

Environmental Impact Assessment

Cummeennabuddoge Wind Farm

Chapter 16: Material Assets (Including Telecommunications and Aviation)

Cummeennabuddoge Wind (DAC)

February 2024



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16 Material Assets (Including Telecommunications and Aviation)

16.1 Introduction

This chapter of the EIA assesses the potential for significant effects of the Proposed Development on Material Assets.

Material assets are “resources that are valued and that are intrinsic to specific places” which can be of human or natural origin (EPA, 2003)¹ taken to mean “built services and infrastructure” (EPA, 2022).

Material assets of natural origin are assessed elsewhere within this EIA such as landscape (Chapter 6), biodiversity (Chapter 8), soils and geology (Chapter 10), water quality (Chapter 11), air quality (Chapter 12).

In terms of potential effects on Material Assets of human origin; traffic and transport; is assessed in Chapter 8: Traffic Impact and Access Route Assessment and archaeology and cultural heritage, in Chapter 15: Cultural and Archaeological Heritage.

Accordingly, this chapter assesses the potential effects on other human original material assets with the potential to be affected by the Proposed Development. Specifically:

- Aviation;
- Telecommunications; and
- Resources and Utility Infrastructure (including electricity, gas, water, waste and quarries).

16.1.1 Statement of Authority

This chapter has been prepared by Richard Newsham. Richard has substantial Material Assets assessment experience having prepared Material Assets chapters for multiple permitted and proposed developments which have been subject to EIA.

Richard Newsham has a BSc (Hons) in Geography and Natural Hazard Management and is a Prince2 Practitioner. Richard has over 6 years in the renewable energy industry, including 3 years as an EIA Project Manager and 1 year as a renewable energy developer.

The Technical Appendices 16-1 Telecoms Impact Study and 16-2 Aviation Impact Assessment were prepared by Ai Bridges, with Ai Bridges' input led by Kevin Hayes. Kevin Hayes is the Founding Director and Engineering Contracts Manager in Ai Bridges Ltd.

Kevin has over 20 years' experience in Telecommunications Network Design and Project Management. Kevin has a B.Eng Hons in Electronic Engineering – Communications & Industrial Automation and M.Eng Hons in Electronic Engineering-

¹ This existing advice note is to be updated to follow the guidelines set out in EPA, 2022. As of writing this has not yet occurred.

Communications & Communications Engineering. He also managed and designed the software prediction model for the TVI & Broadband EMI Interference Studies for Wind Farms.

16.2 Methodology and Approach

16.2.1 Legislation, Planning Policy and Guidance

This assessment has been undertaken in accordance with the following policy and guidance:

- Cork County Development Plan 2022-2028 (CCC, 2022);
- Design Manual for Urban Roads and Streets (DoT, 2022);
- Environmental Protection Agency: Advice Notes on Current Practice (in the preparation on Environmental Impact Statements) (EPA, 2003)²;
- Environmental Protection Agency: Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, 2022);
- The Guidance on the preparation of the Environmental Impact Assessment Report (European Commission 2017)
- Kerry County Development Plan 2022-2028 (KCC, 2022);
- International Telecommunication Union (ITU) – ITU-R Recommendations (ITU, 2023); and

16.2.2 Consultation

The assessment process has been informed by pre-application consultation with An Bord Pleanála (ABP) and the responses received following the circulation of a Scoping Document seeking feedback on the project in August 2021. A summary of the key consultation responses to that Scoping request which relate to this chapter are described in Table 16-1.

Table 16-1: Consultation Summary

Consultee	Summary of Consultee Response	Where addressed within this Report
Telecommunications Consultees		
2RN	Turbine locations are outwith the telecommunication paths however there is still potential to be affected. 2RN request a signed protocol between 2RN and Cummeennabuddoge DAC.	Noted. Cummeennabuddoge DAC will sign the protocol agreement.
BT	The Proposed Development will have no impact on the BT Ireland Microwave Network.	Noted.
Vodafone	There are two Vodafone links that pass through the site. A minimum of 30m clearance between the	Noted.

² This existing advice note is to be updated to follow the guidelines set out in EPA, 2022. As of writing this has not yet occurred.

Consultee	Summary of Consultee Response	Where addressed within this Report
	rotor tip and the maximum 1st Fresnel zone diameter is desired.	
Eir (Previously Meteor)	The Proposed Development will have no impact on the Eir Network.	Noted.
TETRA Ireland Communications Ltd	TETRA have equipment at RTE Mullaghanish approximately 700m away, 700m buffer required from the equipment to the Proposed Development.	Noted. No turbines are within 700m from the RTE Mullaghanish telecommunication mast
Virgin Media	Virgin have a back-haul link from RTE Mullaghanish to Carron Mtn. 52m buffer required from the equipment to the Proposed Development.	This link has been addressed in Section 16.4 and the accompanying Technical Appendix 16-1 Telecommunication Impact Study. This demonstrates suitable clearance from the link and nearest turbine.
ESB Networks Telecoms	1 Radio link at Mullaghanish to Knockmoyle which may be affected by the Proposed Development. 3 multipoint radio links at Mullaghanish to Caherdowney MV and Mullaghanish to Newmarket may also be affected. 2 nd Fresnel zone, plus 150m buffer clearance +100m micro siting recommended.	These links have been addressed in Section 16.4 and the accompanying Technical Appendix 16-1 Telecommunication Impact Study. This demonstrates suitable clearance from the link and nearest turbine.
Radio Telefis Éireann	8 links identified within proximity to the Proposed Development. 2 nd Fresnel zone clearance from all links to the nearest Turbine recommended.	These links have been addressed in Section 16.4 and the accompanying Technical Appendix 16-1 Telecommunication Impact Study. This demonstrates vertical clearance from the link and nearest turbine.
Broadcasting Authority of Ireland	The Proposed Development will have no impact on FM radio services, it may have an effect on television reception.	Noted. See Section 16.4
Premier Broadband	No Response.	Not Applicable.
O2	No Response.	Not Applicable.
Irish Telecoms	No Response.	Not Applicable.
TowerCom Ltd	No Response.	Not Applicable.
Three	No Response.	Not Applicable.
Netshare	No Response.	Not Applicable.
Comreg	No Response.	Not Applicable.
Aviation Consultees		
Department of Defence	All turbines should be illuminated by high intensity obstacle lights that will allow the hazard be identified and avoided by aircraft in flight.	Section 16.3

