

MachairWind Offshore Windfarm

Chapter 17 Infrastructure and Other Marine Users



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GLOSSARY OF ACRONYMS

Term	Definition
amsl	Above Mean Sea Level
CEA	Cumulative Effects Assessment
CES	Crown Estate Scotland
CMAL	Caledonian Maritime Assets
DoL	Depth of Lowering
DSLPP	Development Specification and Layout Plan
ECC	Export Cable Corridor
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
GW	Gigawatt
HRA	Habitats Regulations Assessment
IAC	Inter-Array Cable
ICPC	International Cable Protection Committee
INTOG	Innovation and Targeted Oil and Gas
km	kilometres
LAT	Lowest Astronomical Tide
LFA	Low Flying Area
LMP	Lighting and Marking Plan
LSE	Likely Significant Effect
MCA	Maritime and Coastguard Agency
MD-LOT	Marine Directorate Licencing and Operations Team
MoD	Ministry of Defence
NLB	Northern Lighthouse Board
NMP	National Marine Plan
NPF	National Planning Framework
NSTA	North Sea Transition Authority
m	metres
O&M	Operation and Maintenance
OAA	Option Agreement Area
OnTDA	Onshore Transmission Development Area
OREI	Offshore Renewable Energy Installations
OSP	Offshore Substation Platform



Term	Definition
OVMPNSP	Outline Vessel Management Plan and Navigational Safety Plan
PDE	Project Design Envelope
POA	Plan Option Area
RYA	Royal Yachting Association
SAR	Search and Rescue
SEA	Strategic Environmental Assessment
SMP-OWE	Sectoral Marine Plan for Offshore Wind Energy
SNH	Scottish Natural Heritage
UK	United Kingdom
UXO	Unexploded Ordnance
WDA	Windfarm Development Area
WTG	Wind Turbine Generator
Zoi	Zone of Influence



GLOSSARY OF TERMS

Term	Definition
Cable protection	Protective measure to minimise the effects of scour and hazards along the offshore cables (e.g. to prevent cable exposure or snagging of vessel anchors or fishing gear), as well as for protecting these cables at infrastructure crossing points.
Collision	The act or process of two moving objects colliding.
Combined Assessment	A whole-Project assessment considering interactions between the Windfarm Development Area, Offshore Export Cable Corridor and Onshore Transmission Development Area (i.e. considering impact interactions and additive effects to determine if any effects would be materially elevated from those assessed for the Windfarm Development Area-alone assessment). Due to long delays in securing confirmation of the Project's grid connection location, the level of detail available for the Offshore Export Cable Corridor and Onshore Transmission Development Area is limited and therefore the assessment is commensurate with the level of detail available at the time of carrying out the assessment. Within the upcoming Offshore Export Cable Corridor and Onshore Transmission Development Area consent applications, their respective scoping and Environmental Impact Assessment Report / Environmental Report will take account of all likely effects predicted within the WDA EIA and present updated combined assessments using the latest available information covering all aspects of the Project.
Cumulative Effects Assessment	Assessment of likely significant effects resulting from the incremental change caused by other past, present and reasonably foreseeable projects / activities together with the Project. This is separate to combined effects arising between the Project's separate Development Areas.
Development Area	Application boundary for consenting purposes which, for the Project, consists of a Windfarm Development Area, Offshore Export Cable Corridor, and Onshore Transmission Development Area. Separate consent and marine licence applications will be submitted for each Development Area where applicable.
Embedded mitigation measure	Mitigation measures, including industry good practice measures, that are directly incorporated into the design for the MachairWind Windfarm Development Area to avoid or reduce environmental effects.
Environmental Impact Assessment (EIA)	The process of evaluating the likely significant environmental effects of a proposed development over and above the existing circumstances (or 'baseline').
Environmental Impact Assessment (EIA) Regulations	A collective term referring to The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 and The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017.
Inter-array cables (IACs)	Armoured cable containing electrical and fibre optic cores which link the wind turbine generators to each other and to the offshore substation platform(s).
Lowest Astronomical Tide (LAT)	The lowest level that can be expected to occur under average meteorological conditions and under any combination of astronomical conditions.
MachairWind Offshore Windfarm	An offshore windfarm capable of exporting around 2 GW of renewable energy to the National Electricity Transmission System. MachairWind Offshore Windfarm comprises three Development Areas: <ul style="list-style-type: none"> • The WDA – located on the west coast of Scotland to the northwest of Islay and west of Colonsay; • The Offshore Export Cable Corridor – a preliminary boundary extending from the WDA to mean high water springs at a landfall location near Girvan, South Ayrshire; and • The Onshore Transmission Development Area – a preliminary boundary which extends landward from mean low water springs and includes the land required for the landfall of the



Term	Definition
	<p>offshore export cables and their route up to but not including the proposed high voltage direct current switching station which will be developed and constructed by Transmission Owner, ScottishPower Transmission.</p> <p>Separate consent and licence applications will be submitted for each Development Area.</p>
Mean High Water Springs (MHWS)	The average, over a year, of the heights of two successive high waters during those periods of 24 hours (once every fortnight) when the range of the tide is greatest.
Mean Low Water Springs (MLWS)	The average, over a year, of the heights of two successive low waters during those periods of 24 hours (once every fortnight) when the range of the tide is greatest.
Mean sea level	The average level of the sea taking account of all tidal effects but excluding surge events.
National Electricity Transmission System	The high-voltage electricity power transmission network serving Great Britain which receives electricity from generators (such as offshore windfarms) and transmits that electricity to anywhere on the National Electricity Transmission System to satisfy demand.
Offshore cables	The collective term for all offshore cables i.e. IACs, offshore substation platform link cables, offshore export cables and associated fibre optic cables.
Offshore ECC infrastructure	The offshore transmission infrastructure located within the boundary of the Offshore Export Cable Corridor, namely the offshore export cable(s).
Offshore export cable	Armoured cable containing electrical cores between the offshore substation platform(s) and landfall. Offshore export cables will include bundled fibre optic cables. The offshore export cables are subject to Marine Licence applications under the Marine (Scotland) Act 2010. The portion of the offshore export cable(s) located within the WDA is assessed as part of this MachairWind WDA EIA and a marine licence application to construct, alter or improve this portion has been submitted alongside the WDA application. A separate marine licence application will be submitted for the portion of the offshore export cable(s) from the WDA boundary to mean high water Mean High Water Springs.
Offshore Export Cable Corridor (ECC)	The preliminary boundary extending from the WDA to mean high water springs near Girvan, South Ayrshire and within which the offshore export cable(s) will be located. A separate marine licence application will be submitted for the offshore export cable(s) located within the Offshore ECC.
Offshore Substation Platform (OSP)	An offshore platform with a fixed foundation located within the WDA which houses electrical equipment such as transformers, switchgear, protection and control systems, and enables the windfarm's renewable electricity to be collected via inter-array cables and exported to the National Electricity Transmission System via offshore export cables.
Offshore Substation Platform (OSP) link cables	Electrical cables which link OSPs (if more than one OSP is required). These cables will include fibre optic cores or bundled fibre optic cables. OSP link cables will be wholly located within the WDA.
Onshore Transmission Development Area (OnTDA)	The preliminary boundary which extends landward from mean low water springs and includes the land required for the landfall of the offshore export cables and their route up to but not including the proposed high voltage direct current switching station which will be developed and constructed by Transmission Owner, ScottishPower Transmission. This Transmission Owner is responsible for consenting the high voltage direct current switching station. Onward connections to the National Electricity Transmission System will be consented by National Grid Electricity Transmission and ScottishPower Transmission. Where relevant, these are considered as part of cumulative effects assessment in the EIA.
OnTDA infrastructure	The onshore transmission infrastructure, for which the Applicant is responsible, that is located primarily within the OnTDA, up to mean low water springs, and includes but is not limited to: landfall(s), onshore export cables, transition joint bays, telecom/SCADA infrastructure including vehicular access, joint bays, link boxes and temporary construction



Term	Definition
	compounds. The OnTDA infrastructure will be subject to a planning application under the Town and Country Planning (Scotland) Act 1997.
Operational life	The operational life is the expected length of time from final commissioning of the WDA until the cessation of commercial operations. This is anticipated to be 35 years.
Option Agreement Area (OAA)	The seabed area awarded to ScottishPower Renewables in January 2022 through the Scotwind leasing round.
Plan Option	A spatial plan area proposed through the Sectoral Marine Plan for offshore wind energy (as adopted in 2020). As part of the ScotWind leasing round, offshore wind developers submitted bids for Plan Options which, following a successful bid, become OAAs.
Pre-construction works	Pre-construction works are activities undertaken prior to formal commencement of construction. Examples include survey works such as geotechnical and geophysical surveys and seabed preparation activities.
Safety zones	An area of water around or adjacent to a wind turbine generator or Offshore Substation Platform and associated substructure which is to be constructed, extended, operated or decommissioned, from which certain or all classes of vessels are excluded and within which activities can be regulated for the purpose of securing safety of the wind turbine generator, substructure or vessels in that vicinity, and individuals on both the wind turbine generator, substructure or vessel, in line with Section 95 of the Energy Act 2004.
Scottish Marine Area	The area of Scotland's territorial sea limit (up to 12 nautical miles from baseline) as defined in the Marine (Scotland) Act 2010.
ScotWind	A Crown Estate Scotland seabed leasing round which enabled developers to propose offshore wind projects and apply for seabed rights to plan and build windfarms in Scottish waters.
Scour protection	Protective measures to avoid sediment being eroded away from the base of the wind turbine generator foundations as a result of the flow of water.
The Applicant	The legal entity submitting consent applications for the MachairWind Offshore Windfarm, namely MachairWind Limited.
The Project	MachairWind Offshore Windfarm including all its Development Areas and associated infrastructure.
WDA infrastructure	The offshore generation and transmission infrastructure located within the WDA including but not limited to: WTGs, WTG fixed foundations (and associated scour protection), OSP(s), OSP fixed foundations (and associated scour protection), IACs, OSP link and offshore export cable(s) and their associated external cable protection (insofar as these are located within the WDA) and fibre optic cables.
Wind Turbine Generator (WTG)	A wind turbine generator which converts wind energy into electrical energy. Each wind turbine generator is a complex system composed of a high number of components. Typically, the main components include the rotor assembly (composed of three blades and a hub); the nacelle (containing a generator, shaft and gearbox, power electronic converter and transformer); and the tower (containing lifting equipment and the switchgear).
Windfarm Development Area (WDA)	The application boundary within the OAA where consent will be sought for the proposed WDA infrastructure. The WDA infrastructure is subject to Section 36 consent and marine licence applications (generation and transmission) which are being applied for separately from the Offshore ECC infrastructure and OnTDA infrastructure.



17 INFRASTRUCTURE AND OTHER MARINE USERS

17.1 INTRODUCTION

1. This chapter presents an assessment of potential impacts and likely significant effects (LSE) on infrastructure and other marine users that may arise from the construction, operation and maintenance (O&M), and decommissioning of the MachairWind Windfarm Development Area (WDA) infrastructure.
2. Given that certainty on the grid connection location will become known after submission of the WDA Environmental Impact Assessment (EIA) Report (EIAR), this topic chapter considers the WDA Study Area and existing environment only. A combined assessment of the construction, O&M and decommissioning of the WDA activities, Offshore Export Cable Corridor (ECC) and Onshore Transmission Development Area (OnTDA) activities (commensurate with the level of detail that is available at the time of carrying out that assessment) is also provided. This approach will ensure a holistic view is undertaken of the entire Project. As noted in **Chapter 1 Introduction**, the assessment of potential effects on all receptors associated with the Offshore ECC and OnTDA will be presented in individual EIARs, which will be submitted separately in accordance with the relevant EIA Regulations.
3. This chapter considers the following WDA infrastructure: wind turbine generators (WTGs), Offshore Substation Platforms (OSP) and associated fixed foundations and scour protection, IACs, OSP link cables, the portion of the offshore export cable located within the WDA and associated cable protection.
4. This chapter has been prepared to provide Marine Directorate - Licensing and Operations Team (MD-LOT) (on behalf of the Scottish Ministers) and stakeholders with sufficient information to determine the LSE of the Project on the receiving environment.
5. This chapter should be read in conjunction with the following related EIAR chapters:
 - **Chapter 12 Commercial Fisheries** - the infrastructure and other marine users assessment includes consideration of impacts on activities associated with existing aquaculture sites;
 - **Chapter 13 Shipping and Navigation** - shipping and navigation routes are considered for the infrastructure and other marine users receptors identified within the infrastructure and other marine users Study Area; and
 - **Chapter 15 Military and Civil Aviation** - existing military and civil aviation activities are considered in the infrastructure and other marine users assessment.
6. Key inter-relationships between this chapter and those listed above are considered where relevant.
7. This chapter was prepared by Haskoning.

17.2 LEGISLATION, POLICY AND GUIDANCE

8. The overarching policy and legislation relevant to the EIA is described in **Chapter 2 Policy and Legislative Context**. **Table 17.1** sets out the relevant legislation, policy and guidance that informs the assessment for infrastructure and other marine users.



