduction of Invasive Non-Native Species (INNS)	EM7	Scoped Out	Impact pathways, effects, and mitigations are considered analogous to those described for the Construction phase above.	✗	✗	✗	✗	✗
56	Fish and Shellfish Ecology	Decommissioning	Accidental pollution events	EM6	Scoped Out	Impact pathways, effects, and mitigations are considered analogous to those described for the Construction phase above.	✗	✗	✗	✗	✗
57	Offshore and Intertidal Ornithology	Construction (& Decommissioning)	Disturbance and temporary loss of h	EM5 EM8 EM12 EM13 EM15 EM41	Scoped In	Construction activities, including vessel traffic, taking place at sea may have the potential to cause disturbance to seabirds at sea.	✓	✓	✓	✓	✓
58	Offshore and Intertidal Ornithology	Construction (& Decommissioning)	Indirect effects on seabird prey species arising from construction and/or decommissioning activities	EM4 EM5 EM8 EM12 EM13 EM41	Scoped In	There is potential for seabirds to experience indirect effects as a result of construction and decommissioning via potential impacts resulting from underwater noise and SSC on forage fish such as sandeels (van Deurs et al., 2012), which could disrupt prey availability or bird foraging behaviours.	✓	✓	✓	✓	✓
59	Offshore and Intertidal Ornithology	Construction (& Decommissioning)	Indirect effects on seabird prey species arising from accidental pollution during construction and/or decommissioning activities	EM5 EM6 EM8 EM44	Scoped Out	There is potential for the accidental spillage of materials hazardous to the environment to lead to impacts on the marine and/or intertidal environment during construction and/or decommissioning activities. This could result in mortality to ornithological features by means of prey and/or habitat effects. It is considered that, subject to the adoption of and adherence to an appropriate Code of Construction Practise (CoCP), Environmental Management Plan (EMP) and Marine Pollution Contingency Plan (MPCP). Any such potential impacts arising through accidental pollution will be mitigated such that they will be considered to be not significant, in terms of temporal and spatial scale of impact.	✗	✗	✗	✗	✗
60	Offshore and Intertidal Ornithology	Construction (& Decommissioning)	Direct and indirect effects to seabirds via Unexploded Ordnance (UXO) clearance (construction only)	EM13	Scoped In	Detonation of UXO may risk injury or death to diving seabirds within the vicinity. There is also the potential for UXO clearance to impact the availability of seabird prey species.	✓	✓	✓	✓	✓

No.	Receptor	Proposed Development Stage	Impact Pathway	Relevant Embedded Mitigation	Scoped In/Out	Justification	Aspects to be Considered in EIA				
							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
61	Offshore and Intertidal Ornithology	Operation & Maintenance	Collision with operational WTGs	EM28	Scoped In	There is potential for seabirds to collide with WTG blades.	✓	✗	✗	✗	✗
62	Offshore and Intertidal Ornithology	Operation & Maintenance	Disturbance and/or displacement from WTGs and associated vessels and maintenance activities including wet storage activities	EM5 EM15 EM44	Scoped In	There is potential for birds to be disturbed or displaced by anthropogenic activities at sea and/or the presence of anthropogenic objects at sea (Furness <i>et al.</i> , 2013).	✓	✓	✓	✓	✓
63	Offshore and Intertidal Ornithology	Operation & Maintenance	Indirect effects through permanent habitat loss	EM4	Scoped In	The physical presence of anthropogenic structures may remove habitat that was previously available to birds.	✓	✓	✗	✓	✗
64	Offshore and Intertidal Ornithology	Operation & Maintenance	Barrier effects	N/A	Scoped In	There is potential for the Proposed Development to act as a barrier to movement, for seabirds transiting between breeding colonies and foraging areas at sea.	✓	✓	✗	✓	✗
65	Offshore and Intertidal Ornithology	Operation & Maintenance	Impacts to birds through marine lighting	EM16	Scoped In	It is known that burrow-nesting seabirds, including puffins, petrels and shearwaters, can become attracted to artificial lighting, leading to disorientation, grounding and possibly collision (Harris and Davis., 1998; Deakin et al., 2022). Attraction to vessel and other marine lighting can also lead to increased energetic expenditure which could in turn result in increased mortality.	✓	✓	✗	✓	✗
66	Offshore and Intertidal Ornithology	Operation & Maintenance	Entanglement	EM14	Scoped In	Fouling of the anchoring structures by lost fishing nets may present a secondary entanglement endangerment to pursuit-diving seabirds within the water column.	✓	✗	✗	✗	✗
67	Offshore and Intertidal Ornithology	Operation & Maintenance	Indirect effects on seabirds via prey effects and habitat change	EM5 EM6 EM7 EM41	Scoped In	There is potential for seabirds to experience indirect effects during maintenance activities via potential impacts on forage fish such as sandeels (van Deurs et al., 2012), which could disrupt bird foraging behaviours. There is also potential for positive indirect effects through the creation of artificial reefs.	✓	✓	✓	✓	✓
68	Marine Mammals and Other Megafauna	Construction	Increased underwater noise – pile driving	EM10 EM11 EM12	Scoped In	Underwater noise from pile driving has the potential to cause mortality, injury, or behavioural effects. Noise generated from construction methods will be temporary and intermittent. Evidence suggests that animals return to the area once pile driving activities cease. Underwater noise modelling will be carried out on the worst-case scenarios for pile driving found in the Project Design Envelope (see section 11.11.2 for pile driving impact assessment methodology). This will include the IRC platform location if piled foundations used. Results from the underwater noise modelling will inform mitigation measures which will reduce the potential for Permanent Threshold Shift (PTS) to negligible levels, however the potential for disturbance on marine mammals and other megafauna remains and this impact is scoped into the assessment.	✓	✓	N/A	✓	N/A
69	Marine Mammals and Other Megafauna	Construction	Increased underwater noise – other construction activities e.g., seabed preparation, cable lay, trenching	EM10	Scoped In	Underwater noise from construction activities has the potential to cause behavioural effects. Noise generated from construction methods will be temporary and intermittent. Evidence suggests that animals return to the area once activities cease. As there is potential for disturbance on marine mammals and other megafauna, this impact is scoped into the assessment	✓	✓	✓	✓	✓

No.	Receptor	Proposed Development Stage	Impact Pathway	Relevant Embedded Mitigation	Scoped In/Out	Justification	Aspects to be Considered in EIA				
							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
70	Marine Mammals and Other Megafauna	Construction	Increased underwater noise – UXO clearance work	EM10 EM13	Scoped In	Underwater noise from UXO clearance activities has the potential to cause mortality, injury, or behavioural effects. Noise generated from such activities will be temporary and intermittent. Underwater noise modelling will be carried out on the worst-case scenarios for potential UXO clearance work which will be detailed in the Project Design Envelope (see section 11.11.2 for pile driving impact assessment methodology). Results from the underwater noise modelling will inform mitigation measures which will reduce the potential for PTS to negligible levels, however the potential for disturbance on marine mammals and other megafauna remains and this impact is scoped into the assessment.	✓	✓	✓	✓	✓
71	Marine Mammals and Other Megafauna	Construction	Increased underwater noise – use of survey and positioning equipment	EM10 EM11	Scoped In	Underwater noise from survey activities has the potential to cause injury, or behavioural effects. Noise generated from survey activities will be temporary and intermittent. Results from the assessment will inform mitigation measures which will reduce the potential for PTS to negligible levels, however the potential for disturbance on marine mammals and other megafauna remains and this this impact is scoped into the assessment.	✓	✓	✓	✓	✓
72	Marine Mammals and Other Megafauna	Construction	Increased underwater noise – vessels	EM15	Scoped In	Underwater noise from vessels has the potential to cause behavioural effects. As there is the potential for disturbance on marine mammals and other megafauna, this impact is scoped into the assessment.	✓	✓	✓	✓	✓
73	Marine Mammals and Other Megafauna	Construction	Collision risk (vessels)	EM15	Scoped Out	The increased localised use of vessels for the construction works is not expected to increase the collision risk to marine mammals and other megafauna. Embedded mitigation measures such as the development of a Vessel Management Plan (VMP) outlining transit speeds, predetermined routes and relevant aspects of the Scottish Marine Wildlife Watching Code (SMWWC) will be followed. Small cetaceans and seals are agile and not susceptible to collisions. With embedded mitigation, the risk to the more susceptible species (basking shark, minke whale) is negligible. The potential for collision risk from vessels from the Proposed Development are negligible, and given the mitigation in place, effects from vessel collision can be scoped out of further assessment in the EIA.	✗	✗	✗	✗	✗
74	Marine Mammals and Other Megafauna	Construction	Indirect effects such as changes in available habitat and prey availability	EM4 EM9 EM41	Scoped In	There is the potential for direct temporary habitat disturbance during construction owing to seabed preparation works e.g., boulder clearance or other construction activities. These activities have the potential to change available habitat and prey availability, potentially affecting marine mammals and other megafauna. It is therefore considered that impacts on the available habitat and prey availability within the Proposed Development is scoped in for further assessment in the EIA.	✓	✓	✓	✓	✓