Table 17.1 Summary of relevant legislation, policy and guidance for infrastructure and other marine users

Relevant Policy or Guidance	Relevance to the Assessment
Legislation	
Energy Act, 2004	<p>The Energy Act aims to transform the United Kingdom’s (UK’s) energy system by strengthening energy security, supporting the delivery of net zero and ensuring household bills are affordable in the long-term.</p> <p>Section 95 of the Energy Act 2004 sets out that Safety Zones could be established for any phase of an offshore renewable energy project in designated areas, where it is appropriate for safety reasons. Safety Zones are intended to ensure the safety of the renewable energy installation or other installations in the vicinity during their construction, operation, extension or decommissioning.</p>
Policy	
UK Marine Policy Statement (UK Government, 2011)	<p>The Marine Policy Statement is the framework for preparing Marine Plans and guiding decisions affecting the marine environment. It informs the standard approach to planning and decision making to ensure consistency across all UK Marine Plans.</p> <p>The key reference is:</p> <p>Chapter 3: “This chapter sets out the policy objectives for the key activities that take place in the marine environment. These objectives are the specific policy outcomes which the UK Government, Scottish Government...”</p>
Scotland’s National Marine Plan (Scottish Government, 2015) (reviewed in 2024)	<p>The Scottish National Marine Plan (NMP) sets out general, strategic and topic-based policies for the sustainable development of Scotland’s marine resources out to 200 nm. The Plan highlights Marine planning policies applicable to infrastructure and other marine users.</p> <p>The key policies and objectives of relevance to this chapter are:</p> <p>GEN 4: Co-existence – “Proposals which enable coexistence with other development sectors and activities within the Scottish marine area are encouraged in planning and decision-making processes, when consistent with policies and objectives of this plan”.</p> <p>Offshore Wind and Marine Renewable Energy: Spatial Planning Policy 1– “Proposals for commercial scale offshore wind and marine renewable energy development should be sited in the Plan Option areas (POAs) identified through the Sectoral Marine Plan process. Plan Options are considered the preferred strategic locations for the sustainable development of offshore wind and marine renewables. This preference should be taken into account by marine planners and decision makers if alternative development or use of these areas is being considered. Proposals are subject to licensing and consenting processes”</p> <p>Recreation and Tourism Policy 2 – “The following key factors should be taken into account when deciding on uses of the marine environment and the potential impact on recreation and tourism:</p> <ul style="list-style-type: none"> • The extent to which the proposal is likely to adversely affect the qualities important to recreational users, including the extent to which proposals may interfere with the physical infrastructure that underpins a recreational activity. • The extent to which any proposal interferes with access to and along the shore, to the water, use of the resource for recreation or tourism purposes and existing navigational routes or navigational safety. • Where significant impacts are likely, whether reasonable alternatives can be identified for the proposed activity or development. • Where significant impacts are likely and there are no reasonable alternatives, whether mitigation, through recognised and effective measures, can be achieved at no significant cost to the marine recreation or tourism sector interests.” <p>Shipping, Ports, Harbours and Ferries Marine Planning Policy 2 – “Marine development and use should not be permitted where it will restrict access to, or future</p>



Relevant Policy or Guidance	Relevance to the Assessment
	<p>expansion of, major commercial ports or existing or proposed ports and harbours which are identified as National Developments in the current NPF or as priorities in the National Renewables Infrastructure Plan.”</p> <p>Submarine Cables Objective 1 – “Cable and network owners should engage with decision makers at the early planning stage to notify of any intention to lay, repair or replace cables before routes are selected and agreed. When making proposals, cable and network owners and marine users should evidence that they have taken a joined-up approach to development and activity to minimise impacts, where possible, on the marine historic and natural environment, the assets, infrastructures and other users. Appropriate and proportionate environmental consideration and risk assessments should be provided which may include cable protection measures and mitigation plans.”</p> <p>Defence Marine Planning Policy 2 – “For the purposes of national defence, the MOD may establish by-laws for exclusions and closures of sea areas. In most areas this will mean temporary exclusive use of areas by the MOD. Where potential for conflict with other users is identified, appropriate mitigation will be identified and agreed with the MOD, prior to planning permission, a marine licence, or other consent being granted.”</p>
<p>Sectoral Marine Plan for Offshore Wind Energy (Scottish Government, 2020) and Draft Updated Sectoral Marine Plan for Offshore Wind Energy (Scottish Government, 2025)</p>	<p>The Sectoral Marine Plan for Offshore Wind Energy (SMP-OWE) identifies sustainable areas for the future development of commercial scale offshore wind energy in Scotland, including a spatial strategy to inform the seabed leasing process for the purposes of offshore wind energy.</p> <p>The WDA is located in Plan Option Area (POA) W1, as identified in the SMP for Offshore Wind. Plan Options including W1 were subject to testing, refinement and area reduction through Strategic Environmental Assessment (SEA), Habitats Regulations Appraisal (HRA) and plan development processes. The SEA identified relevant characteristics of Plan Option W1 and identified key risks to be addressed in consenting applications. A key risk factor identified for the W1 area is potential impacts on recreational angling outlined in Section 17.11.1.2.</p>
<p>National Planning Framework 4 (Scottish Government, 2023)</p>	<p>National Planning Framework 4 (NPF4) sets out Scotland’s spatial principles, regional priorities, national developments and national planning policy. NPF4 presents Sustainable Places, Liveable Places and Productive Places to achieve national outcomes including benefits to the environment, communities, and health. NPF4 contains a notable focus on tackling both the climate and nature crises.</p> <p>The key references are:</p> <p>Policy 1: “When considering all development proposals significant weight will be given to the global climate and nature crises.”</p> <p>Policy 11: Energy - “Development proposals for all forms of renewable, low-carbon and zero emissions technologies will be supported...”</p> <p>Part 3: Annex B, National Development 3 - Strategic Renewable Electricity Generation and Transmission Infrastructure – “This national development supports renewable electricity generation, repowering, and expansion of the electricity grid...”</p>
<p>Argyll and Bute Council Local Development Plan 2 (Argyll and Bute Council, 2024)</p>	<p>This plan has specific policies which are relevant to the receptors discussed in this chapter.</p> <p>The key reference is:</p> <p>Policy 30: The Sustainable Growth of Renewables – “The Council will support renewable energy developments where these are consistent with the principles of sustainable development and it can be adequately demonstrated that there would be no unacceptable environmental effects, whether individual or cumulative, on local</p>



Relevant Policy or Guidance	Relevance to the Assessment
	communities, natural and historic environments, landscape character and visual amenity, and that the proposals would be compatible with adjacent land uses..."
Guidance	
European Subsea Cable Association guidelines (European Subsea Cables Association, 2012)	The European Subsea Cable Association guideline no.6 'The Proximity of Offshore Renewable Energy Installations (OREI) & Submarine Cable Infrastructure in UK Waters' provides a framework for collaborative working between Offshore Windfarms and subsea cable developments.
International Cable Protection Committee (ICPC) Recommendations (ICPC, 2019)	ICPC Recommendations act as guides to provide cable owners and other seabed users with technically accurate information to promote the highest goals of reliability and safety in the submarine cable environment. The ICPC Recommendation of relevance to this assessment is 13-2C: The Proximity of OREI and Submarine Cable Infrastructure in National Waters.

17.3 CONSULTATION

9. This infrastructure and other marine users chapter has been informed by engagement with stakeholders, including those listed below:

- Argyll and Bute Council;
- Caledonian Maritime Assets (CMAL);
- Kishorn Port Ltd;
- Local fishers and fishery organisations (see **Chapter 12 Commercial Fisheries** for further information);
- Malin Sea Offshore Wind;
- Maritime and Coastguard Agency (MCA);
- MD-LOT;
- Ministry of Defence (MoD);
- North Channel Wind;
- Northern Lighthouse Board (NLB);
- Peel Ports;
- Port Ellen Harbour Association;
- Recreational angling and wildlife tour operators (see **Chapter 13 Shipping and Navigation** for further information);
- Shearwater Energy Ltd;
- Shipping and navigation organisations (see **Chapter 13 Shipping and Navigation** for further information);
- South West Mull and Iona Development (SWMID);
- Spiroad Na Mara; and
- Stornoway Port Authority

10. As part of the consultation process, the Applicant presented the approach to assessment to stakeholders to offer transparency around the scoping methodology and rationale, capture stakeholder advice and guidance, and incorporate stakeholder feedback, where appropriate. A summary of the approach to stakeholder communication and consultation is outlined in **Chapter 6 Consultation and Stakeholder Engagement**.



11. Feedback from the MoD on the refinements to the WDA boundary and infrastructure was sought prior to application to seek transparency of potential impacts. The response to this feedback request is detailed in the Post-Scoping Opinion section of **Table 17.2** below.
12. Consultation with shipping and navigation stakeholders (e.g. MCA, Chamber of Shipping, Cruising Association, NLB) was conducted through the pre-application stage of the Project, with feedback from such organisations helping to inform the design of the Project. Further information on consultation with shipping and navigation stakeholders is detailed in Section 13.3 of **Chapter 13 Shipping and Navigation**.
13. The consultation outcomes in relation to infrastructure and other marine users are outlined in **Table 17.2**, which summarises stakeholder feedback, outlines how the Applicant has responded to the feedback received, and details how it has been considered within this chapter. **Table 17.3** summarises other meetings and consultation relevant to this chapter.
14. As detailed in **Table 17.2** and **Table 17.3**, the following points of agreement with stakeholders are noted:
 - Argyll and Bute Council agreed with the impacts scoped in / scoped out of the assessment and the data sources proposed to be used to characterise the baseline;
 - MD-LOT considered that the baseline data gathered for the assessment is appropriate; and
 - The MoD agreed with the list of practice and exercise areas noted as overlapping with the WDA.



Table 17.2 Summary of stakeholder comments relevant to infrastructure and other marine users and Applicants response

I.D.	Consultee	Stakeholder Comment	Applicant Response
Pre-Scoping Opinion (2022, 2023, 2024)			
1.	MoD (2022)	The Applicant introduced the Project to the MoD via email in November 2022. The MoD acknowledged receipt of the email and requested general project parameters to inform the MoD's assessment of the Project.	The Applicant provided the requested parameters to the MoD via email.
Scoping Opinion (09 January 2025)			
	Argyll and Bute Council	<p>Do you agree that the embedded mitigation measures described provide a suitable means for managing and mitigating the potential effects of the WDA on infrastructure and other marine user receptors?</p> <p>As mentioned in earlier sections, in general yes. However, I note that under section 17.8 Mitigation Measures, M-8 Cable Plan in Table 17.3 Indicative embedded mitigation measures for infrastructure and other marine users states that the Applicant plans to bury cables to a minimum a target burial depth of 0.5 m. Where under Table 8.8 Potential impacts scoped in or scoped out for benthic ecology of the Scoping Report it states: Where cables are buried to sufficient depth, significant effects on benthic receptors are not expected. The UK National Policy Statement for Renewable Energy Infrastructure (EN-3) states that where cables are buried to 'a depth of at least 1.5 m below the seabed, the applicant should not have to assess the effect of the cables on benthic habitats during the operational phase of the offshore wind farm'. It is currently expected that cables will be buried where practicable, but the target depth will vary depending on the ground conditions encountered. It will therefore be important that cable burial will be at a minimum depth of 1.5 m below the seabed, where environmental conditions allow.</p>	<p>The purpose of cable burial is to ensure that the cables are protected from damage, either from human activities such as fishing and shipping, or from naturally occurring physical morphology processes acting on the seabed. Cable minimum Depth of Lowering (DoL) (i.e. the distance between mean seabed level and the top surface of the buried cable will be between 0.3 m and 3 m but is typically between 1.0 m and 2.0 m in seabed substrates consisting of granular material or soft clay. Where practicable, the Applicant will seek to achieve DoLs of 1.0 m to 2.0 m for all offshore cable types. DoLs of up to 3.0 m may be used for areas experiencing significant seabed mobility or due to an increased external threat, such as crossing shipping lanes. DoLs of 0.3 m may be used for IACs in challenging ground conditions such as shallow outcropping rock, due to the inherent protection it provides the cable at a shallower DoL. OSP link cables and offshore export cables would, as far as practicable, have a minimum DoL of 1 m. Otherwise, external cable protection methods would be considered such as concrete mattresses, rock placement, rock bags and nature inclusive design solutions (see Chapter 3 Project Description for further details).</p> <p>The preferred method of cable protection is through cable burial. The use of external cable protection methods would be avoided as far as practicable, and the Applicant is</p>

I.D.	Consultee	Stakeholder Comment	Applicant Response
			considering the use of nature inclusive design solutions (see Chapter 3 Project Description and the Nature Positive Plan).
2.	Argyll and Bute Council	<p>Argyll and Bute Council noted that all potential impacts on infrastructure and other marine users appear to have been identified within the scoping report.</p> <p>However, the Council advise that the Applicant consult with the MoD, MCA, NLB, CMAL, and the Royal Yachting Association (RYA).</p>	<p>The Applicant welcomes the agreement with regards to the impacts scoped in and out.</p> <p>The Applicant confirms that consultation with the MoD, MCA, NLB, CMAL and the RYA has been conducted, see information detailed in paragraph 12 above, responses provided in this table and Table 17.3, Chapter 6 Consultation and Stakeholder Engagement and the Pre-Application Consultation Report for further information.</p>
3.	Argyll and Bute Council	In general agreement with the impacts that have been scoped in and scoped out.	The Applicant welcomes the agreement with regards to the impacts scoped in and out.
4.	Argyll and Bute Council	One of the proposed cable landings is on the West Coast of Islay, the public roads leading to this location are extremely vulnerable to extraordinary traffic. Many of the roads are single track, lightly constructed and are built on peat. Additional information relating to the impacts of any land-based works will be required as part of the EIAR.	The Applicant confirms that no cable landings on the west coast of Islay are proposed. Consideration of potential effects on traffic and transport at port facilities short-listed for the Project is detailed in Section 3.6.11 of Chapter 3 Project Description .
5.	MD-LOT	The Scottish Ministers emphasise the importance of engaging with other marine users, including developers of ScotWind and INTOG projects, during all phases of the Proposed Development.	<p>The Applicant has consulted with other marine users (including other ScotWind and INTOG developers) within and in the vicinity of the Project. See a summary of this consultation in</p> <p>Table 17.3 below, with further details provided in Chapter 6 Consultation and Stakeholder Engagement and the Pre-Application Consultation Report.</p>
6.	MD-LOT	5.13.2 Baseline data sources are considered in Section 17.4 and Section 17.5 of the Scoping Report. The Scottish Ministers	The Applicant welcomes the agreement with regard to the baseline data.



I.D.	Consultee	Stakeholder Comment	Applicant Response
		consider the baseline data gathered for the assessment is appropriate.	
7.	MoD, Defence Infrastructure Organisation	<p>It is acknowledged that, at this time, details of the precise location, dimensions, and configuration of the wind turbines and associated infrastructure is not available and that a Project Design Envelope (PDE) approach has been adopted for this array project. The components of the array project will include the following:</p> <ul style="list-style-type: none"> • Up to 147 WTGs on fixed foundations; • IACs; • If required, scour protection for foundation structures supporting the WTGs; and • If required, external cable protection for IACs. <p>The maximum blade tip height of the wind turbines (metres (m) above Lowest Astronomical Tide (LAT)) is expected to be no greater than 340m, with a maximum rotor diameter of 316 m. I write to confirm the safeguarding position of the MOD on information that should be taken into account in the preparation of an Environmental Statement and any associated application(s).</p>	<p>Chapter 3 Project Description explains changes to the WDA infrastructure since scoping. Notably, the WTG envelope has changed to between 91 of the largest WTG and 144 of the smallest.</p> <p>It should also be noted that the WDA Scoping Report did not include a description of OSPs and OSP link cables which are now being assessed in this WDA EIAR. Additionally, the portion of the offshore export cables within the WDA have been assessed as part of the WDA-alone assessment in the technical chapters of this EIAR. Further information regarding the offshore cables assessed in this EIAR is provided in Section 3.6.7 of Chapter 3 Project Description,</p>
8.	MoD, Defence Infrastructure Organisation	<p><u>Defence Maritime Training and Operational Interests</u></p> <p>The scoping report submitted has accurately identified that the wind farm development area does occupy MOD Navy Exercise Areas X5626 Mackenzie, X5539 Orsay and X5543 Colonsay which are used to conduct naval training activities (ref. Section 17.7.2). In addition, it should also be recognised that the WDA will also affect defence maritime navigational interests that are also located within this area relating to submarine operations and highly surveyed routes retained to support national defence requirements. All these defence maritime assets and interests need to be taken into account in the preparation of an application for this proposed development.</p>	<p>Noted. The term 'maritime navigation interests' has been used to refer to Exercise Areas for training and defence maritime navigational interests. Highly surveyed routes are discussed separately in Section 17.8.4. An assessment of potential effects on the MOD's maritime navigation interests is detailed in Section 17.11.1.1.</p>

I.D.	Consultee	Stakeholder Comment	Applicant Response
		<p>The scoping report has determined that impacts upon MOD maritime navigational interests need to be scoped in for the preparation of an Environmental Impact Assessment in relation to all stages of the life of the development proposed (ref. Section 17.9 -Table 17.4). This is endorsed by the MOD. However, the definition of MOD maritime navigational interests should be used to cover the use of Exercise Areas for training, defence maritime navigational interests and highly surveyed routes.</p>	
	MoD, Defence Infrastructure Organisation	<p>The potential for unexploded ordnance (UXO) to be present within the development area and the need to undertake pre-installation works to address this has been recognised (ref. Sections 3.4.2, 3.5.1, 3.5.2 and 3.5.3.1). Embedded mitigation measures have been defined which include the management of any UXO that may be discovered (ref. Section 9.8-Table 9.8).</p>	Noted.
Post-Scoping (2025 and 2026)			
9.	MoD, Defence Infrastructure Organisation	<p><i>Received 07 November 2025</i></p> <p>The scoping report submitted has accurately identified that the wind farm development area does occupy MOD Navy Exercise Areas X5626 Mackenzie, X5539 Orsay and X5543 Colonsay which are used to conduct naval training activities (ref. Section 17.7.2). In addition, it should also be recognised that the WDA will also affect defence maritime navigational interests that are also located within this area relating to submarine operations and highly surveyed routes retained to support national defence requirements. All these defence maritime assets and interests need to be considered in the preparation of an application for this proposed development.</p> <p>The scoping report has determined that impacts upon MOD maritime navigational interests need to be scoped in for the preparation of an Environmental Impact Assessment in relation to all stages of the life of the development proposed (ref.</p>	<p>Noted. The term 'maritime navigation interests' has been used to refer to Exercise Areas for training and defence maritime navigational interests. Highly surveyed routes are discussed separately in Section 17.8.4 An assessment of potential effects on the MOD's maritime navigation interests is detailed in Section 17.11.1.1.</p>

I.D.	Consultee	Stakeholder Comment	Applicant Response
		Section 17.9 -Table 17.4). This is endorsed by the MOD. However, the definition of MOD maritime navigational interests should be used to cover the use of Exercise Areas for training, defence maritime navigational interests and highly surveyed routes.	

Table 17.3 Summary of relevant meetings held in relation to infrastructure and other users

I.D.	Consultee	Summary of Meeting
Pre-Scoping Opinion (2022, 2023, 2024)		
1.	CMAL (2022)	The Applicant met with CMAL in October 2022 to introduce the Project and answer any initial queries. It was agreed that both parties should remain in contact through the development of the Project.
2.	MCA (2022, 2023, 2024)	The Applicant introduced the Project to the MCA during a meeting in April 2022 and provided an initial overview of the intended surveys to be undertaken. The Applicant continued to keep the MCA up to date with proposed survey works in addition to the deployment and removal of equipment. The Applicant also agreed a 'Notice of Intention to carry out an Exempted Activity' with the MCA for survey works that were undertaken later in 2022.
4.	NLB (2022, 2023, 2024)	The Applicant introduced the Project to the NLB during a meeting in April 2022 and discussed the programme for planned survey activities within the vicinity of the Dubh Artach lighthouse. The Applicant continued to keep the NLB up to date with proposed survey works in addition to the deployment and removal of equipment.
5.	Shearwater Energy Ltd. (2023)	The Applicant met with the Project Manager of Shearwater Energy Ltd, to share project stages and better understand the status of the Shearwater Energy project.
6.	Malin Sea Offshore Wind (2024)	The Applicant introduced themselves and agreed to quarterly update meetings with Malin Sea Offshore Wind project team. The meetings, which took place from February 2024 to April 2025, enabled the projects to share information of relevance due to their neighbouring locations and key stakeholders.
7.	Peel Ports (2024)	The Applicant introduced the Project to the Programme Manager, Head of Engineering and Head of Sales, discussing the key characteristics and project timescales. Discussion on Hunterston PARC and King George V (KGV) characteristics, main activities and future development. Hunterston PARC is a shortlisted port for the Construction and Operations & Maintenance of MachairWind, and KVG is a shortlisted port for Operations & Maintenance of MachairWind.



I.D.	Consultee	Summary of Meeting
8.	Stornoway Port Authority (2024)	The Applicant met with the Business Development Executive and Chief Executive to discuss the marshalling and assembly requirements for MachairWind, and the potential use of the Port of Stornoway for these purposes.
Post-Scoping (2025 and 2026)		
9.	MoD, Defence Infrastructure Organisation (2025)	The Applicant met with the MoD to discuss initial comments on the Project's Scoping Report and potential amendments to the WDA, following the MoD's consultee response on the WDA Scoping Report.
10.	MCA (2025)	The Applicant continued to keep the MCA up to date with proposed survey works in addition to the deployment and removal of equipment.
11.	CMAL (2025)	The Applicant met with CMAL to discuss the progress on Port Ellen Terminal Development, noting the potential for Port Ellen to be used as a marine operations base during the construction phase of the Project, with engagement required with Port Ellen Harbour Association.
12.	Argyll and Bute Council (2025)	The Applicant met with Argyll and Bute Council to discuss the role and requirements of a Marine Operations base during construction and provided an overview of the initial high-level due diligence the project is doing to explore ports that might be suitable, with Oban Harbour identified as a possible option. The Council were comfortable with Oban Harbour being listed as a shortlisted port within the WDA EIAR. It was agreed that the Applicant would keep Argyll and Bute Council informed on the port selection process moving forward. The Applicant also met with Argyll and Bute Council to discuss the O&M requirements for the Project, noting that Campbeltown is a shortlisted port for O&M purposes. In March 2025, the Applicant attended a site visit to Campbeltown with the Council.
13.	Port Ellen Harbour Association (2025)	The Applicant introduced the Project to the director of the Port Ellen Harbour Association and discussed the role and requirements of a Marine Operations base during construction and provided an overview of the initial high-level due diligence the project is doing to explore ports that might be suitable, with Port Ellen identified as a possible option. Port Ellen Harbour Association was comfortable with Port Ellen being listed as a shortlisted port within the WDA EIAR. It was agreed that the Applicant would keep the Port Ellen Harbour Association informed with regards to the port selection process moving forward.
14.	South West Mull and Iona Development (SWMID) (2025)	The Applicant introduced the Project to the Chief Executive Office of SWIMD and discussed the role and requirements of a Marine Operations base during construction and provided an overview of the initial high-level due diligence the project is doing to explore ports that might be suitable, with Bendoran identified as a possible option. It was agreed that the Applicant would keep SWMID informed with regards to the port selection process moving forward.
15.	Peel Ports (2025)	The Applicant met with Peel Ports to discuss Hunterston port, which is a shortlisted port for construction and marshalling and assembly for the Project.

I.D.	Consultee	Summary of Meeting
16.	Kishorn Port Ltd.	The Applicant discussed the construction base requirements for MachairWind and discussed the potential use of Kishorn for these purposes. Kishorn Port Ltd was comfortable with Kishorn being listed as a shortlisted port within the MachairWind EIA for the WDA. Was agreed that the Applicant would keep Kishorn Port Ltd informed with regards to the port selection process moving forward.
17.	Malin Sea Offshore Wind (2025)	The Applicant continued the quarterly meetings with Malin Sea Offshore Wind to discuss the latest activities of relevance to the neighboring developments, such as planned survey works and community engagement events.
18.	Spiorad Na Mara (2025)	The Applicant met with Spiorad Na Mara to share information related to project timescales and planned development activities, including future engagement plans, in addition to discussing potential collaboration opportunities, such as regional supply chain engagement events.
19.	North Channel Wind (2025)	The Applicant has consulted with North Channel Wind, a proposed project off the east coast of Northern Ireland. The purpose of this meeting was to discuss project timescales and consultees' response to the WDA Scoping Report (Appendix 1 of this application).
20.	Arnish (2026)	The Applicant met with Arnish to discuss the role and requirements of a construction and logistics base during the Project's construction phase, including early considerations of foundation types and the need for further clarity once geotechnical surveys are complete. It was agreed that Arnish will be included in the indicative shortlist of ports within the WDA EIAR.



17.4 EXISTING DATA SOURCES

15. **Table 17.4** sets out the information and data sources that have been used to inform this chapter.

Table 17.4 Summary of key datasets and information sources

Dataset	Description	Citation
NMP Interactive	Marine Directorate NMP Interactive contains information on: <ul style="list-style-type: none"> • Aquaculture site locations; • Disposal site locations; • Historic aggregate site data and sand gravel resources; • Subsea cables' locations; and • Spatial information on wave and tidal lease sites around the Study Area. 	Marine Scotland, 2025
Offshore oil and gas activity data	Spatial information on gas and oil infrastructure (gas and oil wells, fields, pipelines and licence blocks).	North Sea Transition Authority (NSTA), 2025
Offshore wind lease area	Represents all current offshore windfarms sites in pre-planning, planning, construction and operational phases in Scottish waters.	Crown Estate Scotland, 2025
Carbon Capture Storage	Recent information on Carbon Capture Storage Development and licensing areas.	Scottish Carbon Capture and Storage, 2025

17.5 SITE-SPECIFIC SURVEY DATA

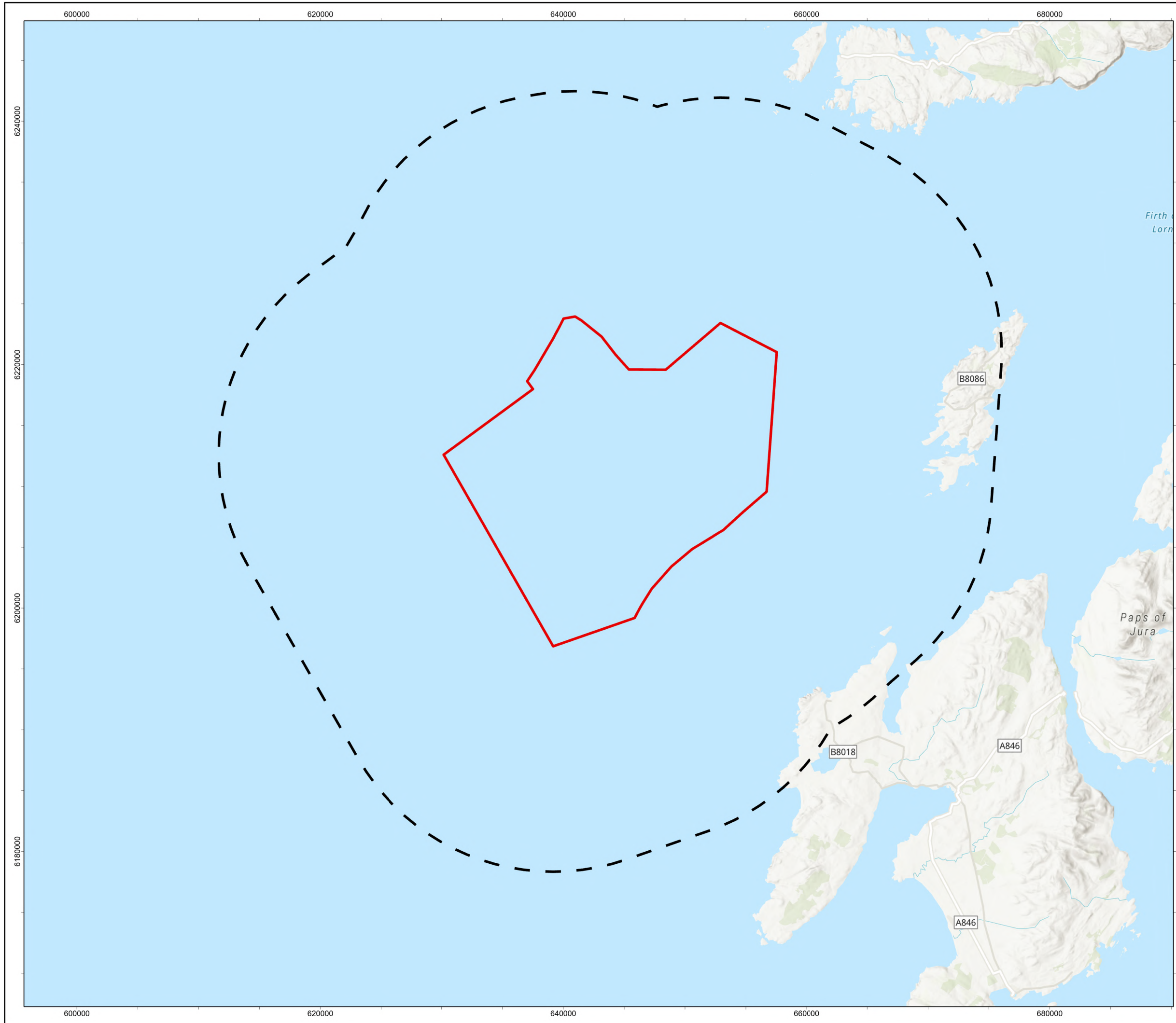
16. The scoping report concluded that no additional baseline information is required to inform this chapter, as there are sufficient existing data sources to provide an environmental baseline to inform the EIA. MD-LOT confirmed in their responses to the Scoping Report that the data sources chosen to establish baseline conditions for infrastructure and other marine users are sufficient.