No.	Receptor	Proposed Development Stage	Impact Pathway	Relevant Embedded Mitigation	Scoped In/Out	Justification	Aspects to be Considered in EIA				
							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
75	Marine Mammals and Other Megafauna	Construction	Accidental pollution events	EM5 EM6	Scoped Out	<p>Pollution incidents can arise throughout construction, from a number of sources including vessels on site and compounds used in the construction of wind farms. The risks of pollution incidents arising will be managed through standard construction measures, application to international legislation such as the IMO MARPOL guidelines and adherence to a Marine Pollution Contingency Plan (MPCP). This will ensure that the risk of such events occurring is as low as reasonably practicable.</p> <p>The potential for accident pollution events to arise from the Proposed Development are small, and given the mitigation in place, effects arising from accidental pollution events on marine mammal and other megafauna will not be significant and can be scoped out of further assessment in the EIA.</p>	x	x	x	x	x
81	Marine Mammals and Other Megafauna	Operation & Maintenance	Increased underwater noise – use of geophysical survey and positioning equipment	EM10	Scoped In	Underwater noise from survey activities has the potential to cause injury, or behavioural effects. Noise generated from survey activities will be temporary and intermittent. Results from the assessment will inform mitigation measures which will reduce the potential for PTS to negligible levels, however the potential for disturbance on marine mammals and other megafauna remains and this this impact is scoped into the assessment.	✓	✓	✓	✓	✓
82	Marine Mammals and Other Megafauna	Operation & Maintenance	Increased underwater noise – vessels	EM15	Scoped In	Underwater noise from vessels has the potential to cause behavioural effects. As there is the potential for disturbance on marine mammals and other megafauna, this impact is scoped into the assessment.	✓	✓	✓	✓	✓
83	Marine Mammals and Other Megafauna	Operation & Maintenance	Increased underwater noise – operation (N/A)	N/A	Scoped In	<p>Operational noise originates from the internal machinery of the WTG and the airborne source does not significantly transfer from air to water. Floating WTGs are found to have similar measured received levels to those of fixed WTG (Risch et al., 2023). Noise may also be created through mooring-related noise.</p> <p>There is potential for disturbance to marine mammals and other megafauna from the Proposed Development therefore increased underwater noise from WTG and moorings have been scoped in the EIA.</p>	✓	N/A	N/A	N/A	N/A
84	Marine Mammals and Other Megafauna	Operation & Maintenance	Entanglement risk - primary	EM14	Scoped Out	<p>The potential for primary entanglement is negligible. This is due to the large diameter of the mooring lines and the weight of the lines preventing slack in the mooring lines. There is no evidence of primary entanglement at existing floating OWFs or from the oil and gas industry (from which the technology comes).</p> <p>The potential for effects marine mammals and other megafauna from primary entanglement arising from the Proposed Development is scoped out for further assessment in the EIA as the potential for significant effect on marine mammals and other megafauna can be ruled out.</p>	x	N/A	N/A	N/A	N/A
85	Marine Mammals and Other Megafauna	Operation & Maintenance	Entanglement risk - secondary	EM14	Scoped In	There is potential for secondary entanglement in lost fishing gear which has itself become entangled (there is some activity by UK pelagic trawls in the Array Area). Entanglement within lost fishing gear is only likely to occur within the footprint of the Array Area where any such lost gear could potentially become caught in mooring lines or inter-array cables. The Array Area is an area of relatively low fishing intensity (demersal seine, dredge and pelagic seine), and as such, although the likelihood is considered low, the potential of lost gear being present, and entangled within project infrastructure and able to 'capture' marine mammals and other megafauna is present.	✓	N/A	N/A	N/A	N/A

No.	Receptor	Proposed Development Stage	Impact Pathway	Relevant Embedded Mitigation	Scoped In/Out	Justification	Aspects to be Considered in EIA				
							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
86	Marine Mammals and Other Megafauna	Operation & Maintenance	Collision risk (vessels)	EM15	Scoped Out	<p>The increased localised use of vessels for the maintenance works is not expected to increase the collision risk to marine mammals and other megafauna. Embedded mitigation measures such as the development of a VMP outlining transit speeds, predetermined routes and relevant aspects of the SMWWC will be followed.</p> <p>Small cetaceans and seals are agile and not susceptible to collisions. With embedded mitigation, the risk to the more susceptible species (basking shark, minke whale) is negligible.</p> <p>The potential for collision risk from vessels from the Proposed Development are negligible, and given the mitigation in place, effects from vessel collision can be scoped out of further assessment in the EIA.</p>	x	x	x	x	x
87	Marine Mammals and Other Megafauna	Operation & Maintenance	Barrier to movement	N/A	Scoped In	<p>The impacts on barrier to movement from floating wind farms are not yet understood, however due to the use of mooring lines and cables there is the potential for marine mammals and other megafauna to be deterred from the Array Area.</p> <p>The potential for the Array Area to act as a barrier to movement for marine mammals and other megafauna has been scoped in for further assessment within the EIA.</p>	✓	N/A	N/A	N/A	N/A
88	Marine Mammals and Other Megafauna	Operation & Maintenance	Indirect effects such as changes in available habitat and prey availability	EM4 EM9 EM41	Scoped In	<p>There is the potential for direct temporary habitat disturbance during operational activities i.e., scour resulting from the movement of mooring lines and through maintenance activities including cable repair and re-burial, or use of jack-up vessels to facilitate repairs. These activities have the potential to change available habitat and prey availability, potentially affecting marine mammals and other megafauna.</p> <p>It is therefore considered that impacts on the available habitat and prey availability within the Proposed Development is scoped in for further assessment in the EIA.</p>	✓	✓	✓	✓	✓
89	Marine Mammals and Other Megafauna	Operation & Maintenance	Presence of electric and magnetic fields (EMF)	EM9	Scoped In	<p>EMF can arise from operational OWF cables and has the potential to affect the behaviour of species able to detect EMF. Typically, this is within the immediate vicinity and is mitigated through cable burial or protection. It is recognised that dynamic cables for floating projects are, for a certain parts of the cable length, located within the water column, and as such the interaction of species with cables for floating projects differs from that of traditional fixed foundation projects.</p> <p>The potential exists for detectable EMF to arise from the Proposed Development and therefore it is scoped in for further assessment in the EIA.</p>	✓	N/A	✓	N/A	✓
90	Marine Mammals and Other Megafauna	Operation & Maintenance	Accidental pollution events	EM5 EM6	Scoped Out	<p>Pollution incidents can arise throughout operation from a number of sources including vessels on site and compounds used in the operation of wind farms. The risks of pollution incidents arising will be managed through standard construction measures, application to international legislation such as the IMO MARPOL guidelines and adherence to a MPCP. This will ensure that the risk of such events occurring is as low as reasonably practicable.</p> <p>The potential for accident pollution events to arise from the Proposed Development are small, and given the mitigation in place, effects arising from accidental pollution events on marine mammal and other megafauna will not be significant and can be scoped out of further assessment in the EIA.</p>	x	x	x	x	x

No.	Receptor	Proposed Development Stage	Impact Pathway	Relevant Embedded Mitigation	Scoped In/Out	Justification	Aspects to be Considered in EIA				
							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
91	Marine Mammals and Other Megafauna	Decommissioning	Increased underwater noise – other construction activities e.g., seabed preparation, cable lay, trenching	EM10	Scoped In	Underwater noise from decommissioning activities has the potential to cause behavioural effects. Noise generated from construction methods will be temporary and intermittent. Evidence suggests that animals return to the area once activities cease. As there is potential for disturbance on marine mammals and other megafauna, this this impact is scoped into the assessment.	✓	✓	✓	✓	✓
92	Marine Mammals and Other Megafauna	Decommissioning	Increased underwater noise – use of survey and positioning equipment	EM10	Scoped In	Underwater noise from survey activities has the potential to cause injury or behavioural effects. Noise generated from survey activities will be temporary and intermittent. Results from the assessment will inform mitigation measures which will reduce the potential for PTS to negligible levels, however the potential for disturbance on marine mammals and other megafauna remains and this this impact is scoped in to the assessment.	✓	✓	✓	✓	✓
93	Marine Mammals and Other Megafauna	Decommissioning	Increased underwater noise – vessels	EM15	Scoped In	Underwater noise from vessels has the potential to cause behavioural effects. As there is the potential for disturbance on marine mammals and other megafauna, this impact is scoped into the assessment.	✓	✓	✓	✓	✓
94	Marine Mammals and Other Megafauna	Decommissioning	Collision risk (vessels)	EM15	Scoped Out	<p>The increased localised use of vessels for the decommissioning works is not expected to increase the collision risk to marine mammals and other megafauna. Embedded mitigation measures such as the development of a Vessel Management Plan outlining transit speeds, predetermined routes and relevant aspects of the SMWWC will be followed.</p> <p>Small cetaceans and seals are agile and not susceptible to collisions. With embedded mitigation, the risk to the more susceptible species (basking shark, minke whale) is negligible.</p> <p>The potential for collision risk from vessels from the Proposed Development are negligible, and given the mitigation in place, effects from vessel collision can be scoped out of further assessment in the EIA.</p>	✗	✗	✗	✗	✗
95	Marine Mammals and Other Megafauna	Decommissioning	Indirect effects such as changes in available habitat and prey availability	EM4 EM9 EM41	Scoped In	There is the potential for direct temporary habitat disturbance during decommissioning owing to seabed works. These activities have the potential to change available habitat and prey availability, potentially affecting marine mammals and other megafauna. It is therefore considered that impacts on the available habitat and prey availability within the Proposed Development is scoped in for further assessment in the EIA.	✓	✓	✓	✓	✓
96	Marine Mammals and Other Megafauna	Decommissioning	Accidental pollution events	EM5 EM6	Scoped Out	Pollution incidents can arise throughout decommissioning, from a number of sources including vessels on site and compounds used in wind farms. The risks of pollution incidents arising will be managed through standard construction measures, application to international legislation such as the IMO MARPOL guidelines and adherence to a MPCP. This will ensure that the risk of such events occurring is as low as reasonably practicable. The potential for accident pollution events to arise from the Proposed Development are small, and given the mitigation in place, effects arising from accidental pollution events on marine mammal and other megafauna will not be significant and can be scoped out of further assessment in the EIA.	✗	✗	✗	✗	✗
97	Commercial Fisheries	Construction	Temporary loss or restricted access to established fishing grounds	EM19 EM22 EM23 EM24 EM25 EM27	Scoped In	Installation activities have potential to create loss of fishing opportunities due to restricted access to fishing grounds. This effect is expected to be localised to the Proposed Development in the short term.	✓	✓	✓	✓	✓