17.6 INFRASTRUCTURE AND OTHER MARINE USERS STUDY AREA

17. This section describes the infrastructure and other marine users Study Area and how it has been defined. The purpose of a Study Area is to set the geographical boundary within which the existing environment is assessed (**Section 17.8**).

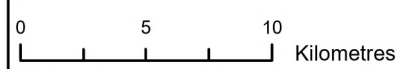
18. The infrastructure and other marine users Study Area (**Figure 17.1**) is defined by the WDA plus a 18.52 kilometres (km) (10 nautical miles (nm)) buffer to align with the shipping and navigation Study Area presented in **Chapter 13 Shipping and Navigation**.





Windfarm Development Area

Infrastructure and Other Marine Users Study Area (10 nautical mile buffer)



2	03/12/2025	AB	GC	CC	PM
REV	DATE	CREATOR	REVIEWER	TECHNICAL CHECKER	TECHNICAL APPROVER

DRAWING NUMBER: MCW-DWF-ENV-MAP-RHS-000023

DATUM	ETRS89	PROJECTION	UTM Zone 29N
SCALE	1:300,000	PAGE SIZE	A3

PROJECT TITLE: MachairWind

Figure 17.1: Infrastructure and Other Marine Users Study Area

© Haskoning UK Ltd, 2025.
 Service Layer Credits: World_Hillshade: Esri, Ordnance Survey, NASA, NGA, USGS
 World Ocean Reference: Sources: Esri, TomTom, Garmin, GEBCO, National Geographic, NOAA,
 and the GIS User Community
 World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap
 contributors, and the GIS User Community
 World Ocean Base: Esri, GEBCO, Garmin, NaturalVue
NOT TO BE USED FOR NAVIGATION



17.7 REALISTIC WORST-CASE SCENARIOS

19. The final design of the WDA will be confirmed by detailed engineering studies post-consent. To undertake a robust and precautionary impact assessment, the realistic worst-case design scenarios (i.e., those that would cause the greatest impact) are defined from the PDE; ensuring that all other design scenarios would have equal or less impact. Please see **Chapter 5 EIA Methodology** for further details on the design envelope approach.
20. The realistic worst-case scenarios for the infrastructure and other marine users assessment are summarised in **Table 17.5**. These are based on the project design as described in **Chapter 3 Project Description**.

Table 17.5 Realistic worst-case scenarios for impacts on the infrastructure and other marine users

Impact	Realistic Worst-Case Scenario	Rationale
Construction		
Impact 1: Disruption to MoD maritime navigational interests (including exercise areas for training and defence maritime navigational interests)	<ul style="list-style-type: none"> • Maximum of 144 WTGs with a minimum spacing between and within WTG rows of 944 m; • Maximum WDA area: 448 km²; • Maximum blade tip height of 332.88 metres (m) above mean sea level (amsl); • Maximum rotor diameter of 290 m; • Maximum of two OSPs; 	Maximum physical obstruction leading to disruption to MoD maritime navigational interests and limitation of access and displacement of recreational charter angling and wildlife tour vessels due to the footprint of the WDA, safety zones and minimum WTG spacing.
Impact 2: Limitation of access and displacement of recreational charter angling and wildlife tours	<ul style="list-style-type: none"> • Construction safety zones: <ul style="list-style-type: none"> • Temporary (or rolling) 500 m safety zones surrounding the location of all surface piercing structures where construction work is being undertaken; • 50 m safety zones around all partially completed or completed surface piercing structures which are not yet fully commissioned during the construction phase; • Pre-construction vessels: up to 14 vessels operating within the WDA at any one-time with up to 140 vessel movements (round trips); • Construction vessels: Up to 117 vessels may operate within the WDA during the entire construction period, with up to 5,699 round-trip movements. Construction period of five years. • During the construction phase, disruption to MoD maritime navigational interests and limitation of access and displacement of recreational charter angling and wildlife tour vessels would increase incrementally as the presence of infrastructure increases. The worst-case scenario in terms of the presence of infrastructure would be reached on completion of construction when the O&M phase would begin. 	The maximum duration of impacts over the offshore construction period.
O&M		
Impact 1: Disruption to MoD maritime navigational interests (including exercise areas for training and defence maritime navigational interests)	<ul style="list-style-type: none"> • Maximum of 144 WTGs with a minimum spacing between and within WTG rows of 944 m; • Maximum WDA area: 448 km²; • 35-year operational life; • 500 m safety zones around any structure such as WTGs or OSPs where major maintenance is ongoing; 	Maximum physical obstruction leading to disruption to MoD maritime navigational interests and limitation of access and displacement of recreational charter angling and wildlife tour vessels due to the footprint of the



Impact	Realistic Worst-Case Scenario	Rationale
<p>Impact 2: Limitation of access and displacement of recreational charter angling and wildlife tours</p>	<ul style="list-style-type: none"> • Up to 13 vessels operating within the WDA at any one time with up to 423 vessel movements (round trips) per annum including for planned and unplanned O&M activities. Vessels will be involved in a range of activities including routine WTG/OSP inspections / services, cable repair/replacement; and • Limitation of access within the WDA as per the presence of infrastructure described for construction. 	<p>WDA, safety zones and minimum WTG spacing.</p> <p>The maximum duration of impacts over the 35-year operational life.</p>
<p>Decommissioning</p>		
<p>Impact 1: Disruption to MoD maritime navigational interests (including exercise areas for training and defence maritime navigational interests)</p>	<p>At the end of the WDA's operational life, it is expected that all structures above the seabed (except for scour protection and cable protection) will be fully removed where feasible. WTG and OSP foundations will be cut below the natural level of the seabed and removed. Removal of some or all of the offshore cables may be undertaken, however static portions of these may remain in situ. Scour protection and cable protection are expected to remain in situ although the method of decommissioning is yet to be determined.</p> <p>The detail and scope of the decommissioning works will be determined by the relevant legislation and guidance at the time of decommissioning.</p> <p>For the purposes of the worst-case scenario, it is anticipated that the impacts will be no greater than those identified for the construction phase.</p> <p>During the decommissioning phase, disruption to MoD maritime navigational interests and limitation of access and displacement of recreational charter angling and wildlife tour vessels would decrease incrementally as the presence of infrastructure decreases.</p>	



17.8 EXISTING ENVIRONMENT

21. The existing baseline environment for infrastructure and other users considers the scoped in offshore infrastructure and activities found within the Study Area.
22. This section describes the infrastructure and other marine users receptors, using publicly available data sources (**Section 17.4**) deemed of relevance to the Study Area (**Section 17.5**). This sets the context for the identification of mitigation measures (**Section 17.9**) and assessment of significance (**Section 58**) which then feeds into the consideration of cumulative effects (**Section 17.12.3**) and potential transboundary impacts (**Section 17.13**).
23. Some receptors have been scoped out of further assessment as these are not identified within the Study Area or the scoping representations received on the WDA Scoping Report. In line with the WDA Scoping Report, the following receptors have been scoped out of the WDA EIAR:
 - Offshore Windfarm Developments;
 - Subsea Cables;
 - Wave and Tidal;
 - Aquaculture;
 - Offshore Oil and Gas Operations;
 - Carbon Capture and Storage;
 - Dredging and Disposal Sites; and
 - Marine Aggregates and Mining.
24. Another receptor scoped in for further assessment under the topic of Military and Civil Aviation, but also relevant to this chapter, are the Dubh Artach and Skerryvore lighthouses. Due to the proximity of the Dubh Artach and Skerryvore lighthouses to the WDA, the potential impact of the Project on these lighthouses has been assessed in **Appendix 15.2 Dubh Artach Lighthouse Technical Note**. Following this assessment and consultation undertaken with the NLB, a 2 nautical mile (3.74 km) buffer around Dubh Artach has been implemented into the WDA refinements presented within this EIAR. As the Skerryvore lighthouse is located 30.74 km northwest of the WDA, no refinements to the WDA were proposed with regards to this lighthouse. Potential effects on these receptors in an EIA context is detailed in Section 13.11.1.6 of **Chapter 13 Shipping and Navigation** and Section 15.11.1.1.2.1 of **Chapter 15 Military and Civil Aviation**. No further assessment on these receptors is presented within this chapter.

17.8.1 Ministry of Defence

25. The Study Area overlaps several MoD exercise areas (X5626: Mackenzie, X5539: Orsay, X5543: Colonsay, X5542: Blackstone, X5627: Staffa, X5628: Mull, see **Figure 17.2**). Metadata embedded in the shapefiles for these exercise areas detail that these areas are used for general submarine exercises (e.g. non-firing exercises, practices and trials). Temporary marine activity restrictions can be implemented by the MoD in these areas to coincide with scheduled exercises. Additional exercise areas extend for the entirety of the west coast of Scotland.
26. The MoD, in their scoping opinion and correspondence dated 07 November 2025 (see **Table 17.2**) noted that the WDA is within a region that contains MoD maritime navigational interests including submarine navigation and highly surveyed routes. Highly surveyed routes are retained by the MoD to support national defence requirements and are not defined in the public domain. Scottish Government (2025) shows a range of MoD assets in the west coast region, such as naval facilities and storage depots. While these are beyond the Study Area for Infrastructure and Other Users, it is recognised that vessel traffic associated with the MoD's facilities may route through the Study Area. As such, a meeting was held with the MoD on 7 March 2025 to introduce the Project and seek the



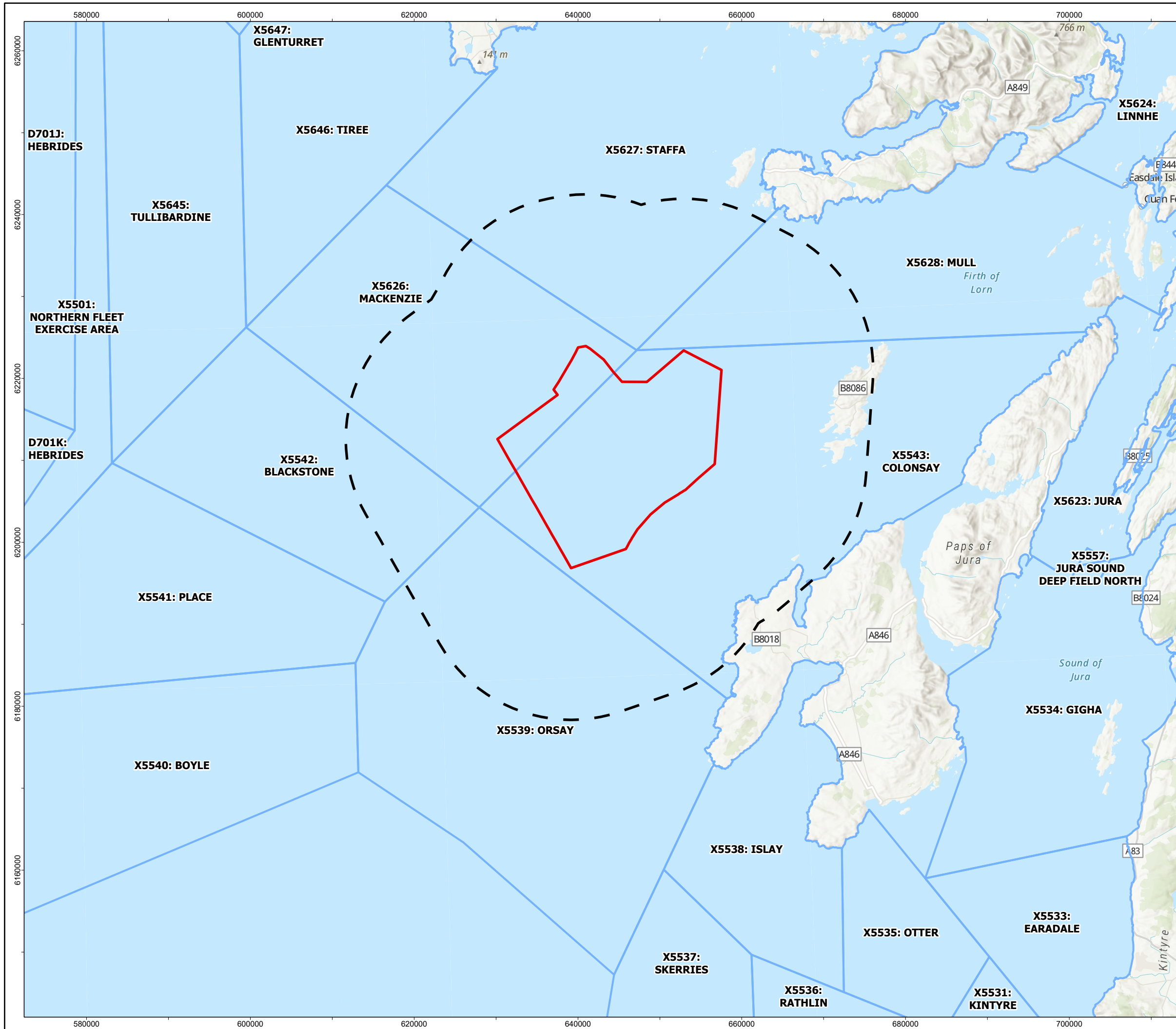
MoD's feedback on the EIA Scoping WDA boundary in relation to the MoD's maritime navigational interests.

27. The WDA is also located within Low Flying Area (LFA) 14 of the UK Military Low Flying System, in which military aircraft may engage in low level flying activities, which for fixed-wing aircraft is defined as flying down to 250 feet from the ground (UK Government, 2025). Further information on aviation activity within the vicinity of the Study Area is provided in **Chapter 15 Military and Civil Aviation**.

17.8.2 Recreational Charter Angling and Wildlife Tours

28. The Study Area is situated within an area that is used for recreational charter angling and wildlife tours from local islands including Jura, Islay, Iona and Mull. The local islands are home to species that attract tourism including seabirds, seals, dolphins and minke whales. Recreational charter angling and wildlife tours are subject to seasonal variations to coincide with suitable weather. Many of the tours operators such as Islay Sea Adventures operate daily 'in-season' which is typically April to October.
29. Further information on the recreational vessel activity is provided in **Chapter 13 Shipping and Navigation**.



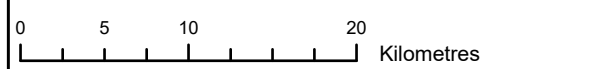


Windfarm Development Area (Red outline)

Infrastructure and Other Marine Users Study Area (10 nautical mile buffer) (Dashed black line)

MoD Exercise Areas (Blue outline)

N



3	04/02/2026	AB	GC	CC	PM
REV	DATE	GIS CREATOR	GIS REVIEWER	TECHNICAL CHECKER	TECHNICAL APPROVER

DRAWING NUMBER: MCW-DWF-ENV-MAP-RHS-000024

DATUM	ETRS89	PROJECTION	UTM Zone 29N
SCALE	1:450,000	PAGE SIZE	A3

PROJECT TITLE: MachairWind

Figure 17.2: Infrastructure and Other Marine Users Study Area in the Context of Navy and Submarine Exercise Areas

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 © Haskoning UK Ltd, 2026.
 Service Layer Credits: World Ocean Reference: Sources: Esri, TomTom, Garmin, GEBCO, National Geographic, NOAA, and the GIS User Community
 World_Hillshade: Esri, CGIAR, N Robinson, NCEAS, USGS
 World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
 World Ocean Base: Esri, GEBCO, Garmin, NaturalVue

NOT TO BE USED FOR NAVIGATION

17.8.3 Predicted Future Baseline

30. Climate change may impact the future baseline of recreational and tourism activity. Recreational and tourism activities are highly seasonal, operating in favourable weather and tidal conditions. Climate change may alter these patterns by increasing the occurrence of less favourable weather conditions. Additionally, climate change may affect the abundance of wildlife populations, shifting the spatial and temporal distribution of species which are of particular interest for tourism.
31. The future offshore wind baseline will evolve as Scotland moves towards a greater use of low carbon technology. Scotland is considered to have the most abundant natural wind resource in Europe with around 25% of the continent's wind resource (Scottish Government, 2023). The deployment of offshore wind in Scotland is set to continue and contribute towards the UK target of achieving up to 50 Gigawatt (GW) of offshore wind in the UK by 2030 (see **Chapter 2 Policy and Legislative Context** for further details). The development of offshore wind in Scotland, will over the next 10 to 20 years include Innovation and Targeted Oil and Gas (INTOG) projects, which seek to support the oil and gas industry in the transition to a low carbon future, through platform electrification via the direct connection of offshore WTGs to oil and gas platforms or the development of new technologies such as hydrogen production (Offshore Wind Scotland, 2025).
32. The closest offshore windfarm development with a secured seabed lease is Malin Sea Offshore Wind, located 48 km to the south of the WDA, and acquired by ESB in May 2023 as part of CES' Innovation and Targeted Oil & Gas leasing round.
33. It is noted that the development area for the Nomadic Offshore Wind Project is located 30 km south of the WDA. While this project was previously expected to enter construction in 2026 and O&M in 2030 (Power Technology, 2024), no application documents have been submitted for the project with the most recent public statements on its development being released in 2022. As such, the current development status of this project cannot be determined at the time of writing and will not be considered further in this chapter.
34. Development of the offshore wind industry in Scotland is supported by Scottish Government development plans such as 'Scotland's NMP' (Scottish Government, 2015) and the draft updated SMP-OWE (Scottish Government, 2025), the Initial Plan Framework Sectoral Marine Plan for Offshore Wind for INTOG (Scottish Government, 2022) and the INTOG Sectoral Marine Plan (Scottish Government, 2025).
35. The predicted future baseline shifts outlined in this section are expected regardless of whether the Project is developed.

17.8.4 Data Limitations and Assumptions

36. The primary data gap identified during the preparation of the baseline information is the location of the MoD's highly surveyed routes, which as noted in **Section 17.8.1** are not defined in the public domain. In the MoD's public representations to other wind farms it is stated that highly surveyed routes 'must not be obstructed or impeded by offshore developments such as wind turbines' (MoD, 2023).
37. As detailed in **Table 17.2**, the Applicant has engaged with the MoD throughout the pre-application stage of the Project, with amendments to the WDA boundary being made with reference to the MoD's feedback. However, due to the location of these highly surveyed routes being of national security interest, the Project cannot be certain if the WDA presented in this application overlaps with these routes. As such, there is not sufficient information available to accurately assess potential impacts



on these highly surveyed routes. The Applicant will continue to engage with the MoD to ensure that the Project may co-exist with the existing MoD activities within / in the vicinity of the Project.

38. No other information gaps were identified during the preparation of the baseline information for this assessment.

17.9 EMBEDDED MITIGATION

39. This section outlines the embedded mitigation relevant to the infrastructure and other marine users assessment (as shown in **Table 17.6** below). Where additional mitigation measures are required to mitigate potentially significant effects (in EIA terms), these are detailed in the impact assessment.

Table 17.6 Embedded mitigation measures for infrastructure and other marine users

ID	Mitigation Measure	Description	Securing Mechanism
M-8	Cable Plan	Development of, and adherence to, a Cable Plan (incorporating a Cable Burial Risk Assessment (CBRA)). The Cable Plan will confirm planned cable routeing, burial, and any additional external cable protection, and will set out methods for post-installation cable monitoring. Furthermore, this plan will detail environmental sensitivities and design considerations to mitigate, as far as practicable, the effects of offshore cable laying and associated protection during installation and operation of the WDA infrastructure. The amount of cable protection utilised will be minimised where practicable; protection will be used only where design burial depths are not reasonably practicable or where crossings require it.	Section 36 and marine licence consent conditions. Secured via the requirement for a Cable Plan, to be developed and submitted to the Scottish Ministers for approval before commencement of construction.
M-10	Hierarchy of Unexploded Ordnance Clearance Methods	Development of an Unexploded Ordnance (UXO) Threat and Risk Assessment. The current hierarchy of UXO clearance techniques, in order of preference, are: <ul style="list-style-type: none"> • Avoid (through micro-siting); • Use a low-noise method to render the ordnance safe without requirement for detonation, e.g. laser cutting, mechanical removal if safe to do so; • Low-order clearance if above options not practicable; and • High-order clearance, if low-order clearance not possible, or in the unlikely event that low-order deflagration was unsuccessful. 	Will be secured via a UXO Threat Risk Assessment, which will be submitted as part of a separate Marine Licence application submission prior to construction.
M-18	Navigational Safety Plan	Development of, and adherence to, a Navigational Safety Plan (NSP). This plan will describe measures put in place related to navigational safety, including information on safety zones, charting, construction buoyage, temporary lighting and marking, and means of notification of activities associated with the WDA to other sea users.	Section 36 and marine licence consent conditions. Secured via Appendix 13 Outline Vessel Management Plan and Navigational Safety Plan.
M-19	Notice to Mariners	Advanced warning and accurate location details of construction, maintenance and decommissioning operations, associated Safety Zones and advisory passing distances will be given via Notices to	Included within NSP content which is a standard Section 36 and marine licence consent



ID	Mitigation Measure	Description	Securing Mechanism
		Mariners and Kingfisher webpage. All notices will be uploaded to the Project website (www.machairwind.com).	condition. An outline NSP has been provided in Appendix 13 Outline Vessel Management Plan and Navigational Safety Plan .
M-20	Lighting and Marking Plan	Development of, and adherence to, a Lighting and Marking Plan (LMP). This plan will set out the marine and aviation navigational lighting and marking measures to be applied during the construction and operation of the WDA. This will be in accordance with Appendix 12 Outline Lighting and Marking Plan which will incorporate the requirements of the Air Navigation Order 2016, of the MOD and other relevant legislation and guidance. Infrared lights will be installed on the WTGs to ensure full compliance.	Section 36 and marine licence consent conditions. An outline LMP has been provided in Appendix 12 Outline Lighting and Marking Plan .
M-23	Safety Zones	Application for and use of Safety Zones of up to 500 m during construction, major repairs and decommissioning phases. Where appropriate, guard vessels will also be used to ensure adherence with Safety Zones or advisory passing distances, as defined by risk assessment, to mitigate any impact which poses a risk to surface navigation during construction, O&M and decommissioning phases. Such impacts may include partially installed structures or cables, extinguished navigation lights or other unmarked hazards. During the O&M phase, there would be 500 m safety zones around any structure where major maintenance is ongoing.	Application submitted under Section 95 and Schedule 16 of the Energy Act 2004. Will also be referenced within the Navigational Safety Plan, secured under standard Section 36 and Marine Licence condition.
M-24	Dropped Objects	Dropped objects on the seabed during works associated with the WDA which may pose a hazard will be reported in line with the MD-LOT procedures. Objects will be recovered where they pose a hazard to other marine users and where recovery is possible.	Section 36 and marine licence consent conditions. Secured via Appendix 13 Outline Vessel Management Plan and Navigational Safety Plan .
M-25	Marking	All WDA infrastructure will be appropriately marked on the UK Hydrographic Office Admiralty Charts.	Provision of relevant information to UKHO required under standard marine licence conditions.
M-26	Search and Rescue (SAR)	Development of a SAR Checklist in consultation with the MCA to ensure compliance with Marine Guidance Note 654 and its annexes. This will be completed post consent.	Section 36 and marine licence consent conditions. Secured via Appendix 13 Outline Vessel Management Plan and Navigational Safety Plan .



ID	Mitigation Measure	Description	Securing Mechanism
M-27	Emergency Response and Cooperation Plan	Development of, and adherence to, an Emergency Response and Cooperation Plan. This plan ensures co-operation with the MCA by detailing the design parameters of the WDA, emergency contact details, and processes to be followed.	Emergency Response and Cooperation Plan, secured under standard Section 36 and Marine Licence condition.
M-28	Guard Vessels	Where appropriate, guard vessels will be used to ensure adherence with Safety Zones (M-23) or advisory passing distances.	Section 36 and marine licence consent conditions. Secured via an Emergency Response and Cooperation Plan which will be developed and submitted prior to construction.
M-29	Marine Coordination Centre	A marine coordination centre will be implemented to manage project vessels throughout construction, O&M and decommissioning phases.	Section 36 and marine licence consent conditions. Secured via Appendix 13 Outline Vessel Management Plan and Navigational Safety Plan .
M-31	Vessel Marine Regulations	Compliance of all Project vessels with international Marine Regulations as adopted by the Flag State, notably Convention on International Regulations for Preventing Collisions at Sea (COLREGs) IMO, 1972/77) and International Convention for the Safety of Life at Sea (SOLAS) (IMO, 1974).	Section 36 and marine licence consent conditions. Secured via Appendix 13 Outline Vessel Management Plan and Navigational Safety Plan . The Project will employ a dedicated competent resource to verify compliance with international Marine Regulations, including a Marine Operations Management Manual and a suite of Project documentation specific to Marine Operations.
M-34	Development Specification and Layout Plan	Development of, and adherence to, a Development Specification and Layout Plan. The layout of the WTGs will be finalised post consent. Consultation with the MCA and Northern Lighthouse Board (NLB) will be undertaken to ensure that the specific WTG layout is compatible with potential SAR activity (M-26).	Section 36 and marine licence consent conditions. Secured via the requirement for a Design Specification and Layout Plan, which will be submitted to Scottish Ministers for approval prior to the commencement of construction.
M-35	Failures of Lighting and Marking	Failures of the lighting and marking in the WDA will be appropriately reported and rectified as soon as practicable. Interim hazard warnings (i.e. Notice to	Section 36 and marine licence consent conditions. Secured via



ID	Mitigation Measure	Description	Securing Mechanism
		Mariners (M-19)) or alternate temporary mitigation will be put in place as required. Associated communication procedures, including with the MCA and NLB will be included in the post-consent LMP (M-20).	Appendix 12 Outline Lighting and Marking Plan.
M-46	Decommissioning Programme.	Development and adherence to a Decommissioning Programme. This programme will identify all the items of equipment, infrastructure and materials that have been installed or drilled and describes the decommissioning solution for each, whilst considering the potential environmental effects of each method alongside appropriate mitigation techniques that can be implemented.	Section 36 and marine licence consent conditions. Secured via a Decommissioning Programme, which will be developed and submitted to Scottish Ministers for approval before commencement of construction.
M-48	WDA boundary refinement	The WDA has been refined following review of the Scoping Opinion and further public and stakeholder consultation to reduce potential impacts on various receptor groups. The northern, eastern and southern boundaries of the WDA have been refined, resulting in an overall reduction of the WDA by approximately 40% when compared with the W1 Plan OAA. The reduction in the WDA has also reduced the horizontal spread of WTGs. Further information is provided in Chapter 4 Site Selection and Alternatives .	Secured within the Location Plan submitted alongside the Generation and Transmission Marine Licence Applications.
M-49	Dubh Artach setback distance	A 2 nautical mile buffer has been introduced around the Dubh Artach lighthouse to ensure the safety of any vessels and helicopters associated with any works for the lighthouse.	Secured within the Location Plan submitted alongside the Generation and Transmission Marine Licence Applications.

40. All embedded mitigation for this chapter is summarised in **Appendix 5 WDA Mitigation and Commitments Register**. Impacts to infrastructure and other marine users will be assessed with this mitigation in place.

17.10 APPROACH TO ASSESSMENT

41. As noted above, this topic chapter considers the WDA Study Area and existing environment only. A combined assessment of the construction, O&M and decommissioning of the WDA activities, Offshore ECC and OnTDA activities (commensurate with the level of detail that is available at the time of carrying out that assessment) is also provided and the methodology for this is described in **Section 17.10.2**. This approach will ensure a holistic view is undertaken of the entire project.

17.10.1 Windfarm Development Area-Alone

17.10.1.1 Methodology

42. **Chapter 5 EIA Methodology** provides a summary of the general impact assessment methodology applied in this WDA EIAR. The assessment uses the conceptual ‘source-pathway-receptor’ model.



The model identifies potential impacts resulting from the proposed activities on the environment and sensitive receptors within it.

17.10.1.1.1 Definitions of sensitivity and magnitude

43. For each potential impact, the assessment identifies receptors within the Study Area which are sensitive to that impact and implements a systematic approach to understanding the impact pathways and the level of impacts on given receptors. The definitions of sensitivity and magnitude for the purpose of the infrastructure and other marine users assessment are provided in **Table 17.7** and **Table 17.8**.