No.	Receptor	Proposed Development Stage	Impact Pathway	Relevant Embedded Mitigation	Scoped In/Out	Justification	Aspects to be Considered in EIA				
							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
98	Commercial Fisheries	Construction	Temporary displacement of fishing activity into other areas	EM19 EM22 EM23 EM24 EM25 EM27	Scoped In	Any reduced access to fishing grounds creates the potential for displacement of fishing activity. This effect is expected to be short-term and localised, and the operational range of relevant fleets will not typically be limited to the Proposed Development.	✓	✓	✓	✓	✓
99	Commercial Fisheries	Construction	Interference with normal fishing activities	EM9 EM17 EM19 EM22 EM25 EM26	Scoped In	Movement of vessels and deployment of assembled floating structures associated with the installation of the Proposed Development adding to the existing volume of marine traffic in the area, may lead to interference of fishing activity. Further assessment required to conclude impact significance; assessment will be informed by the outcomes of the Shipping and Navigation impact assessment (see Chapter 13) and Navigational Risk Assessment (NRA).	✓	✓	✓	✓	✓
100	Commercial Fisheries	Construction	Snagging damage to static gear by Project vessels	EM9 EM26	Scoped In	The effects of project vessels snagging gear will be minimised by agreements put in place ahead of construction with local static gear fishers to remove any gear from the area while construction is carried out. The risk of snagging gear while vessels transit to and from site remains, but this risk should be minimised by having a designated offshore FLO on board.	✓	✓	✓	✓	✓
101	Commercial Fisheries	Construction	Temporary increases in steaming times	EM9 EM17 EM19 EM22 EM26	Scoped In	This effect will largely be localised to Array Area and in close proximity to cable installation activities and therefore limited deviations to steaming routes are expected during construction. Given adequate notification, it is expected that vessels, which typically have an operational range beyond that of the Proposed Development (as indicated by VMS data presented above), will be in a position to avoid temporary construction areas with no or minimal impact on their steaming times.	✓	✓	✓	✓	✓
102	Commercial Fisheries	Construction	Physical presence of infrastructure and potential exposure of that infrastructure leading to gear snagging	EM23 EM26 EM27	Scoped In	Standard industry practice and protocol (e.g., seabed infrastructure will be buried and/or marked on nautical charts) will minimise the risk of gear snagging, but it remains likely to be an area of industry concern. Further assessment required to conclude impact significance. Safety aspects associated with this impact, including damage to property and vessel stability, will be considered within the Shipping and Navigation impact assessment (see Chapter 13).	✓	✓	✓	✓	✓
103	Commercial Fisheries	Operation & Maintenance	Permanent or temporary loss or restricted access to established fishing grounds	EM19 EM22 EM23 EM24 EM26 EM27	Scoped In	The presence of floating WTGs and associated infrastructure may result in a loss or restricted access to fishing grounds during the operation and maintenance phase. The assessment presented in the EIA will be based on the maximum design parameters applicable to the WTGs and their moorings and will assess the extent of loss and/or restriction and associated impacts with regard to commercial fishing.	✓	✓	✓	✓	✓
104	Commercial Fisheries	Operation & Maintenance	Permanent or temporary displacement of fishing activity into other areas	EM19 EM22 EM23 EM24 EM25 EM27	Scoped In	Any reduced access to fishing grounds creates the potential for displacement of fishing activity. This effect is expected to be localised to the Array Area if it occurs. The operational range of relevant fleets will not typically be limited to the Proposed Development.	✓	✓	✓	✓	✓
105	Commercial Fisheries	Operation & Maintenance	Interference with normal fishing activities	EM9 EM17 EM19 EM22 EM25 EM26 EM27	Scoped In	Movement of vessels associated with O&M phase of the Proposed Development adding to the existing volume of marine traffic in the area, may lead to interference of fishing activity. Assessment will be informed by the outcomes of the Shipping and Navigation EIA (see Chapter 13) and NRA.	✓	✓	✓	✓	✓

No.	Receptor	Proposed Development Stage	Impact Pathway	Relevant Embedded Mitigation	Scoped In/Out	Justification	Aspects to be Considered in EIA				
							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
106	Commercial Fisheries	Operation & Maintenance	Increased steaming times	EM9 EM17 EM19 EM22 EM25 EM26 EM27	Scoped In	Limited deviations to steaming routes are expected in respect to safety zones. Given adequate notification, it is expected that vessels, which typically have an operational range beyond that of the Proposed Development (as indicated by VMS data presented above), should be in a position to avoid the Proposed Development with no or minimal impact on their steaming times.	✓	✓	✓	✓	✓
107	Commercial Fisheries	Operation & Maintenance	Physical presence of infrastructure and potential exposure of that infrastructure leading to gear snagging	EM23 EM26	Scoped In	Standard industry practice and protocol (e.g., seabed infrastructure will be buried and/or marked on nautical charts) will minimise the risk of gear snagging, but it remains likely to be an area of industry concern. Safety aspects associated with this impact will be considered within the Shipping and Navigation impact assessment (see Chapter 13).	✓	✓	✓	✓	✓
108	Commercial Fisheries	Decommissioning	Temporary loss or restricted access to established fishing grounds	EM19 EM21 EM23 EM24 EM25 EM27	Scoped In	Decommissioning activities have potential to create loss of fishing opportunities. This effect is expected to be localised, and short term. Furthermore, the operational range of relevant fleets will not typically be limited to the Proposed Development.	✓	✓	✓	✓	✓
109	Commercial Fisheries	Decommissioning	Temporary displacement of fishing activity into other areas	EM19 EM21 EM23 EM24 EM25 EM27	Scoped In	Any reduced access to fishing grounds creates the potential for displacement of fishing activity. This effect is expected to be short-term and localised, and the operational range of relevant fleets will not typically be limited to the Proposed Development.	✓	✓	✓	✓	✓
110	Commercial Fisheries	Decommissioning	Interference with normal fishing activities	EM9 EM17 EM19 EM22 EM25 EM26 EM27	Scoped In	Movement of vessels associated with decommissioning of the Proposed Development adding to the existing volume of marine traffic in the area, may lead to interference of fishing activity. Assessment will be informed by the outcomes of the Shipping and Navigation EIA (see Chapter 13) and NRA.	✓	✓	✓	✓	✓
111	Commercial Fisheries	Decommissioning	Snagging damage to static gear by Project vessels	EM9 EM26	Scoped In	Standard industry practice and protocol (e.g., seabed infrastructure will be buried and/or marked on nautical charts) will minimise the risk of gear snagging. Safety aspects associated with this impact, including damage to property and vessel stability, will be considered within the Shipping and Navigation impact assessment (see Chapter 13).	✓	✓	✓	✓	✓
112	Commercial Fisheries	Decommissioning	Temporary increases in steaming times	EM9 EM17 EM19 EM22 EM26 EM27	Scoped In	Limited deviations to steaming routes are expected in respect to safety zones. Given adequate notification, it is expected that vessels, which typically have an operational range beyond that of the Proposed Development (as indicated by VMS data presented above), should be in a position to avoid the development area with no or minimal impact on their steaming times.	✓	✓	✓	✓	✓
113	Commercial Fisheries	Decommissioning	Physical presence of infrastructure and potential exposure of that infrastructure leading to gear snagging	EM26	Scoped In	Standard industry practice and protocol (e.g., seabed infrastructure will be buried and/or marked on nautical charts) will minimise the risk of gear snagging. Safety aspects associated with this impact will be considered within the Shipping and Navigation EIA (see Chapter 13).	✓	✓	✓	✓	✓

No.	Receptor	Proposed Development Stage	Impact Pathway	Relevant Embedded Mitigation	Scoped In/Out	Justification	Aspects to be Considered in EIA				
							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
114	Shipping and Navigation	Construction	Impact of floating mooring and cable systems and interactions with vessels at risk of snagging	EM18 EM19 EM20 EM21 EM22 EM25 EM30 EM31 EM50	Scoped In	Once construction begins, there will be underwater obstructions in the form of moorings and as construction progresses, cables. Depending on sequencing of construction, these may be <i>in situ</i> for a period ahead of turbines and above sea/floating elements being installed. There is also potential for underwater obstructions without a corresponding turbine structure. Vessels can potentially snag fishing gear or anchors on this infrastructure.	✓	✓	✓	✗	✓
115	Shipping and Navigation	Construction	Impact to commercial and ferry routes including re-routing/deviation of lifeline services	EM50	Scoped In	Commercial vessels and ferries will potentially be displaced from existing routes due to the presence of the Proposed Development.	✓	✓	✗	✓	✗
116	Shipping and Navigation	Construction	Increased collision risk	EM6 EM17 EM18 EM22 EM25 EM30 EM31 EM32	Scoped In	Marine craft associated with the construction will be transiting to/from the area in all phases. There will be potential interaction with other vessels transiting the area which leads to an increased risk of collision.	✓	✓	✓	✓	✓
117	Shipping and Navigation	Construction	Increased contact/allision risk	EM6 EM18 EM19 EM20 EM21 EM22 EM25 EM28 EM30 EM31 EM33 EM46 EM47	Scoped In	Infrastructure in the area will create a risk of contact for either powered or drifting vessels transiting the area.	✓	✓	✗	✓	✗
118	Shipping and Navigation	Construction	Increased grounding risk	EM9 EM18 EM29	Scoped In	Changes to vessel routeing as a result of the cable or project vessels may lead to a potential increase in the risk of grounding.	✗	✗	✗	✗	✓
119	Shipping and Navigation	Construction	Impact to Search and Rescue capability	EM20 EM28 EM30 EM46	Scoped In	The potential for reduced access for SAR responders due to infrastructure may affect SAR capability. This along with the increase in vessel activity may result in an increase in incidents further affecting capability.	✓	✓	✓	✓	✗
120	Shipping and Navigation	Construction	Interference with Radar, communications and positioning systems	EM15	Scoped In	Communication and positioning systems may be affected by the presence of infrastructure.	✓	✓	✗	✓	✗
121	Shipping and Navigation	Construction	Reduction in Under Keel Clearance due to subsurface infrastructure	EM9 EM18 EM29	Scoped In	Use of cable protection associated with the Proposed Development has the potential to reduce the available depth of water along the cable route. This would reduce the available under keel clearance for vessels transiting the area.	✗	✗	✗	✗	✓
122	Shipping and Navigation	Construction	Impact on wet storage/marshalling areas	N/A	Scoped In	There may be a need for storage of floating infrastructure both during assembly and whilst waiting to be taken to the Array Area. Dependent on location, this may affect routeing and port operations.	✓	✗	✗	✗	✗
123	Shipping and Navigation	Construction	Towage operations	EM32	Scoped In	Towage will be required to take assembled floating infrastructure to the array area. There is potential for impacts to occur during these operations including breakout and interaction with other vessels.	✓	✗	✗	✗	✗