Table 17.7 Definition of sensitivity

Sensitivity	Definition
High	High value activity fundamental to the operator or infrastructure that is of international or national economic importance. No redundancy available in the event of impact. Activity very sensitive to the impact. For example, gas pipeline, electrical infrastructure or telecommunication cable supporting UK or European activity or nationally important aggregates area where extraction company has no access to areas of equal quality aggregates.
Medium	Medium value activity. Impact to asset would significantly reduce operators' activities but not result in complete failure to continue operations. Limited redundancy available. Asset regionally important. Asset has limited tolerance of impact. For example, gas pipeline, electrical infrastructure or telecommunication cable, where asset owners have some potential for redundancy planning. Aggregates areas where extraction company has some, but limited access to equal quality aggregate.
Low	Low value activity. Impact to asset would have limited implications on operator/public either due to the availability of redundancy or limited pathway for impact. Asset has some tolerance of impact. For example, electrical or telecommunication cable with ability to undertake redundancy planning to limit impact. Aggregates area where extraction company has access to large area of equal quality aggregate.
Negligible	Low value activity, operators' activities would not be significantly reduced by impact. Asset generally tolerant of impact. Limited impact to asset owners or local community in case of damage or failure.

Table 17.8 Definition of magnitude

Magnitude	Definition
High	Loss of resource and / or quality and integrity of receptor; severe damage to key characteristics, features or elements. For example, accidental damage to asset resulting in permanent or long-term inoperability or complete loss of access to economically important asset.
Medium	Loss of resource, but not adversely affecting integrity of resource; partial loss of / damage to key characteristics, features or elements. For example, damage to an asset that results in either short term, complete inoperability or long term reduced functionality. Partial loss of access to economically important asset, or short-term complete loss of access.
Low	Some measurable change in attributes, quality or vulnerability, minor loss of, or alteration to, one (maybe more) key characteristics, features or elements. For example, accidental damage to asset resulting in short term reduction of functionality but not complete loss of function. Short term disruption to access of asset.
Negligible	Very minor loss or detrimental alteration to one or more characteristics, features or elements, and / or slight alteration to activity.



17.10.1.2 Significance of Effect

44. The potential significance of effect for a given impact is a function of the overall sensitivity and the magnitude of the impact (see **Chapter 5 EIA Methodology** for further details). A matrix is used (**Table 17.9**) as a framework to determine the significance of an effect. Definitions of each level of significance are provided in **Table 17.9**. Impacts and effects may be either positive (beneficial) or negative (adverse). ‘Major’ effects are always deemed to be significant. ‘Moderate’ effects can be significant or not significant depending on the scenario and professional judgement. ‘Minor’ and ‘negligible’ effects are always deemed not significant.
45. In applying this methodology, professional judgement contributes to concluding significance of effects. This judgement draws on the assessor’s technical expertise, knowledge of the receiving environment, and understanding of how similar developments have influenced comparable receptors. Judgement also considers the quality and confidence of the available data (**Section 17.8.4**), the level of uncertainty associated with predicted impacts, and any relevant guidance or industry standards. Professional judgement ensures that the matrix outputs are interpreted in context, allowing the assessor to account for site-specific conditions, receptor sensitivities that may cut across criteria, and the nature of the predicted changes. This approach ensures that the determination of significance is robust, transparent and proportionate.’

Table 17.9 Significance of effect matrix

Sensitivity	Adverse Magnitude				Beneficial Magnitude			
	High	Medium	Low	Negligible	Negligible	Low	Medium	High
High	Major	Major	Moderate	Minor	Minor	Moderate	Major	Major
Medium	Major	Moderate	Minor	Negligible	Negligible	Minor	Moderate	Major
Low	Moderate	Minor	Minor	Negligible	Negligible	Minor	Minor	Moderate
Negligible	Minor	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Minor

Table 17.10 Definition of significance of effect

Significance of Effect	Definition
Major	Very large or large change in receptor condition, both adverse or beneficial, which are likely to be important considerations at a regional or district level because they contribute to achieving national, regional or local objectives, or could result in exceedance of statutory objectives and / or breaches of legislation.
Moderate	Intermediate change in receptor condition, which are likely to be important considerations at a local level.
Minor	Small change in receptor condition, which may be raised as local issues but are unlikely to be important in the decision-making process.
Negligible	No discernible change in receptor condition.
No Change	No effect, therefore, no change in receptor condition.

17.10.2 Combined Assessment: WDA, Offshore Export Cable Corridor and Onshore Development Transmission Development Area Methodology

46. This section presents how the Applicant will assess interactions between the WDA, Offshore ECC and OntDA (i.e. considering impact interactions and additive effects to determine if any effects would



be materially elevated from those assessed for the WDA-alone assessment). The approach enables potential interactions between each Development Area to be identified and assessed, ensuring a whole Project assessment is undertaken in a manner that is meaningful and proportionate. This is referred to as the combined assessment.

47. In this context, interactions are considered where there may be spatial overlap of effects, and additive effects are considered where there may be incremental effects on the same receptor, including increased temporal effects.
48. Worst-case scenarios for all WDA infrastructure has been considered for the WDA-alone assessment (**Table 17.5** and **Section 17.11.1**).
49. To inform the combined assessment, a set of assumptions were developed which includes a preliminary boundary for the Offshore ECC and OnTDA (connect point new Girvan, South Ayrshire), anticipated project components and associated construction methods and timelines. These are set out in **Chapter 3 Project Description**, Sections 3.7 and 3.8. Offshore and onshore engineering and environmental surveys enabling Offshore ECC and OnTDA corridor refinement are anticipated to take place after the WDA EIAR has been submitted to the consenting authorities.
50. Within the upcoming Offshore ECC and OnTDA consent applications, their respective scoping and EIARs will take account of all likely effects predicted within the WDA EIA and present updated combined assessments using the latest available information covering all aspects of the Project.
51. **Section 17.11.2** includes a qualitative discussion where potential interactions and additive effects between the WDA and the Offshore ECC and OnTDA have been identified, with the aim of determining whether effects could result in those of greater significance than assessed for the WDA-alone assessment. To accompany the description, a combined assessment summary table is provided. Only residual effects from the WDA-alone assessment are taken forward for consideration in the combined assessment.

17.10.3 Cumulative Effects Assessment Methodology

52. The Cumulative Effects Assessment (CEA) considers the impacts arising from the activities and infrastructure associated with the whole-Project (i.e. the WDA, Offshore ECC and OnTDA) as well as cumulatively with other relevant plans, projects and activities. The general approach to the CEA for infrastructure and other marine users includes identifying potential cumulative effects, identifying a short list of plans and projects for consideration and evaluating the significance of cumulative effects. **Chapter 5 EIA Methodology** provides further details on the general approach to the CEA.
53. In line with the methodology set out in **Chapter 5 EIA Methodology**, the CEA is considered in two main stages with stage 1 split into two steps:
 - **Stage 1a:** Screening of Potential Cumulative Impacts;
 - **Stage 1b:** Screening of other plans, projects and activities; and
 - **Stage 2:** CEA.
54. Stage 1a involves the screening / identification of which whole-Project impacts could have a cumulative effect with other plans, projects and activities (described as ‘impact screening’).
55. Stage 1b is the screening of other plans, projects and activities. In accordance with guidance documents discussed in **Chapter 5 EIA Methodology**, other plans or projects that are deemed likely to go ahead or are going ahead, and for which sufficient information is available to conduct a meaningful assessment, have been taken forward for consideration in **Appendix 5.1 Cumulative**



Projects Long and Short Lists. If sufficient detail is not available, it is not possible to conduct a meaningful assessment of potential cumulative effects and therefore, these developments are not considered further. For the purposes of the CEA Long-List, the criteria of other plans or projects that are proposed for consideration include those which are 'reasonably foreseeable' such as those:

- Which have become operational since baseline data was collected;
- Under construction;
- Permitted application(s), but not yet implemented;
- Submitted application(s) not yet determined; and
- Plans and projects with design information in the public domain, including those that requested a Scoping Opinion up to six months prior to submission of the WDA application date as follows:
 - Projects in Scottish waters;
 - Projects in English, Welsh and Northern Irish waters, or other non-UK waters if considered to be relevant, have connectivity, or the potential for a cumulative effect;
 - Offshore wind projects granted an Option Agreement or Agreement for Lease; and
 - Non-wind projects.

56. The CEA Long-List has been developed based on the above criteria, and has been screened for each potential impact-receptor pathway using the following process:

- **Conceptual overlap:** an impact-receptor pathway describes an impact which has the potential to directly or indirectly affect the receptor(s) in question;
- **Physical overlap:** ability for impacts arising from the WDA, Offshore ECC and OnTDA to overlap with those from other plans or projects on a receptor basis. An overlap of the Zone of Influences (Zols) arising from the two (or more) projects/plans must be established for a cumulative effect to arise. There are exceptions to this for certain mobile receptors that are potentially subject to impacts from multiple plans or projects; and
- **Temporal overlap:** for a cumulative effect to arise from two or more plans or projects, a temporal overlap of impacts arising from each must be established. Some impacts are active only during certain phases of the WDA (e.g. piling noise during construction). However, the absence of a strict overlap may not necessarily mean there is no potential for cumulative effect, as receptors may become further affected by additional, non-temporally overlapping projects.

57. Stage 2 is the assessment of cumulative effects. For the assessment stage, information has been gathered based on the CEA Long-List (**Appendix 5.1**) of plans or projects taken forward from the screening stage. A tiered approach is used to provide a framework for placing relative weight on the potential for each plan or project to be included in the CEA, based on the plan's or project's current stage of maturity, certainty in the design or effects and overall availability of detail on which to carry out an assessment. Projects or plans that will be assessed in Stage 2 will use the following tiers:

- Tier 1 assessment: projects which are operational (but not part of the baseline), under construction, those with consent and those projects where an application has been submitted but not yet determined;
- Tier 2 assessment: all plans/projects assessed under Tier 1, plus those projects with a Scoping Report and/or Scoping Opinion; and
- Tier 3 assessment: all plans/projects assessed under Tier 1 and Tier 2, plus those projects likely to come forward where a Crown Estate Scotland (CES) Option to Lease Agreement or equivalent has been granted (i.e., ScotWind and INTOG projects).

17.10.4 Transboundary Assumptions

58. No potential for significant transboundary effects from the WDA on infrastructure and other users within the EEZ of other EEA member states or other interests of EEA member states have been



identified. Therefore, transboundary effects have been scoped out of the EIA, in line with the Scoping Report.

17.11 ASSESSMENT OF SIGNIFICANCE

17.11.1 Windfarm Development Area-Alone Assessment of Significance

59. The potential effects on infrastructure and other marine users receptors that may occur during construction, O&M and decommissioning of the WDA are assessed in the following sections. The assessment follows the methodology set out in **Section 17.10.1** and is based on the realistic worst-case scenarios defined in **Section 17.7**. This assessment has been undertaken on the basis of all embedded mitigation measures outlined in **Table 17.6**. The embedded mitigation measures relevant for each impact are listed in the summary **Table 17.18**.

60. This assessment has been undertaken on the basis of all embedded mitigation measures outlined in **Table 17.6**. The embedded mitigation measures relevant for each impact are listed in the summary **Table 17.18**.

17.11.1.1 Impact 1: Disruption to MoD maritime navigational interests (including exercise areas for training and defence maritime navigational interests)

61. There is potential for the WDA infrastructure and activities during all phases to interact with MoD exercise areas detailed in **Section 17.8.1** and to limit access and displace MoD maritime navigational interests within the WDA including submarine practice and exercise operations. Assessment of potential impacts on the LFA within the vicinity of the Study Area is provided in Section 15.10.1.1 of **Chapter 15 Military and Civil Aviation**.

17.11.1.1.1 Sensitivity

62. As detailed in **Section 17.8.1** and noted in the MoD's Scoping Response (**Table 17.2**), the WDA may fall within an area used for submarine practice and exercise operations. The presence of WDA Infrastructure directly within practice and exercise areas X5626: Mackenzie and X5543: Colonsay, it has the potential to displace MoD submarine operations from this area. Due to the extensive area of sea utilised by the MoD for submarine practice and exercise operations on the west coast of Scotland however (as shown in the number of additional practice and exercise areas found in the vicinity of the WDA in **Figure 17.2**), and the MoD retaining access to the entirety of the WDA (with the exception of defined Safety Zones) there would not be a complete loss in the MoD's ability to conduct practice and exercise operations within / outside of the WDA. The receptor therefore shows some tolerance to the impact. However, given the importance of this area for national security, the sensitivity is **high** for all phases of the Project.

17.11.1.1.2 Magnitude of Impact

17.11.1.1.2.1 Construction

63. During construction, increased Project vessel movements transiting to/from and operating within the WDA may temporarily impact MoD maritime navigation interests. Construction activity in the WDA will include site preparation works (e.g. surveys, seabed preparation, UXO and boulder clearance) and installation of WDA infrastructure. Safety Zones will be in place during construction. These will include temporary (or rolling) 500 m safety zones around all surface piercing structures where construction work is being undertaken by a construction vessel. Additionally, 50 m safety zones will be implemented around all partially completed or completed surface piercing structures which are



not yet fully commissioned during the construction phase. The construction period for the WDA is expected to last for up to 5 years.

64. MoD vessels and submarines could alter their route or transit around WDA construction activities and safety zones. Adherence to a Vessel Management Plan and Navigational Safety Plan (as detailed in measure M-18 of **Table 17.6**) will ensure that procedures for management and coordination of vessels to mitigate the impact of Project vessels are followed alongside measures related to navigational safety. This includes information on safety zones, charting, construction buoyage, temporary lighting and marking, and means of notification of activities associated with the WDA to other sea users, including the MoD (**Table 17.6**). **Appendix 13 OVMPNSP**, has been submitted with the application and includes outline measures to be included in the final plan to be produced post-consent. The MoD will be consulted in preparation of the final version of this plan post-consent.
65. The Applicant will continue to consult with the MoD throughout all phases of the Project and as progress is made towards construction.
66. The magnitude of impact is therefore considered to be **negligible**.

17.11.1.1.2.2 O&M

67. Major maintenance activities may be necessary and may require the use of vessels such as service operation vessels, crew transfer vessels, jack-up and cable repair vessels. Safety zones of 500 m will be around any structure where major maintenance is ongoing (major maintenance works are defined within the Electricity (Offshore Generating Stations) (Safety Zones) (Application Procedures and Control of Access) Regulations 2007. Maintenance activities will be more localised (i.e. restricted to specific areas) and of shorter duration compared to construction activities. Vessels will be able to transit through the WDA during operation and Safety Zones would only be required intermittently for discrete areas during maintenance activities. No permanent operational Safety Zones are expected.
68. The relevant embedded mitigation will be implemented, as discussed in **Section 17.9** including the issue of Notices to Mariners advising of planned maintenance activities, the use of appropriate lighting, marking and charting of each relevant infrastructure/activity. A series of management plans will be in place throughout the O&M phase of the Project to protect other marine users (**Section 17.9**), including the OVMPNSP, DSLP and LMP. The Applicant will continue communication with the MoD throughout the O&M phase of the WDA, to ensure safe operations and minimise disturbance to MoD maritime navigational interests.
69. The direct disruption to MoD maritime navigation interests from the presence of O&M vessels and Safety Zones will be temporary and localised. The presence of the WDA infrastructure would be long-term throughout the operational life of the WDA; however it is anticipated that MoD activities can continue to co-exist with the WDA given that the MoD will retain access throughout the entire WDA (with the exception of Safety Zones during major maintenance works).
70. Due to the localised nature of the potential impact, the magnitude of impact is considered to be **negligible**.

17.11.1.1.2.3 Decommissioning

71. Decommissioning works would be determined by the relevant legislation and guidance at the time and will be subject to consultations and further assessments regarding technical feasibility, safety, risk and the environment. Infrastructure will be removed from the seabed as described in **Chapter 3**



Project Description. The magnitude of impact during decommissioning would be comparable to or less than those identified for the construction phase.

72. Mitigation measures equivalent to those discussed above for construction and O&M will be followed during decommissioning to ensure safe operations and to minimise disturbance to MoD maritime navigational interests. It is anticipated that decommissioning impacts would be the same or less than those during construction and therefore the magnitude of impact is considered to be **negligible**.

17.11.1.1.2.4 *Significance of Effect*

73. Overall, it is predicted that sensitivity of MoD maritime navigation interests is **high**. In light of the embedded mitigation that the Project has committed to ensure the possibility of co-existence between other sea users within the WDA, the magnitude of impact during all phases is classified as **negligible**. The effect is therefore of **minor adverse** significance, which is **not significant** in EIA terms. No further mitigation is proposed at this stage of the Project,

Table 17.11 Significance of effect for Impact 1: Impacts on MoD maritime navigational interests

Phase	Receptor	Sensitivity	Magnitude	Significance of Effect	Additional Mitigation	Residual Effect
Construction	MoD maritime navigational interests	High	Negligible	Minor Adverse	N/A	Minor Adverse
O&M	MoD maritime navigational interests	High	Negligible	Minor Adverse		Minor Adverse
Decommissioning	MoD maritime navigational interests	High	Negligible	Minor Adverse		Minor Adverse

17.11.1.2 *Impact 2: Limitation of access and displacement of recreational charter angling and wildlife tours*

74. Recreation and tourism activities including angling and wildlife tours from local islands operate within the WDA, as described in **Section 17.8.2**. This includes wildlife tours based in the neighbouring islands of Jura, Islay and Mull as well as recreational sea angling.

17.11.1.2.1 Sensitivity

75. Recreational charter angling and wildlife tours support rural business and are of local economic importance (see **Chapter 18 Socio-economics**). However, recreational charter angling and wildlife tour vessels will likely be able to alter their routes to avoid any disruption which could be caused during construction, O&M and decommissioning of the WDA. As noted in Section 10.2.5 of **Appendix 13.1 Navigational Risk Assessment**, during the winter vessel traffic survey period, no recreational vessels were recorded intersecting the WDA. During the summer survey period an average of one recreational fishing vessel every five days was found to intersect the WDA. As such, the WDA is not considered to be within an area where these activities are concentrated, and it is expected that operators will be able to find alternative sites.



76. Due to site alternatives for recreational angling and tourism enabling recreational activity to continue during the stages of the Project, the sensitivity of the receptor is therefore considered to be **low**.

17.11.1.2.2 Magnitude of Impact

17.11.1.2.2.1 Construction

77. During the construction phase there will be temporary 500 m safety zones in operation around construction vessels installing infrastructure as well as advisory safety distances. In addition, there would be an incremental increase in the presence of windfarm infrastructure and vessels as construction progresses. The Project may limit access for recreational vessels used for angling and wildlife tourism, as required vessels and safety zones will restrict charter operations throughout all phases. The spatial extent of the impact is small as there is adequate sea room outside of the WDA safety zone and construction vessel safety zones.

78. The mitigation included in **Section 17.9** such as the notice to mariners and kingfisher webpages will allow recreational tours to have access to information on the time, nature and length of construction works, allowing operators to plan around the works.

79. Due to the temporary construction works and seasonality of recreational angling and wildlife tours, there will be a minor, reversible shift from the baseline. Therefore, the magnitude of the impact of restricted access on recreational activity will be **low** during the construction phase.

17.11.1.2.2.2 O&M

80. During the Project's operational phase, recreational vessels may be affected by the presence of the WDA infrastructure and any temporary safety zones required for the purposes of major maintenance. There will also be temporary 500 m safety zones in operation around active maintenance vessels when maintenance or repairs are required. Recreational use of the site, such as for angling is low, and separation of WTGs would allow passage through the windfarm site.

81. The area from which recreational activities may be displaced during maintenance activities is likely to be limited with the potential to result in slight decline of recreational activity. The frequency of maintenance activities will be continuous over the operational period, as such the magnitude of the effect has been assessed to be **low**.

17.11.1.2.2.3 Decommissioning

82. The magnitude of impact during decommissioning would be comparable to or less than those identified for the construction phase and is therefore considered to be **low**.

17.11.1.2.2.4 Significance of Effect

83. The sensitivity of recreational angling and wildlife tours during O&M of the WDA is **low**. The magnitude of the potential impact during construction, O&M and decommissioning is **low**. Following the methodology in **Table 17.12**, the significant effect of impacts on recreational charter angling and wildlife tour access is **minor adverse**, which is **not significant** in EIA terms.

84. No additional mitigation is required to manage potential effects on recreation angling and wildlife tours operations during the O&M phase.



Table 17.12 Significance of effect for Impact 2: Limitation of access and displacement of recreational charter angling and wildlife tours

Phase	Receptor	Sensitivity	Magnitude	Significance of Effect	Additional Mitigation	Residual Effect
Construction	Recreational angling and wildlife tours	Low	Low	Minor Adverse	None required	Minor Adverse
O&M	Recreational angling and wildlife tours	Low	Low	Minor Adverse	None required	Minor Adverse
Decommissioning	Recreational angling and wildlife tours	Low	Low	Minor Adverse	None required	Minor Adverse

17.11.2 Combined Assessment: Windfarm Development Area, Offshore Export Cable Corridor and Onshore Development Transmission Development Area

85. This section presents how the Applicant will assess interactions between the WDA, Offshore ECC and OnTDA (i.e. considering impact interactions and additive effects to determine if any effects would be materially elevated from those assessed for the WDA-alone assessment). This is referred to as the combined assessment.

17.11.2.1 Impact 1: Disruption to MoD maritime navigational interests (including exercise areas for training and defence maritime navigational interests)

86. The Offshore ECC may route through several MoD navy and submarine exercise areas (such as X5539: Orsay, X5538: Islay, X5535: Otter, X5533: Earadale and X5534: Gigha). As noted in the assessment of potential effects on MoD maritime navigational interests within the WDA (see **Section 17.11.1.1**), it is expected that the embedded mitigation measures outlined in **Section 17.9** would be sufficient to ensure no significant effects on the MoD's maritime navigational interests would occur as a result of the Offshore ECC.

87. While disruption would be limited to the construction and decommissioning phases of the Project, given the national significance of the receptor, sensitivity is considered **high**. Works within MoD maritime navigational interest areas will be transitory and limited spatially, with any disturbance being intermittent. Consequently, the magnitude of the impact is assessed as **negligible**. With regards to potential effects resulting from the Offshore ECC, it is considered therefore that the effect is of **minor adverse** significance, which is **not significant** in EIA terms.

88. The OnTDA is not located within any areas utilised by the MoD for practice and exercise activities. As such, no pathway for effect is expected to exist between the MoD maritime navigational interests and activities related to the OnTDA.

17.11.2.2 Impact 2: Limitation of access and displacement of recreational charter angling and wildlife tours

89. During the construction and decommissioning phases of the Offshore ECC there will be temporary 500 m safety zones in operation around construction vessels installing infrastructure as well as advisory safety distances. As construction / decommissioning activities would be transitory in nature, travelling along the Offshore ECC in a linear fashion, any safety zone restrictions would occupy a minimal spatial footprint at any point in time. In addition, the same embedded mitigation measures



outlined in **Section 17.9** would be implemented for any works in the Offshore ECC to ensure any construction / decommissioning activities would be communicated in a timely fashion with recreational charter angling and wildlife tour users and locations of cable protection measures detailed during the O&M phase of the Project. As such, it is not expected that any significant effects would occur on recreational charter angling and wildlife tour receptors during the lifespan of the Project.

- 90. Due to site alternatives for recreational angling and tourism enabling recreational activity to continue during all stages of the Project, the sensitivity of the receptor is therefore considered to be **low**. Due to the small spatial footprint of safety zones and temporary nature of the impact, the magnitude is considered to be **negligible**. With regards to potential effects resulting from the Offshore ECC, it is considered therefore that the effect is of **negligible adverse** significance, which is **not significant** in EIA terms.
- 91. Due to the onshore nature of any activities associated with the OnTDA, no pathway for effect is expected to exist between the OnTDA and recreational charter angling and wildlife tour receptors.

17.11.2.3 Combined Assessment Summary

Table 17.13 Infrastructure and other users combined assessment summary

Receptor/Topic	WDA Residual Effect	Offshore ECC Assessment of Effects	OnTDA Assessment of Effects	Combined Assessment
C, D* Impact 1: Impacts on MoD maritime navigational interests	Not Significant (Minor Adverse)	Not Significant (Minor Adverse)	N/A – no pathway to receptors	No significant residual effects likely
C, O&M, D* Impact 2: Impacts on recreational charter angling and wildlife tour access	Not Significant (Minor Adverse)	Not Significant (Negligible Adverse)	N/A – no pathway to receptors	No significant residual effects likely
* C = Construction, O&M = Operation and Maintenance, D = Decommissioning				



17.12 CUMULATIVE EFFECTS

17.12.1 Screening of Potential Cumulative Impacts

92. The first step in the CEA is the screening / identification of which whole-Project impacts could have a cumulative effect with other plans, projects and activities (described as ‘impact screening’). This information is set out in **Table 17.14**, together with a consideration of the confidence in the data that is available to inform a detailed assessment and the associated rationale.

Table 17.14 Potential cumulative impacts (impact screening)

Impact	Potential for Cumulative Impact	Data Confidence	Rationale
Construction			
Impact 1: Disruption to MoD maritime navigational interests (including exercise areas for training and defence maritime navigational interests)	Yes	Low	The overlap in construction periods with other developments, including the implementation of 500 m safety zones will further limit access to MoD, over a larger area.
Impact 2: Limitation of access and displacement of recreational charter angling and wildlife tours	Yes	Low	The overlap in construction periods of other developments, including the implementation of 500 m safety zones will further limit access to tourism operators and recreational anglers, over a larger area.
O&M			
Impact 1: Disruption to MoD maritime navigational interests (including exercise areas for training and defence maritime navigational interests)	No	Low	WTG and operation vessels associated with other developments may create obstacles, reducing sea space. However, Malin Sea Wind is at adequate distance (48 km) from the Project for this not to impact the receptors.
Impact 2: Limitation of access and displacement of recreational charter angling and wildlife tours	No	Low	
Decommissioning			
Impact 1: Disruption to MoD maritime navigational interests (including exercise areas for training and defence maritime navigational interests)	No	Low	WTG and decommissioning vessels associated with other developments may create obstacles, reducing sea space. However, Malin Sea Wind is at adequate distance (48 km)



Impact	Potential for Cumulative Impact	Data Confidence	Rationale
Impact 2: Limitation of access and displacement of recreational charter angling and wildlife tours	No	Low	from the Project for this not to impact the receptors.

17.12.2 Screening of Other Plans, Projects and Activities

93. The second screening step in the CEA is the identification of the other plans, projects and activities that may result in cumulative impacts for inclusion in the CEA (described as ‘project screening’). This information is set out in **Table 17.15**, together with consideration of the relevant details of each, including current status (e.g. under construction), planned construction period, closest distance to the Project, status of available data and rationale for including or excluding from the assessment.
94. The Project screening has been informed by the development of a CEA Long List (**Appendix 5.1**) which forms an exhaustive list of plans, projects and activities in a very large Study Area. The list has been assessed, based on the confidence in being able to undertake an assessment from the information and data available, enabling individual plans, projects and activities to be screened in or out. As described in **Section 17.10.3**, this has been undertaken using a tiered approach to provide a framework for placing relative weight on the potential for each plan or project to be included in the CEA for this topic.
95. This chapter has aligned the cumulative Zol with that of **Chapter 13 Shipping and Navigation**, with a 92.6 km (60 nautical mile) Zol used to identify other plans, project and activities, which are detailed in **Table 17.15 below**. This Zol was also used to identify MoD maritime navigational interests (including exercise areas for training and defence maritime navigational interests) within the wider area around the WDA.