No.	Receptor	Proposed Development Stage	Impact Pathway	Relevant Embedded Mitigation	Scoped In/Out	Justification	Aspects to be Considered in EIA				
							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
124	Shipping and Navigation	Construction	Impact on port/harbours and nearshore operations	N/A	Scoped In	Access to local ports may be affected by the presence of the project and operations associated with it.	✓	✗	✗	✓	✓
125	Shipping and Navigation	Construction	Impact on commercial fishing vessel activity	EM17 EM22 EM25	Scoped In	Fishing vessels may be displaced from their current routes due to the presence of infrastructure and activities associated with the Project.	✓	✓	✓	✓	✓
126	Shipping and Navigation	Construction	Impact on fishing recreational activity	EM22 EM26	Scoped In	Recreational vessels may be displaced from their current routes due to the presence of infrastructure and activities associated with the Project.	✓	✓	✓	✓	✓
127	Shipping and Navigation	Operation & Maintenance	Impact of floating mooring and cable systems and interactions with vessels at risk of snagging	EM18 EM19 EM20 EM22 EM25 EM30 EM31 EM46	Scoped In	The Proposed Development will present underwater obstructions in the form of mooring and as construction progresses, cables. Vessels can potentially snag fishing gear or anchors on this infrastructure.	✓	✗	✓	✗	✓
128	Shipping and Navigation	Operation & Maintenance	Impact of small movements of floating installations around the nominal central location	EM31	Scoped In	The movement of floating infrastructure is dependent on the mooring technology and arrangements to be used. There is potential for this to result in effects on vessels progressing through the array area or for SAR.	✓	✗	✗	✗	✗
129	Shipping and Navigation	Operation & Maintenance	Impact to commercial and ferry routes including re-routing/deviation of lifeline services	EM50	Scoped In	Commercial vessels will potentially be displaced from existing routes due to the presence of the Proposed Development.	✓	✓	✗	✓	✗
130	Shipping and Navigation	Operation & Maintenance	Increased collision risk	EM6 EM17 EM18 EM22 EM25 EM30 EM31 EM32	Scoped In	Marine craft associated with the operation will be transiting to/from the area in all phases. There will be potential interaction with other vessels transiting the area which leads to an increased risk of collision.	✓	✓	✗	✓	✗
131	Shipping and Navigation	Operation & Maintenance	Increased contact/allision risk	EM6 EM18 EM19 EM20 EM21 EM22 EM25 EM28 EM30 EM31 EM33 EM46 EM47	Scoped In	Infrastructure in the area will create a risk of contact for either powered or drifting vessels transiting the area.	✓	✓	✗	✓	✗
132	Shipping and Navigation	Operation & Maintenance	Increased grounding risk	EM9 EM18 EM29	Scoped In	Changes to vessel routing as a result of the cable or project vessels may lead to a potential increase in the risk of grounding.	✗	✗	✗	✗	✓
133	Shipping and Navigation	Operation & Maintenance	Impact to Search and Rescue capability	EM20 EM30 EM46	Scoped In	The increase in vessel activity may result in an increase in incidents. This along with the potential for reduced access for SAR responders due to infrastructure may affect SAR capability.	✓	✓	✗	✓	✗
134	Shipping and Navigation	Operation & Maintenance	Interference with Radar, communications and positioning systems	EM47	Scoped In	Communication and positioning systems may be affected by the presence of infrastructure.	✓	✓	✗	✓	✗

No.	Receptor	Proposed Development Stage	Impact Pathway	Relevant Embedded Mitigation	Scoped In/Out	Justification	Aspects to be Considered in EIA				
							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
135	Shipping and Navigation	Operation & Maintenance	Reduction in Under Keel Clearance due to subsurface infrastructure	EM9 EM18	Scoped In	Use of cable protection associated with the Project has the potential to reduce the available depth of water along the cable route. This would reduce the available under keel clearance for vessels transiting the area.	✓	✗	✓	✗	✓
136	Shipping and Navigation	Operation & Maintenance	Towage operations	EM34	Scoped In	Towage may be required to take floating infrastructure to and from the Array Area for maintenance purposes. There is potential for impacts to occur during these operations including breakout and interaction with other vessels.	✓	✗	✗	✗	✗
137	Shipping and Navigation	Operation & Maintenance	Temporary/dynamic change in layout due to tow in/tow out for O&M maintenances	EM33 EM46	Scoped In	If floating infrastructure is removed from the Array Area for maintenance purposes, there will be a change to the promulgated layout. This may affect vessels transiting through or near to the Array Area.	✓	✗	✗	✗	✗
138	Shipping and Navigation	Operation & Maintenance	Impact on port/harbours and nearshore operations	N/A	Scoped In	Access to local ports may be affected by the presence of the Proposed Development and operations associated with it.	✗	✗	✗	✓	✓
139	Shipping and Navigation	Operation & Maintenance	Impact on fishing vessel activity	EM22 EM25	Scoped In	Fishing vessels may be displaced from their current routes due to the presence of infrastructure and activities associated with the Proposed Development.	✓	✓	✓	✓	✓
140	Shipping and Navigation	Operation & Maintenance	Impact on recreational activity	EM22 EM25	Scoped In	Recreational vessels may be displaced from their current routes due to the presence of infrastructure and activities associated with the Proposed Development.	✓	✓	✓	✓	✓
141	Shipping and Navigation	Decommissioning	Impact of floating mooring and cable systems and interactions with vessels at risk of snagging	EM18 EM20 EM22 EM25 EM30 EM31 EM46	Scoped In	During decommissioning there will be underwater obstructions in the form of mooring and as construction progresses, cables. There is also potential for underwater obstructions without a corresponding turbine structure. Vessels can potentially snag fishing gear or anchors on this infrastructure.	✓	✗	✓	✗	✓
142	Shipping and Navigation	Decommissioning	Impact to commercial and ferry routes including re-routing/deviation of lifeline services	EM46	Scoped In	Commercial vessels will potentially be displaced from existing routes due to the presence of the Proposed Development.	✓	✓	✓	✓	✓
143	Shipping and Navigation	Decommissioning	Increased collision risk	EM6 EM17 EM18 EM22 EM25 EM30 EM31 EM32	Scoped In	Marine craft associated with the decommissioning of the project will be transiting to/from the area in all phases. There will be potential interaction with other vessels transiting the area which leads to an increased risk of collision.	✓	✓	✓	✓	✓
144	Shipping and Navigation	Decommissioning	Increased contact/allision risk	EM6 EM18 EM19 EM20 EM21 EM22 EM25 EM28 EM30 EM31 EM33 EM46 EM47	Scoped In	Infrastructure in the area will create a risk of contact for either powered or drifting vessels transiting the area.	✓	✓	✗	✓	✗
145	Shipping and Navigation	Decommissioning	Increased grounding risk	EM9 EM18 EM29	Scoped In	Changes to vessel routeing as a result of the cable or project vessels may lead to a potential increase in the risk of grounding.	✗	✗	✗	✗	✓

No.	Receptor	Proposed Development Stage	Impact Pathway	Relevant Embedded Mitigation	Scoped In/Out	Justification	Aspects to be Considered in EIA				
							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
146	Shipping and Navigation	Decommissioning	Impact to Search and Rescue capability	EM20 EM30 EM46	Scoped In	The increase in vessel activity may result in an increase in incidents. This along with the potential for reduced access for SAR responders due to infrastructure may affect SAR capability.	✓	✓	✗	✓	✗
147	Shipping and Navigation	Decommissioning	Interference with Radar, communications and positioning systems	EM47	Scoped In	Communication and positioning systems may be affected by the presence of infrastructure.	✓	✓	✗	✓	✗
148	Shipping and Navigation	Decommissioning	Reduction in Under Keel Clearance due to subsurface infrastructure	EM9 EM18 EM29	Scoped In	Use of cable protection has the potential to reduce the available depth of water along the cable route. This would reduce the available under keel clearance for vessels transiting the area.	✗	✗	✗	✗	✓
149	Shipping and Navigation	Decommissioning	Towage operations	EM32	Scoped In	Towage will be required to take floating infrastructure from the array area. There is potential for impacts to occur during these operations including breakout and interaction with other vessels.	✓	✗	✗	✗	✗
150	Shipping and Navigation	Decommissioning	Impact on port/harbours and nearshore operations	N/A	Scoped In	Access to local ports may be affected by the presence of the project and operations associated with it.	✓	✗	✗	✓	✓
151	Shipping and Navigation	Decommissioning	Impact on fishing vessel activity	EM22 EM25	Scoped In	Fishing vessels may be displaced from their current routes due to the presence of infrastructure and activities associated with the Proposed Development.	✓	✓	✓	✓	✓
152	Shipping and Navigation	Decommissioning	Impact on recreational activity	EM22 EM25	Scoped In	Recreational vessels may be displaced from their current routes due to the presence of infrastructure and activities associated with the decommissioning of the Proposed Development.	✓	✓	✓	✓	✓
153	Marine Archaeology and Cultural Heritage	Construction	Loss of or damage to known and unknown marine historic environment assets from direct impacts.	EM38 EM39 EM40	Scoped In	Any of WTG foundations and supporting structures, offshore export cables and other infrastructure that impact on the seabed have the potential to result in the damage/loss of known archaeological features and unknown archaeological features, which may lie undiscovered on or below the surface of the seabed, if any are present. Similar effects may be expected from vessel jack-up or anchoring systems that impact the seabed, or the removal of devices and other infrastructure in ways that disturb the seabed during decommissioning activities. Effects are considered to be permanent.	✓	✓	✓	✓	✓
154	Marine Archaeology and Cultural Heritage	Construction	Loss of or damage to submerged prehistoric landscapes from physical impacts	EM38 EM39 EM40	Scoped In	Any of WTG foundations and supporting structures, the offshore export cable and other infrastructure that impact on the seabed have the potential to result in the damage/loss of submerged prehistoric landscape deposits or features, if any are present. Similar effects may be expected from vessel jack-up or anchoring systems that impact the seabed, or the removal of devices and other infrastructure in ways that disturb the seabed during decommissioning activities. Effects are considered to be permanent.	✓	✓	✓	✓	✓
152	Marine Archaeology and Cultural Heritage	Construction	Temporary or permanent change to the setting of heritage assets	EM38 EM40	Scoped In	The setting of known and named wreck sites may be impacted by activities associated with WTG foundations and supporting structures, the offshore export cable and other infrastructure, and in turn this could potentially affect the significance of such seabed features.	✓	✓	✓	✓	✓
156	Marine Archaeology and Cultural Heritage	Construction	Indirect disturbance to marine historic environment assets caused by cable burial methods and /or cable protection	EM39	Scoped In	Indirect impacts to known and potential seabed prehistory, maritime and aviation assets caused by changes to the hydrodynamic and sedimentary regimes due to sediment redistribution.	✓	✓	✓	✓	✓
157	Marine Archaeology and Cultural Heritage	Operation & Maintenance	Loss of or damage to known and unknown marine historic environment assets from direct impacts	EM38 EM40	Scoped In	Any of WTG foundations and supporting structures, cables, and other infrastructure on the seabed or in the water column above that result in localised scouring have the potential to result in the damage/loss of submerged prehistoric landscape deposits or features, if any are present. Maintenance vessel jack-up or anchoring systems that impact the seabed, or the repeated removal and replacement of devices and other infrastructure in ways that disturb the seabed also have the potential to result in the damage/loss of any such features. Although the likelihood of impact is low, effects are considered to be permanent.	✓	✓	✓	✓	✓