Table 17.15 Planned projects within 92.6 km of the Project

Project / Plan	Status	Closest Distance from the WDA (km)	Closest Distance from the Offshore ECC (km)	Description of Project / Plan	Construction Period	Operational Period	Data Confidence	Overlap with the WDA	Included in the CEA	Rationale
Tier 1 projects / plans (projects which are operational (but not part of the baseline), under construction, those with consent and submitted but not yet determined)										
Dubh Artach and Skerryvore Refurbishment Works	In planning	3.7 km	30 km	Lighthouse refurbishment works	2027 to 2032	N/A	Very High	Potential for temporal overlap ¹	Yes	Potential for cumulative effects related to loss of access for MoD maritime navigational interests, recreational charter angling and wildlife tours
Tier 2 projects / plans (all plans/projects assessed under Tier 1, plus those projects with a Scoping Report and/or Scoping Opinion)										
LirIC Interconnector	In planning	125 km	Overlaps ECC	Subsea HVDC Interconnector	2032	2032 onward	Medium	Potential for spatial and temporal overlap with Offshore ECC	Yes	Potential for cumulative effects related to loss of access for MoD maritime navigational interests, recreational charter angling and wildlife tours



Project / Plan	Status	Closest Distance from the WDA (km)	Closest Distance from the Offshore ECC (km)	Description of Project / Plan	Construction Period	Operational Period	Data Confidence	Overlap with the WDA	Included in the CEA	Rationale
Tier 3 projects / plans (all plans/projects assessed under Tier 1 and Tier 2, plus those projects likely to come forward where a CES Option to Lease Agreement or equivalent has been granted (i.e., ScotWind and INTOG projects))										
Malin Sea Wind	Early Planning	48 km	13 km	Offshore Windfarm	2030	2031	Low	Potential for temporal overlap ¹	Yes	Potential for cumulative effects related to loss of access for MoD maritime navigational interests, recreational charter angling and wildlife tours
Western Link 2	In planning	Approx. 120 km	Overlaps ECC	Subsea HVDC Interconnector	TBC	TBC	Low	Potential for spatial and temporal overlap with Offshore ECC	Yes	Potential for cumulative effects related to loss of access for MoD maritime navigational interests, recreational charter angling and wildlife tours

¹ Construction period for MachairWind estimated to take place in late 2020's – late 2030's (see Section 3.7 of **Chapter 3 Project Description** for further information)



17.12.3 Cumulative Effects Assessment

17.12.3.1 *Cumulative Impact 1: Potential for cumulative effects from impacts Disruption to MoD maritime navigational interests (including exercise areas for training, defence and maritime navigational interests).*

96. The footprint of Malin Sea Wind, the Dubh Artach / Skerryvore refurbishment works, LirIC Interconnector and Western Link 2 overlap with MoD maritime navigational interests. Construction activities for the Project may overlap with those of Malin Sea Wind, the Dubh Artach / Skerryvore refurbishment works, LirIC Interconnector and Western Link 2. Therefore, the safety zones implemented during construction may occur simultaneously and have a larger impact on MoD maritime navigational interests than the Project alone.

17.12.3.1.1 Sensitivity

97. As previously identified in **Section 17.11.1.1.1** MoD areas are deemed to be of high national importance. The overall sensitivity of the receptor is therefore considered to be **high**.

17.12.3.1.2 Magnitude of impact

98. During construction of the WDA, the cumulative impact is predicted to have low spatial extent and be of short-term duration, relative to the lifetime of the Project. The distance between the Project and Malin Sea Wind is 48 km, with the Project being 3.7 km (2 nautical miles) from Skerryvore and Dubh Artach lighthouses (the closest lighthouse of the two requiring maintenance works). Due to the distances of these projects from the Project, there will be no direct spatial overlap of safety zones. In addition, any safety zones for these projects would be minimal in scale given the smaller potential capacity of Malin Sea Wind when compared to the Project (up to 100MW capacity) and Dubh Artach / Skerryvore works only requiring a single safety zone per works. As such these additional safety zones would not result in a significantly larger area of displacement when compared to the Project alone.

99. During construction of the offshore ECC, the cumulative impact of any overlapping construction periods is predicted to have low spatial extent and be of short-term duration, relative to the lifetime of the Project. While construction of the LirIC Interconnector and Western Link 2 projects may overlap within the X5521 – Turnberry PEXA with the Offshore ECC, due to the linear nature of construction works for subsea cables it is not expected that any required safety zones for the projects combined would result in a significantly larger area of displacement when compared to the Project alone.

100. There may be a cumulative impact over the operational lifetime of the Project and Malin Sea Wind, should both projects be constructed. This may result in a greater area of displacement of MoD maritime navigational interests than when compared to the Project alone. As noted in **Section 17.9**, a series of management plans will be in place throughout the O&M phase of the Project to protect other marine users (**Section 17.9**), including the OVMPNSP, DSLP and LMP. It is expected that, in line with other consented offshore windfarms in UK territorial waters, the developers of Malin Sea Wind would develop similar management plans with the MoD to minimise disturbance to MoD maritime navigational interests.

101. Following the completion of the Dubh Artach / Skerryvore refurbishment works, maintenance works on both lighthouses would be expected to return to the intermittent baseline levels already accommodated by the MoD.



- 102. Due to the lack of surface piercing infrastructure required for LirIC Interconnector and Western Link 2, once operational there would be no further impact on MoD activities within the area of overlap with the Offshore ECC.
- 103. Due to the lack of direct spatial overlap and minimal spatial scale of the combined Project, Malin Sea Wind and Dubh Artach / Skerryvore refurbishment work safety zones, the magnitude of the cumulative impact with the WDA is therefore considered to be **negligible**.
- 104. Due to minimal spatial scale of the combined Project, LirIC Interconnector and Western Link 2 construction works, the magnitude of the cumulative impact with the Offshore ECC is therefore considered to be **negligible**.

17.12.3.1.3 Significance of effect

- 105. The cumulative safety zones associated with the Project, Malin Sea Wind, the Dubh Artach / Skerryvore refurbishment works, LirIC Interconnector and Western Link 2 may lead to a broader area of displacement for MoD maritime navigational interests compared to the Project alone.
- 106. The Applicant will continue communication with the MoD through the post-application stage of the Project to ensure that any potential disruption is reduced as low as reasonably practicable and is not significant in EIA terms. It is expected that the developers of Malin Sea Wind, LirIC Interconnector and Western Link 2 would engage with the MoD in a similar manner to ensure their potential effects on MoD activities would be reduced to a level not significant in EIA terms.
- 107. Overall, it is predicted that the sensitivity / value of the receptor is **high** (in line with the conclusion presented in **Section 17.11.1.1.1** of this chapter), and the magnitude of cumulative impact is **negligible**. The cumulative effect is therefore of **minor adverse** significance, which is **not significant** in EIA terms.

17.12.3.1.3.1 Additional Mitigation and Residual Effect

- 108. No further mitigation is considered necessary at this stage of the Project, due to the conclusion of minor adverse significance reached above.

17.12.3.2 Cumulative Impact 2: Limitation of access and displacement of recreational charter angling and wildlife tours

- 109. The lateral separation between the WDA, Malin Sea Wind and the Dubh Artach / Skerryvore refurbishment works is such that there is no potential for cumulative impacts on recreational charter angling and wildlife tours to occur as a result of the WDA construction, O&M and decommissioning activities.
- 110. Construction activities for the Offshore ECC could overlap spatially and temporally with construction of the LirIC Interconnector and Western Link 2 however, and therefore could result in a cumulative effect on recreational charter angling and wildlife tours in the nearshore area of the Offshore ECC.

17.12.3.2.1 Sensitivity

- 111. As previously identified in **Section 17.11.1.2.1**, due to site alternatives for recreational angling and tourism enabling recreational activity to continue during construction of the Project, the sensitivity of the receptor is therefore considered to be **low**.

17.12.3.2.2 Magnitude of impact

- 112. During construction of the Offshore ECC, the cumulative impact is predicted to have low spatial extent and be of short-term duration, relative to the lifetime of the Project. While construction of the



LirIC Interconnector and Western Link 2 may overlap with construction of the Offshore ECC within the nearshore area, due to the linear nature of construction works for subsea cables it is not expected that any required safety zones for the projects combined would result in a significantly larger area of displacement when compared to the Project alone.

- 113. Due to minimal spatial scale of the combined Project, LirIC Interconnector and Western Link 2 construction works, the magnitude of the cumulative impact with the Offshore ECC is therefore considered to be **negligible**.

17.12.3.2.3 Significance of effect

- 114. The cumulative safety zones associated with construction works for the Offshore ECC, LirIC Interconnector and Western Link 2 may lead to a broader area of displacement for recreational charter angling and wildlife tours compared to the Project alone.
- 115. However, in line with predicted that the sensitivity / value of the receptor being **low** and the magnitude of cumulative impact being **negligible**, the cumulative effect is therefore of **minor adverse** significance, which is **not significant** in EIA terms.

17.12.3.2.3.1 Additional Mitigation and Residual Effect

- 116. No further mitigation is considered necessary at this stage of the Project, due to the conclusion of minor adverse significance reached above.

17.13 TRANSBOUNDARY EFFECTS

- 117. No potential for significant transboundary effects from the WDA on infrastructure and marine users receptors within the EEZ of other EEA member states or other interests of EEA member states have been identified. Therefore, transboundary effects have been scoped out of the EIA, in line with the Scoping Opinion (MD-LOT, 2024).

17.14 INTER-RELATED AND INTERACTING IMPACTS

17.14.1 Inter-Relationships

- 118. **Table 17.16** below provides a summary of the key inter-relationships between infrastructure and other marine users and other technical chapters and indicates where those issues have been addressed in the relevant chapters.

Table 17.16 Infrastructure and other marine users inter-relationships

Topic and description	Related chapter(s)	Where addressed in this EIAR	Rationale
Construction, operation and decommissioning			
Impact 1: Disruption to MoD maritime navigational interests (including exercise areas for training and defence maritime navigational interests)	Chapter 13 Shipping and Navigation	Section 13.11.1.1.	The presence of construction and operation vessels, and installation of offshore infrastructure has the potential to be a navigational risk to transiting MoD vessels. This may result in the diversion of vessels when in transit.



Topic and description	Related chapter(s)	Where addressed in this EIAR	Rationale
Impact 1: Disruption to MoD maritime navigational interests (including exercise areas for training and defence maritime navigational interests)	Chapter 15 Military and Civil Aviation	Section 15.10.1.3	The presence of the installed turbines could result in an impact on the effectiveness of Civil Primary Surveillance Radars Systems in the area of the Project.
Impact 2: Limitation of access and displacement of recreational charter angling and wildlife tours	Chapter 13 Shipping and Navigation Chapter 18 Socio-economics	Section 13.11.1.1 Section 18.11.1.9	The presence of construction and operation vessels and installed offshore infrastructure has the potential to have an adverse effect on wildlife related tourism within the area, resulting from seascape impacts.

17.14.2 Interactions

119. There are no potential interactions between impacts on the infrastructure and other users described in this chapter as these are all separate, non-related receptors.
120. A lifetime assessment has been undertaken which considers the impact interactions identified and the potential for impacts to affect receptors relevant to this chapter across all development phases (Table 17.17).

Table 17.17 Potential interactions between impacts – phase and lifetime assessment

Receptor	Construction	O&M	Decommissioning	Phase Assessment	Lifetime Assessment
MoD Navigational Interests	Minor Adverse	Minor Adverse	Minor Adverse	N/A - No potential interactions between impacts	No greater than individually assessed impact for each phase. Expectation that co-existence agreements will be reached between the Applicant and MoD. Magnitude of effect would be no worse than that concluded for each individual phase.
Tourism and Recreation	Minor Adverse	Minor Adverse	Minor Adverse	N/A - No potential interactions between impacts	No greater than individually assessed impact for each phase. Magnitude of effect of disruption to recreational vessels over lifetime of Project would be no worse than that concluded for each individual phase.



17.15 POTENTIAL MONITORING REQUIREMENTS

121. The Applicant does not consider that there are any potential monitoring methods available to test the predictions made within the assessment of LSE on infrastructure and other marine users.

17.16 SUMMARY

122. **Table 17.18** presents a summary of the assessment of LSE on infrastructure and other marine users during the construction, O&M and decommissioning phases of the Project.
123. The assessment has established that the WDA would result in effects on infrastructure and other marine users are considered at most **minor adverse (not significant** in EIA terms).



Table 17.18 Summary of potential effects for infrastructure and other marine users

Potential Impact	Receptor(s)	Embedded Mitigation	Sensitivity	Magnitude of Impact	Significance of Effect	Additional Mitigation	Residual Significance of Effect	Proposed Monitoring	Combined Assessment	Cumulative Residual Significance of Effect
Construction										
Impacts on MoD maritime navigational interests	MoD maritime navigational interests	M-18, M-19, M-23, M-24, M-25, M-34, M-35, M-49	High	Negligible	Minor Adverse	N/A	Minor adverse	None required	No significant residual effects likely.	Minor adverse
Impacts on recreational charter angling and wildlife tours	Recreational angling and wildlife tours	M-8, M-18, M-19, M-20, M-23, M-24, M-25, M-26, M-27, M-28, M-29, M-31, M-34, M-35, M-49	Low	Low	Minor Adverse	N/A	Minor adverse	None required	No significant residual effects likely.	No potential for cumulative impacts.
O&M										
Impacts on MoD maritime navigational interests	MoD maritime navigational interests	M-18, M-19, M-23, M-24, M-25, M-34, M-35, M-49	High	Negligible	Minor Adverse	N/A	Minor adverse	None required	No significant residual effects likely.	Minor adverse
Impacts on recreational charter angling and wildlife tours	Recreational angling and wildlife tours	M-8, M-18, M-19, M-20, M-23, M-24, M-25, M-26, M-27, M-28, M-29, M-31,	Low	Low	Minor Adverse	N/A	Minor adverse	None required	No significant residual effects likely.	No potential for cumulative impacts.



Potential Impact	Receptor(s)	Embedded Mitigation	Sensitivity	Magnitude of Impact	Significance of Effect	Additional Mitigation	Residual Significance of Effect	Proposed Monitoring	Combined Assessment	Cumulative Residual Significance of Effect
		M-34, M-35, M-49								
Decommissioning										
Impacts on MoD maritime navigational interests	MoD maritime navigational interests	M-18, M-19, M-23, M-24, M-25, M-34, M-35, M-49	High	Negligible	Minor Adverse	N/A	Minor Adverse	None required	No significant residual effects likely.	Minor adverse
Impacts on recreational charter angling and wildlife tours	Recreational angling and wildlife tours	M-8, M-18, M-19, M-20, M-23, M-24, M-25, M-26, M-27, M-28, M-29, M-31, M-34, M-35, M-49	Low	Low	Minor Adverse	N/A	Minor adverse	None required	No significant residual effects likely.	No potential for cumulative impacts.



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