No.	Receptor	Proposed Development Stage	Impact Pathway	Relevant Embedded Mitigation	Scoped In/Out	Justification	Aspects to be Considered in EIA				
							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
158	Marine Archaeology and Cultural Heritage	Operation & Maintenance	Loss of or damage to submerged prehistoric landscapes from direct impacts	EM38 EM40	Scoped In	Any of WTG foundations and supporting structures, cables, and other infrastructure on the seabed or in the water column above that result in localised scouring have the potential to result in the damage/loss of submerged prehistoric landscape deposits or features, if any are present. Maintenance vessel jack-up or anchoring systems that impact the seabed, or the repeated removal and replacement of devices and other infrastructure in ways that disturb the seabed also have the potential to result in the damage/loss of any such features. Although the likelihood of impact is low, effects are considered to be permanent.	✓	✓	✓	✓	✓
159	Marine Archaeology and Cultural Heritage	Operation & Maintenance	Temporary or permanent change to the setting of heritage assets	EM38 EM40	Scoped In	The setting of known and named wreck sites may be impacted by activities associated with the device designs, the offshore export cable and other infrastructure, and in turn this could potentially affect the significance of such seabed features.	✓	✓	✓	✓	✓
160	Marine Archaeology and Cultural Heritage	Operation & Maintenance	Indirect disturbance to marine historic environment assets caused by additional cable protection used during repair and maintenance	EM39	Scoped In	Indirect changes to known and potential seabed prehistory, maritime and aviation assets caused by changes to hydrodynamic and sedimentary regimes may expose receptors leading to increased rates of deterioration through biological, chemical and physical processes.	✓	✓	✓	✓	✓
161	Marine Archaeology and Cultural Heritage	Decommissioning	Loss of or damage to known and unknown marine historic environment assets from direct impacts.	EM38 EM39 EM40	Scoped In	The removal of devices and other infrastructure in ways that disturb the seabed during decommissioning activities have the potential to result in the damage/loss of known archaeological features and unknown archaeological features, which may lie undiscovered on or below the surface of the seabed, if any are present. Effects are considered to be permanent.	✓	✓	✓	✓	✓
162	Marine Archaeology and Cultural Heritage	Decommissioning	Loss of or damage to submerged prehistoric landscapes from physical impacts	EM38 EM39 EM40	Scoped In	The removal WTG foundations and other infrastructure in ways that disturb the seabed during decommissioning activities have the potential to result in the damage/loss of known archaeological features and unknown archaeological features, which may lie undiscovered on or below the surface of the seabed, if any are present. Effects are considered to be permanent	✓	✓	✓	✓	✓
163	Marine Archaeology and Cultural Heritage	Decommissioning	Temporary or permanent change to the setting of heritage assets	EM38 EM39 EM40	Scoped In	The setting of known and named wreck sites may be impacted by activities associated with the device designs, the offshore export cable and other infrastructure, and in turn this could potentially affect the significance of such seabed features.	✓	✓	✓	✓	✓
164	Military and Civil Aviation	Construction (& Decommissioning)	Civil Airport IFPs	N/A	Scoped In	The Proposed Development WTGs are outside the safeguarding area of any civil airports. The Proposed Development will therefore not create any physical obstacles within the safeguarding area for any civil airports. However, the location of WTG assembly, and transport routes to the Array Area, are not yet known. As such, this impact remains scoped into the EIA.	✓	✗	✗	✗	✗
165	Military and Civil Aviation	Construction (& Decommissioning)	Military Aerodrome IFPs	N/A	Scoped In	The Proposed Development WTGs are outside the safeguarding area of any military aerodromes. The Proposed Development will therefore not create any physical obstacles within the safeguarding area for any military aerodromes. However, the location of WTG assembly, and transport routes to the Array Area, are not yet known. As such, this impact remains scoped into the EIA.	✓	✗	✗	✗	✗
166	Military and Civil Aviation	Construction (& Decommissioning)	Low flying (including SAR)	EM16 EM30 EM36 EM37	Scoped In	There is potential for the Proposed Development WTGs to impact on low-flying aircraft and, as such, the impact has been scoped into the EIA. A LMP will be developed with all relevant aviation stakeholders and details of the Proposed Development WTGs will be included in aviation documentation and displayed on aviation charts.	✓	✓	✓	✓	✓
167	Military and Civil Aviation	Construction (& Decommissioning)	HMRs	N/A	Scoped In	In line with CAA guidance, the Proposed Development's WTGs will be within 2 NM (3.7 km) from up to 4 HMRs (026, 029, 032 and 035). Helicopters operations on HMRs may be affected. As such, this impact has been scoped in to the EIA.	✓	✓	✓	✓	✓

No.	Receptor	Proposed Development Stage	Impact Pathway	Relevant Embedded Mitigation	Scoped In/Out	Justification	Aspects to be Considered in EIA				
							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
168	Military and Civil Aviation	Construction (& Decommissioning)	Offshore helicopter installations	N/A	Scoped Out	In line with CAA guidance, the Proposed Development's WTGs are more than 9 NM (17 km) from any offshore helicopter installation. Consequently, helicopter operations into offshore installations are not expected to be affected by the Project. As such, this impact has been scoped out of the EIA.	x	x	x	x	x
169	Military and Civil Aviation	Construction (& Decommissioning)	Local Airspace Restrictions	N/A	Scoped Out	There is no potential for the Project to impact on local airspace restrictions. As such, this impact has been scoped out of the EIA.	x	x	x	x	x
170	Military and Civil Aviation	Operation & Maintenance	Civil ATC radar	None	Scoped In	The Proposed Development's WTGs will potentially be within radar coverage of the NATS Allanshill and Perwinnes PSR systems. As such, this impact has been scoped in to the EIA.	✓	x	x	x	x
171	Military and Civil Aviation	Operation & Maintenance	Military ATC radar	N/A	Scoped Out (WTG only)	The Proposed Development WTGs are not within radar coverage of any military ATC radar systems. As such, this impact has been scoped out of the EIA. Any effects from the construction or operation of cabling infrastructure (including OSP's and IRC) will be considered in the EIA when more detail is available.	x	✓	✓	✓	✓
172	Military and Civil Aviation	Operation & Maintenance	Military AD radar	None	Scoped In	The Proposed Development WTGs will potentially be within radar coverage of MoD's Buchan Air Defence radar. As such, this impact has been scoped into the EIA. Any effects from the construction or operation of cabling infrastructure (including OSP's and IRC) will be considered in the EIA when more detail is available.	✓	✓	✓	✓	✓
173	Military and Civil Aviation	Operation & Maintenance	Met Office radar	N/A	Scoped Out (WTG only)	The Proposed Development WTGs are not within radar coverage of any Met Office radar systems. As such, this impact has been scoped out of the EIA. Any effects from the construction or operation of cabling infrastructure (including OSP's and IRC) will be considered in the EIA when more detail is available.	x	✓	✓	✓	✓
174	Seascape, Landscape and Visual Impact	Construction	Indirect effects from intervisibility of the Proposed Development during construction from NCCAs.	N/A	Scoped Out	<p>At 74.8 km from the Proposed Development Array Area and 27.5 km from the IRC platform, it is not predicted that construction activities associated with the Proposed Development would result in a likely significant effect on the key characteristics of the NCCAs, LCTs, the special qualities of protected and designated landscapes, and visual receptors as a result of the distance of the Array Area and IRC platform to the coastline.</p> <p>Two ferry routes would obtain closer views of the WTGs within the Array Area and IRC platform. However, only the Aberdeen – Lerwick and Aberdeen to Kirkwall ferry routes, cruise liners and recreational boats are predicted to receive likely significant effects for a short section when passing the IRC platform and Array Area to the west due to proximity; thereafter, decreasing to non-significant levels with distance.</p> <p>There would be an increase in shipping during the export cable laying; however, this would be experienced within the existing context of shipping servicing oil rigs. Similarly, lighting associated with the construction of the Proposed Development would be experienced within the context of existing artificial lighting from settlements and roads in Aberdeenshire, and shipping and offshore oil rigs in the seascape.</p> <p>For the nearshore cable installation works including Landfall activities, possible impacts are likely to result from the use of cable lay vessels, jack up barges and cranes. Activities are predicted to be of relatively low magnitude, temporary and of short duration and as</p>	x	x	x	x	x

No.	Receptor	Proposed Development Stage	Impact Pathway	Relevant Embedded Mitigation	Scoped In/Out	Justification	Aspects to be Considered in EIA				
							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
175	Seascape, Landscape and Visual Impact	Construction	Indirect effects from intervisibility of the Proposed Development during construction from LCTS.	N/A	Scoped Out	<p>At 74.8 km from the Proposed Development Array Area and 27.5 km from the IRC platform, it is not predicted that construction activities associated with the Proposed Development would result in a likely significant effect on the key characteristics of the NCCAs, LCTs, the special qualities of protected and designated landscapes, and visual receptors as a result of the distance of the Array Area and IRC platform to the coastline.</p> <p>Two ferry routes would obtain closer views of the WTGs within the Array Area and IRC platform. However, only the Aberdeen – Lerwick and Aberdeen to Kirkwall ferry routes, cruise liners and recreational boats are predicted to receive likely significant effects for a short section when passing the IRC platform and Array Area to the west due to proximity; thereafter, decreasing to non-significant levels with distance.</p> <p>There would be an increase in shipping during the export cable laying; however, this would be experienced within the existing context of shipping servicing oil rigs. Similarly, lighting associated with the construction of the Proposed Development would be experienced within the context of existing artificial lighting from settlements and roads in Aberdeenshire, and shipping and offshore oil rigs in the seascape.</p> <p>For the nearshore cable installation works including Landfall activities, possible impacts are likely to result from the use of cable lay vessels, jack up barges and cranes. Activities are predicted to be of relatively low magnitude, temporary and of short duration and as such will not result in a likely long-term significant effect.</p>	x	x	x	x	x
176	Seascape, Landscape and Visual Impact	Construction	Indirect effects from intervisibility of the Proposed Development during construction from protected and designated landscapes.	N/A	Scoped Out	<p>At 74.8 km from the Proposed Development Array Area and 27.5 km from the IRC platform, it is not predicted that construction activities associated with the Proposed Development would result in a likely significant effect on the key characteristics of the NCCAs, LCTs, the special qualities of protected and designated landscapes, and visual receptors as a result of the distance of the Array Area and IRC platform to the coastline.</p> <p>Two ferry routes would obtain closer views of the WTGs within the Array Area and IRC platform. However, only the Aberdeen – Lerwick and Aberdeen to Kirkwall ferry routes, cruise liners and recreational boats are predicted to receive likely significant effects for a short section when passing the IRC platform and Array Area to the west due to proximity; thereafter, decreasing to non-significant levels with distance.</p> <p>There would be an increase in shipping during the export cable laying; however, this would be experienced within the existing context of shipping servicing oil rigs. Similarly, lighting associated with the construction of the Proposed Development would be experienced within the context of existing artificial lighting from settlements and roads in Aberdeenshire, and shipping and offshore oil rigs in the seascape.</p> <p>For the nearshore cable installation works including Landfall activities, possible impacts are likely to result from the use of cable lay vessels, jack up barges and cranes. Activities are predicted to be of relatively low magnitude, temporary and of short duration and as such will not result in a likely long-term significant effect.</p>	x	x	x	x	x

No.	Receptor	Proposed Development Stage	Impact Pathway	Relevant Embedded Mitigation	Scoped In/Out	Justification	Aspects to be Considered in EIA				
							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
177	Seascape, Landscape and Visual Impact	Construction	Indirect effects from visibility of the Proposed Development during construction from visual receptors.	N/A	Scoped Out	<p>At 74.8 km from the Proposed Development Array Area and 27.5 km from the IRC platform, it is not predicted that construction activities associated with the Proposed Development would result in a likely significant effect on the key characteristics of the NCCAs, LCTs, the special qualities of protected and designated landscapes, and visual receptors as a result of the distance of the Array Area and IRC platform to the coastline.</p> <p>Two ferry routes would obtain closer views of the WTGs within the Array Area and IRC platform. However, only the Aberdeen – Lerwick and Aberdeen to Kirkwall ferry routes, cruise liners and recreational boats are predicted to receive likely significant effects for a short section when passing the IRC platform and Array Area to the west due to proximity; thereafter, decreasing to non-significant levels with distance.</p> <p>There would be an increase in shipping during the export cable laying; however, this would be experienced within the existing context of shipping servicing oil rigs. Similarly, lighting associated with the construction of the Proposed Development would be experienced within the context of existing artificial lighting from settlements and roads in Aberdeenshire, and shipping and offshore oil rigs in the seascape.</p> <p>For the nearshore cable installation works including Landfall activities, possible impacts are likely to result from the use of cable lay vessels, jack up barges and cranes. Activities are predicted to be of relatively low magnitude, temporary and of short duration and as such will not result in a likely long-term significant effect.</p>	x	x	x	x	x
178	Seascape, Landscape and Visual Impact	Operation & Maintenance	Indirect effects from intervisibility of the Proposed Development during operation from NCCAs.	EM44	Scoped Out	<p>During operation, the addition of the WTGs in the Array Area and IRC platform would not result in likely significant effects on the key characteristics of the NCCAs and LCTs, the special qualities of protected and designated landscapes, and visual receptors due to the distance from the Aberdeenshire coastline.</p> <p>Two ferry routes, cruise liners and recreational boats would obtain closer views of the WTGs and IRC Platform. However, likely significant effects would occur over a short section when passing the Array Area and IRC platform due to proximity, thereafter, decreasing to non-significant levels.</p> <p>Following commissioning and operation of the WTGs, there would be a significant reduction in vessels in proximity to the Proposed Development, with vessel movements limited to operational craft. This would be experienced within the existing context of shipping servicing oil rigs.</p> <p>Lighting on the WTGs located in the Array Area and IRC platform would be barely perceptible during the operational and maintenance phase due to distance and be mainly seen by people on vessels passing the Proposed Development.</p>	x	x	x	x	x

No.	Receptor	Proposed Development Stage	Impact Pathway	Relevant Embedded Mitigation	Scoped In/Out	Justification	Aspects to be Considered in EIA				
							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
179	Seascape, Landscape and Visual Impact	Operation & Maintenance	Indirect effects from intervisibility of the Proposed Development during operation from LCTS.	EM44	Scoped Out	<p>During operation, the addition of the WTGs in the Array Area and IRC platform would not result in likely significant effects on the key characteristics of the NCCAs and LCTs, the special qualities of protected and designated landscapes, and visual receptors due to the distance from the Aberdeenshire coastline.</p> <p>Two ferry routes, cruise liners and recreational boats would obtain closer views of the WTGs and IRC Platform. However, likely significant effects would occur over a short section when passing the Array Area and IRC platform due to proximity, thereafter, decreasing to non-significant levels.</p> <p>Following commissioning and operation of the WTGs, there would be a significant reduction in vessels in proximity to the Proposed Development, with vessel movements limited to operational craft. This would be experienced within the existing context of shipping servicing oil rigs.</p> <p>Lighting on the WTGs located in the Array Area and IRC platform would be barely perceptible during the operational and maintenance phase due to distance and be mainly seen by people on vessels passing the Proposed Development.</p>	x	x	x	x	x
180	Seascape, Landscape and Visual Impact	Operation & Maintenance	Indirect effects from intervisibility of the Proposed Development during operation from protected and designated landscapes.	EM44	Scoped Out	<p>During operation, the addition of the WTGs in the Array Area and IRC platform would not result in likely significant effects on the key characteristics of the NCCAs and LCTs, the special qualities of protected and designated landscapes, and visual receptors due to the distance from the Aberdeenshire coastline.</p> <p>Two ferry routes, cruise liners and recreational boats would obtain closer views of the WTGs and IRC Platform. However, likely significant effects would occur over a short section when passing the Array Area and IRC platform due to proximity, thereafter, decreasing to non-significant levels.</p> <p>Following commissioning and operation of the WTGs, there would be a significant reduction in vessels in proximity to the Proposed Development, with vessel movements limited to operational craft. This would be experienced within the existing context of shipping servicing oil rigs.</p> <p>Lighting on the WTGs located in the Array Area and IRC platform would be barely perceptible during the operational and maintenance phase due to distance and be mainly seen by people on vessels passing the Proposed Development.</p>	x	x	x	x	x

No.	Receptor	Proposed Development Stage	Impact Pathway	Relevant Embedded Mitigation	Scoped In/Out	Justification	Aspects to be Considered in EIA				
							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
181	Seascape, Landscape and Visual Impact	Operation & Maintenance	Indirect effects from intervisibility of the Proposed Development during operation from visual receptors.	EM16 EM44	Scoped Out	<p>During operation, the addition of the WTGs in the Array Area and IRC platform would not result in likely significant effects on the key characteristics of the NCCAs and LCTs, the special qualities of protected and designated landscapes, and visual receptors due to the distance from the Aberdeenshire coastline.</p> <p>Two ferry routes, cruise liners and recreational boats would obtain closer views of the WTGs and IRC Platform. However, likely significant effects would occur over a short section when passing the Array Area and IRC platform due to proximity, thereafter, decreasing to non-significant levels.</p> <p>Following commissioning and operation of the WTGs, there would be a significant reduction in vessels in proximity to the Proposed Development, with vessel movements limited to operational craft. This would be experienced within the existing context of shipping servicing oil rigs.</p> <p>Lighting on the WTGs located in the Array Area and IRC platform would be barely perceptible during the operational and maintenance phase due to distance and be mainly seen by people on vessels passing the Proposed Development. and be mainly seen by people on vessels passing the Proposed Development.</p>	x	x	x	x	x
182	Seascape, Landscape and Visual Impact	Decommissioning	Indirect effects from intervisibility of the Proposed Development during decommissioning from NCCAs	N/A	Scoped Out	<p>During decommissioning, potential effects would be similar to construction but shorter in duration. It is not predicted that a likely significant effect on the key characteristics of the NCCAs and LCTs, the special qualities of protected and designated landscapes, and visual receptors will occur due to distance.</p> <p>Two ferry routes, cruise liners and recreational boats would obtain closer views of the decommissioning of the WTGs and IRC platform; however, likely significant effects would occur for a short section when passing the Array Area and IRC Platform due to proximity; thereafter, decreasing to non-significant levels.]</p> <p>There would be an increase in shipping during decommissioning; however, this would be experienced within the existing context of shipping servicing oil rigs. For the nearshore decommissioning works may arise from the use of vessels, jack up barges and cranes. Activities are predicted to be of relatively low magnitude, temporary and of short duration and as such will not result in a likely significant effect.</p>	x	x	x	x	x

No.	Receptor	Proposed Development Stage	Impact Pathway	Relevant Embedded Mitigation	Scoped In/Out	Justification	Aspects to be Considered in EIA				
							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
183	Seascape, Landscape and Visual Impact	Decommissioning	Indirect effects from intervisibility of the Proposed Development during decommissioning from LCTS	N/A	Scoped Out	<p>During decommissioning, potential effects would be similar to construction but shorter in duration. It is not predicted that a likely significant effect on the key characteristics of the NCCAs and LCTs, the special qualities of protected and designated landscapes, and visual receptors will occur due to distance.</p> <p>Two ferry routes, cruise liners and recreational boats would obtain closer views of the decommissioning of the WTGs and IRC platform; however, likely significant effects would occur for a short section when passing the Array Area and IRC Platform due to proximity; thereafter, decreasing to non-significant levels.]</p> <p>There would be an increase in shipping during decommissioning; however, this would be experienced within the existing context of shipping servicing oil rigs.</p> <p>For the nearshore decommissioning works may arise from the use of vessels, jack up barges and cranes. Activities are predicted to be of relatively low magnitude, temporary and of short duration and as such will not result in a likely significant effect.</p>	x	x	x	x	x
184	Seascape, Landscape and Visual Impact	Decommissioning	Indirect effects from intervisibility of the Proposed Development during decommissioning from protected and designated landscapes	N/A	Scoped Out	<p>During decommissioning, potential effects would be similar to construction but shorter in duration. It is not predicted that a likely significant effect on the key characteristics of the NCCAs and LCTs, the special qualities of protected and designated landscapes, and visual receptors will occur due to distance.</p> <p>Two ferry routes, cruise liners and recreational boats would obtain closer views of the decommissioning of the WTGs and IRC platform; however, likely significant effects would occur for a short section when passing the Array Area and IRC Platform due to proximity; thereafter, decreasing to non-significant levels.]</p> <p>There would be an increase in shipping during decommissioning; however, this would be experienced within the existing context of shipping servicing oil rigs.</p> <p>For the nearshore decommissioning works may arise from the use of vessels, jack up barges and cranes. Activities are predicted to be of relatively low magnitude, temporary and of short duration and as such will not result in a likely significant effect.</p>	x	x	x	x	x
185	Seascape, Landscape and Visual Impact	Decommissioning	Indirect effects from intervisibility of the Proposed Development during decommissioning from visual receptors	N/A	Scoped Out	<p>During decommissioning, potential effects would be similar to construction but shorter in duration. It is not predicted that a likely significant effect on the key characteristics of the NCCAs and LCTs, the special qualities of protected and designated landscapes, and visual receptors will occur due to distance.</p> <p>Two ferry routes, cruise liners and recreational boats would obtain closer views of the decommissioning of the WTGs and IRC platform; however, likely significant effects would occur for a short section when passing the Array Area and IRC Platform due to proximity; thereafter, decreasing to non-significant levels.]</p> <p>There would be an increase in shipping during decommissioning; however, this would be experienced within the existing context of shipping servicing oil rigs.</p> <p>For the nearshore decommissioning works may arise from the use of vessels, jack up barges and cranes. Activities are predicted to be of relatively low magnitude, temporary and of short duration and as such will not result in a likely significant effect.</p>	x	x	x	x	x

No.	Receptor	Proposed Development Stage	Impact Pathway	Relevant Embedded Mitigation	Scoped In/Out	Justification	Aspects to be Considered in EIA				
							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
186	Socio-Economics, Tourism and Recreation	Construction	Increase in employment and Gross Value Added (GVA)	EM48	Scoped In	The construction of the Proposed Development will require expenditure with companies in each of the study areas. This will support employment and generate GVA, including impacts associated with spending in the wider supply chain (indirect effects) and spending by staff (induced effects).	✓	✓	✓	✓	✓
187	Socio-Economics, Tourism and Recreation	Construction	Demographic changes	N/A	Scoped In	The impacts of demographic changes will be assessed as far as possible, including the scale of any impact and its potential to be significant. If ports have been determined by the time of the assessment, it will be possible to be more definitive on the likely significance of these impacts.	✓	✓	✓	✓	✓
188	Socio-Economics, Tourism and Recreation	Construction	Changes to housing demand	N/A	Scoped In	The impacts of demographic changes and the implications for housing demand will be assessed as far as possible, including the scale of any impact and its potential to be significant. If ports have been determined by the time of the assessment, it will be possible to be more definitive on the likely significance of these impacts.	✓	✓	✓	✓	✓
189	Socio-Economics, Tourism and Recreation	Construction	Changes to other local public and private services	N/A	Scoped In	The impacts of demographic changes and the implications for demand on local public and private services will be assessed as far as possible, including the scale of any impact and its potential to be significant. If ports have been determined by the time of the assessment, it will be possible to be more definitive on the likely significance of these impacts.	✓	✓	✓	✓	✓
190	Socio-Economics, Tourism and Recreation	Construction	Socio-cultural impacts	N/A	Scoped In	An increase in the number of new residents may lead to changes in community character, quality of life, community stress and conflict, or social problems. The significance of the effect will be determined by the demographic and social baseline in the areas local to the key epicentres of economic impact. If the port location(s) have yet to be selected, the assessment will develop logic chains of social impacts and potential effects on communities for a range of potential epicentre scenarios.	✓	✓	✓	✓	✓
191	Socio-Economics, Tourism and Recreation	Construction	Changes to visitor behaviour	N/A	Scoped In	Potential changes to visitor behaviour may arise from changes to onshore activity associated with the construction of the Proposed Development, such as increased activity at ports and harbours.	✓	✓	✓	✓	✓
192	Socio-Economics, Tourism and Recreation	Construction	Changes to commercial fisheries	see Commercial Fisheries Chapter	Scoped In	If the construction of the Proposed Development causes disruption to commercial fishing, as identified as a significant effect in the Commercial Fisheries Chapter, this may lead to reduced economic activity in the commercial fisheries sector.	✓	✓	✓	✓	✓
193	Socio-Economics, Tourism and Recreation	Construction	Changes to shipping and marine recreation	See Shipping and Navigation Chapter	Scoped In	Significant effects to economic activity as a result of the construction of the offshore elements of the proposed development may impact activity in the shipping and marine recreation sectors. This will be dependent on the identification of significant effects in the appropriate chapters of the EIA.	✓	✓	✓	✓	✓
194	Socio-Economics, Tourism and Recreation	Operation & Maintenance	Increase in employment and Gross Value Added (GVA)	EM48	Scoped In	Operation and maintenance will require expenditure with companies and organisations in each of the study areas, supporting employment and generating GVA.	✓	✓	✓	✓	✓
195	Socio-Economics, Tourism and Recreation	Operation & Maintenance	Demographic change	N/A	Scoped In	The impacts of demographic changes will be assessed as far as possible, including the scale of any impact and its potential to be significant. If ports have been determined by the time of the assessment, it will be possible to be more definitive on the likely significance of these impacts.	✓	✓	✓	✓	✓
196	Socio-Economics, Tourism and Recreation	Operation & Maintenance	Changes to housing demand	N/A	Scoped In	The impacts of demographic changes and the implications for housing demand will be assessed as far as feasibly practicable, including the scale of any impact and its potential to be significant. If ports have been determined by the time of the assessment, it will be possible to be more definitive on the likely significance of these impacts.	✓	✓	✓	✓	✓

No.	Receptor	Proposed Development Stage	Impact Pathway	Relevant Embedded Mitigation	Scoped In/Out	Justification	Aspects to be Considered in EIA				
							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
197	Socio-Economics, Tourism and Recreation	Operation & Maintenance	Changes to other local public and private services	N/A	Scoped In	The impacts of demographic changes and the implications for demand on local public and private services will be assessed as far as feasibly practicable, including the scale of any impact and its potential to be significant. If ports have been determined by the time of the assessment, it will be possible to be more definitive on the likely significance of these impacts.	✓	✓	✓	✓	✓
198	Socio-Economics, Tourism and Recreation	Operation & Maintenance	Socio-cultural impacts	N/A	Scoped In	An increase in the number of new residents may lead to changes in community character, quality of life, community stress and conflict, or social problems. The significance of the effect will be determined by the demographic and social baseline in the areas local to the key epicentres of economic impact. If the port location(s) have yet to be selected, the assessment will develop logic chains of social impacts and potential effects on communities for a range of potential epicentre scenarios.	✓	✓	✓	✓	✓
199	Socio-Economics, Tourism and Recreation	Operation & Maintenance	Changes to visitor behaviour.	N/A	Scoped In	Potential changes to visitor behaviour may arise from changes to onshore activity associated with the operation of the Proposed Development, such as increased activity at ports and harbours, or changes to seascape and visual impact.	✓	✓	✓	✓	✓
200	Socio-Economics, Tourism and Recreation	Operation & Maintenance	Changes to commercial fisheries.	N/A	Scoped In	If the operation of the Proposed Development causes disruption to commercial fishing this may lead to reduced economic activity in the commercial fisheries sector. This will be dependent on the identification of significant effects in the appropriate chapters of the EIA i.e. the Commercial Fisheries Chapter (Chapter 12).	✓	✓	✓	✓	✓
201	Socio-Economics, Tourism and Recreation	Operation & Maintenance	Changes to shipping and marine recreation.	N/A	Scoped In	The operation of the offshore elements of the Proposed Development may impact activity in the shipping and marine recreation sectors. This will be dependent on the identification of significant effects in the appropriate chapters of the EIA i.e. the Shipping and Navigation Chapter (Chapter 13).	✓	✓	✓	✓	✓
202	Socio-Economics, Tourism and Recreation	Decommissioning	Increase in employment and Gross Value Added (GVA)	N/A	Scoped In	Decommissioning will require expenditure with companies and organisations in each of the study areas, supporting employment and generating GVA.	✓	✓	✓	✓	✓
203	Socio-Economics, Tourism and Recreation	Decommissioning	Changes to visitor behaviour	N/A	Scoped Out	Potential changes to visitor behaviour may arise from changes to onshore activity associated with decommissioning of the Proposed Development, such as increased activity at ports and harbours, or changes to seascape and visual impact. However, the locations, methods and approach to decommissioning is unlikely to be known at this stage and the tourism sector baseline has the potential to change significantly between now and the time of decommissioning. The significance of any effect will also be determined by the location of ports used in the decommissioning. This has been scoped out as a meaningful assessment will not be possible until the port location(s) are known.	✓	✓	✓	ü	✓
204	Socio-Economics, Tourism and Recreation	Decommissioning	Demographic changes	N/A	Scoped In	The impacts of demographic changes will be assessed as far as possible, including the scale of any impact and its potential to be significant. If ports have been determined by the time of the assessment, it will be possible to be more definitive on the likely significance of these impacts.	✓	✓	✓	✓	✓
205	Socio-Economics, Tourism and Recreation	Decommissioning	Changes to housing demand	N/A	Scoped In	The impacts of demographic changes and the implications for housing demand will be assessed as far as possible, including the scale of any impact and its potential to be significant. If ports have been determined by the time of the assessment, it will be possible to be more definitive on the likely significance of these impacts.	✓	✓	✓	✓	✓
206	Socio-Economics, Tourism and Recreation	Decommissioning	Changes to other local public and private services	N/A	Scoped In	The impacts of demographic changes and the implications for demand on local public and private services will be assessed as far as possible, including the scale of any impact and its potential to be significant. If ports have been determined by the time of the assessment, it will be possible to be more definitive on the likely significance of these impacts.	✓	✓	✓	✓	✓

No.	Receptor	Proposed Development Stage	Impact Pathway	Relevant Embedded Mitigation	Scoped In/Out	Justification	Aspects to be Considered in EIA				
							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
207	Socio-Economics, Tourism and Recreation	Decommissioning	Socio-cultural impacts	N/A	Scoped In	An increase in the number of new residents may lead to changes in community character, quality of life, community stress and conflict, or social problems. The significance of the effect will be determined by the demographic and social baseline in the areas local to the key epicentres of economic impact. If the port location(s) have yet to be selected, the assessment will develop logic chains of social impacts and potential effects on communities for a range of potential epicentre scenarios.	✓	✓	✓	✓	✓
208	Socio-Economics, Tourism and Recreation	Decommissioning	Changes to commercial fisheries	N/A	Scoped In	If decommissioning the Proposed Development causes disruption to commercial fishing this may lead to reduced economic activity in the commercial fisheries sector. This will be dependent on the identification of significant effects in the appropriate chapters of the EIA.	✓	✓	✓	✓	✓
209	Socio-Economics, Tourism and Recreation	Decommissioning	Changes to shipping and marine recreation	N/A	Scoped In	The decommissioning of the Proposed Development may impact activity in the shipping and marine recreation sectors. This will be dependent on the identification of significant effects in the appropriate chapters of the EIA.	✓	✓	✓	✓	✓
210	Infrastrucure and Other Users	Construction	Temporary obstruction and / or damage of subsea cables and utilities	EM42 EM43	Scoped In	Likely significant effects from construction activities including potential damage to, or interaction between infrastructure, the need for cable or pipeline crossings and increased vessels/ restricted access during construction.	✓	✓	✓	✓	✓
211	Infrastrucure and Other Users	Construction	Temporary obstruction and / or damage of oil and gas infrastructure	EM42 EM43	Scoped In	Likely significant effects resulting from construction of the Proposed Development. Review of offshore optioneering and further detailed design including locations of WTGs, IACs and the routing of the ECC is required to reduce possible interactions but potential for damage and restricted access to infrastructure cannot be discounted at this point.	✓	✓	✓	✓	✓
212	Infrastrucure and Other Users	Construction	Temporary obstruction and / or damage of dredging and disposal sites	N/A	Scoped Out	No likely significant effects are predicted in relation to obstruction of disposal sites due to the distance from the Proposed Development. It is unlikely that the sites would interact and provide any form of obstruction or result in damage and therefore this impact is proposed to be scoped out.	✗	✗	✗	✗	✗
213	Infrastrucure and Other Users	Construction	Temporary obstruction and / or damage to other renewable energy projects	EM42 EM44	Scoped In	There is not considered to be any likely significant effects in relation to obstruction or damage to Beatrice, Moray East, Moray West and Hywind due to the distance from the Proposed Development. However there is potential for obstruction or interaction with ScotWind and INTOG projects with regards to the Proposed Developments IRC platform, export cables and other Offshore Transmission Infrastructure. This is in part due to the uncertainty on the final routes/locations for the Proposed Development and other renewable energy projects. Therefore, these impacts are scoped in.	✗	✗	✗	✓	✓
214	Infrastrucure and Other Users	Construction	Buchan Temporary obstruction and / or damage to CCUS	EM43	Scoped In	There is a CCUS project located in the study area which overlaps the northern section of the ECC Search Area. As the Array Area avoids spatial overlap with the CCUS site it is not considered that any likely significant effects will occur. However, given the early stage development of both projects the impact is screened in for further consideration at EIA stage.	✓	✓	✓	✓	✓
215	Infrastrucure and Other Users	Construction	Interference and / or damage of telecommunications links	N/A	Scoped Out	Likely significant effects are not considered to occur in relation to interference of telecommunications links due to the distance between the Proposed Development and the closest transmitter locations, and following the consultation undertaken (as detailed in Table 18.1).	✗	✗	✗	✗	✗
216	Infrastrucure and Other Users	Construction	Temporary obstruction and / or damage to other marine infrastructure.	N/A	Scoped Out	There is no other marine infrastructure (including aquaculture sites) in the study area of the Proposed Development.	✗	✗	✗	✗	✗
217	Infrastrucure and Other Users	Operation & Maintenance	Obstruction and / or damage of subsea cables and utilities	EM42	Scoped In	Likely significant effects from operational and maintenance activities associated with the Proposed Development including cable repairs and re-burial activities resulting in damage or restricted access.	✓	✓	✓	✓	✓
218	Infrastrucure and Other Users	Operation & Maintenance	Obstruction and / or damage of oil and gas	EM42 EM43	Scoped In	Potential for likely significant effects from operational and maintenance activities associated with the Proposed Development including cable repairs and re-burial activities resulting in damage or restricted access.	✓	✓	✓	✓	✓

No.	Receptor	Proposed Development Stage	Impact Pathway	Relevant Embedded Mitigation	Scoped In/Out	Justification	Aspects to be Considered in EIA				
							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
219	Infrastrucure and Other Users	Operation & Maintenance	Obstruction and / or damaget o marine dredging and disposal	N/A	Scoped Out	No likely significant effects are predicted in relation to obstruction of disposal sites due to the distance from the Proposed Development, and the nature and frequency of the O&M activities. Therefore, it is highly unlikely that the sites would interact and provide any form of obstruction, therefore this is proposed to be scoped out.	x	x	x	x	x
220	Infrastrucure and Other Users	Operation & Maintenance	Obstruction and / or damage to other renewable energy projects	EM44	Scoped In	No likely significant effects are predicted in relation to obstruction or damage to Beatrice, Moray East, Moray West and Hywind due to the distance from the Proposed Development. However, there is potential for obstruction or interaction with other ScotWind and INTOG projects with regards to the Proposed Development IRC platform, export cables and other Offshore Transmission Infrastructure. This is in part due to the uncertainty on the final routes/locations for the Proposed Development and other renewable energy projects. Therefore, these impacts are scoped in.	x	x	x	✓	✓
221	Infrastrucure and Other Users	Operation & Maintenance	Interference and / or damage of telecommunications links (Operation / Maintenance).	N/A	Scoped Out	Likely significant effects are unlikely to occur in relation to interference of telecommunications links due to the distance between the Proposed Development and the closest transmitter's locations. Therefore, this is proposed to be scoped out.	x	x	x	x	x
222	Infrastrucure and Other Users	Operation & Maintenance	Temporary obstruction and / or damage to CCUS	N/A	Scoped In	There is a CCUS site located in the study area which overlaps the northern section of the ECC Search Area. As the Array Area avoids the CCUS site it is unlikely that any significant effects will occur, however, given the early stage development of both projects the impact is screened in for further consideration.	✓	✓	✓	✓	✓
223	Infrastrucure and Other Users	Operation & Maintenance	Temporary obstruction and / or damage to other marine infrastructure.	N/A	Scoped Out	There are no other marine infrastructure (including aquaculture sites) in the study area of the Proposed Development.	x	x	x	x	x
224	Infrastrucure and Other Users	Decommissioning	Temporary obstruction and / or damage of cables and utilities	EM42 EM43	Scoped In	Likely significant cumulative effects may arise from decommissioning activities and resultant increases vessels to other marine users.	✓	✓	✓	✓	✓
225	Infrastrucure and Other Users	Decommissioning	Temporary obstruction and / or damage of oil and gas	EM42 EM43	Scoped In	Likely significant cumulative effects may arise from decommissioning activities and resultant increases vessels to other marine users.	✓	✓	✓	✓	✓
226	Infrastrucure and Other Users	Decommissioning	Temporary obstruction and / or damage of marine dredging and disposal	N/A	Scoped Out	No likely significant effects are predicted in relation to obstruction of disposal sites due to the distance from the Proposed Development. It is highly unlikely that the sites would interact and provide any form of obstruction, therefore this is proposed to be scoped out.	x	x	x	x	x
227	Infrastrucure and Other Users	Decommissioning	Temporary obstruction and / or damage to other renewable energy projects	N/A	Scoped in	No likely significant effects are predicted in relation to obstruction or damage to other renewable energy projects associated with decommissioning of array infrastructure due to the distance from the Proposed Development. There is however, potential for obstruction or interaction with ScotWind and INTOG projects with regards to the Proposed Development IRC platform, export cables and other Offshore Transmission Infrastructure. This is in part due to the uncertainty on the final routes/locations for the Proposed Development and other renewable energy projects. Therefore, these impacts are scoped in for further consideration as part of the EIA.	x	x	x	✓	✓
228	Infrastrucure and Other Users	Decommissioning	Temporary obstruction and / or damage to CCUS	EM43	Scoped In	There is a potential CCUS site located in the in the study area which overlaps the northern section of the ECC Search Area. As the Array Area avoids the CCUS site it is unlikely that any significant effects will occur, however, given the early stage development of both projects the impact is screened in for further consideration.	✓	✓	✓	✓	✓
229	Infrastrucure and Other Users	Decommissioning	Temporary obstruction and / or damage to other marine infrastructure.	N/A	Scoped Out	There are no other marine infrastructure (including aquaculture sites) in the study area of the Proposed Development.	x	x	x	x	x

No.	Receptor	Proposed Development Stage	Impact Pathway	Relevant Embedded Mitigation	Scoped In/Out	Justification	Aspects to be Considered in EIA				
							Floating WTGs (including moorings, anchors)	Offshore Substation Platform (OSP)	Inter-Array Cables (IACs)	Intermediate Reactive Compensation (IRC) platform	Export Cables (including landfall)
230	Climate Effects	Construction	Embodied carbon in construction materials	N/A	Scoped In	There is potential for emissions to be released from the production, manufacturing, and intra-manufacturing transport of materials used in the construction of the Proposed Development.	✓	✓	✓	✓	✓
231	Climate Effects	Construction	Emissions from construction activities	N/A	Scoped In	The transport of materials and workers to the construction site, energy and water consumed during construction, and any waste generated would contribute to the carbon footprint of the Proposed Development	✓	✓	✓	✓	✓
232	Climate Effects	Construction	Resilience to climate change effects	N/A	Scoped In	There is potential for changes to climate to impact negatively on Proposed Development infrastructure and activities during the construction period.	✓	✓	✓	✓	✓
233	Climate Effects	Operation & Maintenance	Operational energy consumption	N/A	Scoped In	The energy consumed throughout this phase is likely to contribute to the Proposed Development GHG emissions.	✓	✓	✓	✓	✓
234	Climate Effects	Operation & Maintenance	Emissions from operational processes	N/A	Scoped In	The operation of the Proposed Development would result in GHG emissions from the supply of materials to enable operation and maintenance (i.e., lubricants) and the transport of workers and materials.	✓	✓	✓	✓	✓
235	Climate Effects	Operation & Maintenance	Resilience to climate change effects	N/A	Scoped In	There is potential for changes to climate to impact negatively on Proposed Development infrastructure and activities during the O&M phase.	✓	✓	✓	✓	✓
236	Climate Effects	Decommissioning	Emissions from decommissioning activities	N/A	Scoped In	The transport of materials and workers to the Proposed Development, and energy consumption during decommissioning, and any waste generated would contribute to the carbon footprint of the Proposed Development.	✓	✓	✓	✓	✓
237	Climate Effects	Decommissioning	Resilience to climate change effects	N/A	Scoped In	There is potential for changes to climate to impact negatively on Proposed Development infrastructure and activities during decommissioning.	✓	✓	✓	✓	✓