Consultee	Summary of Consultee Response	Where addressed within this Report
	Obstruction lights used should be incandescent or of a type visible to Night Vision Equipment. Obstruction lighting fitted to obstacles must emit light at the near Infra-Red (IR) range of the electromagnetic spectrum specifically at or near 850nanometres (nm) of wavelength. Light intensity to be of similar value to that emitted in the visible spectrum of light.	
Irish Aviation Authority	The Proposed Development is sited at an elevation of approximately 440m AMSL. This height with the addition of the maximum tip height of 200m gives a maximum elevation of 640m which is 40m higher than the maximum allowable elevation of 600m. As such the IAA will request an Instrument Flight Procedures (IFPs) Assessment of Cork Airport to be carried out.	Section 16.3
Kerry Airport	No response	Not Applicable.
Cork Airport	No response	Not Applicable.
Utility Consultees		
Irish Water (now Uisce Éireann)	No response	Not Applicable.
EirGrid	No response	Not Applicable.
Kerry County Council (KCC)	KCC responded to state the consultation email has been forwarded to the local engineer. No further response was given.	Not Applicable.
Cork County Council (CCC)	No applicable response to this Chapter.	Not Applicable.
Department of Housing, Local Government and Heritage	No Response	Not Applicable.

16.2.3 Proposed Turbine Range

The tallest turbine considered for the Proposed Development is 200m to tip height. This represents the largest obstacle of any turbine within the Proposed Turbine Range to air traffic. Rotating turbine blades can produce clutter on radar returns if they are within line of site of a radar, which may require mitigation.

Smaller turbines have a lower chance of interrupting line of site as their blades are more likely to be obscured by terrain due to their smaller height and size.

Similarly, for the telecoms assessment, the largest possible dimensions of a turbine selected and constructed within the Proposed Turbine Range (200m tip and 163m rotor

diameter) were assessed as this provided the largest obstacle to communication links irrespective of which turbine is selected within the Proposed Turbine Range.

In terms of utilities, there will be no change to the potential impacts or predicted effects irrespective of which turbine is selected within the Proposed Turbine Range.

This is due to having no change in the distance from the turbines to electricity lines, quarries, gas lines, water lines or waste centres. The smallest turbines in the Proposed Turbine Range will have a lesser impact upon existing electricity infrastructure than the largest turbines in the Proposed Turbine Range, due to smaller turbines generating less electricity and therefore less load on the electricity infrastructure as a result.

16.3 Aviation

16.3.1 Introduction

Operating wind farms have the potential to cause a variety of adverse effects on aviation. Rotating wind turbine blades may have an impact on certain aviation operations, particularly those involving radar. The physical height of turbines can cause obstruction to aviation and the overall performance of communications, navigation and surveillance equipment.

This section assesses the likelihood of effects on aviation arising from the construction, operation or decommissioning of the Proposed Development. The requirement for an assessment of the likely effects on aviation is set in the Irish Aviation Authority's S.I. No. 215/2005 – Irish Aviation Authority (Obstacles To Aircraft in Flight) Order, 2005 (IAA, 2005).

16.3.2 Methodology

The assessment involved consultation with the Irish Aviation Authority (IAA), Department of Defence, Kerry Airport and Cork Airport. A desk-based assessment to determine if the Proposed Development was assessed as potentially being of significance or if significant effects were likely. A desktop study was also undertaken to determine the presence of aerodromes or airstrips within 50km of the Proposed Development.

The Irish Aviation Authority (IAA, 2005) states:

"A person shall not cause to be erected or constructed any object as defined in Article 4 of this Order within a radius of 10 kilometres of a licensed aerodrome without first notifying the aerodrome licensee of that aerodrome in writing of that intended erection or construction at least thirty days prior to such erection or construction and shall, additionally and where requested provide such information in relation thereto to the Authority as may be required under paragraph (3) of this Article."

16.3.3 Baseline Conditions

The following airports/aerodromes are located in increasing distance from the Proposed Development (IAA, 2022):

- Rathcool Aerodrome (15km west of the nearest turbine) – NGR: W 32682 95269;
- Kerry Airport (31km north west of the nearest turbine) – NGR: Q 95698 04295;
- Bantry Aerodrome (42km south west of the nearest turbine) – NGR: V 97208 48206;
- Abbeyfeale Airfield (46km north of the nearest turbine) – NGR: R 08759 27949; and

- Cork Airport (49km southeast of the nearest turbine) – NGR: W 66020 65577.

There are no large airports in the vicinity of the Proposed Development, with the nearest large airport being Kerry Airport, located 31km from the nearest turbine. As shown in Table 16-1, during consultation IAA confirmed Rathcool does not support any radar facilities.

The Proposed Development is over 30km from the extended centreline of Runway 08/26 (Cork Airport) and also over 30km from the Aerodrome Reference Point of Kerry Airport and so would not affect the Approach Radar for either area.

16.3.4 Assessment of Effects

Do-Nothing Scenario

If the Proposed Development were not to proceed, there would be no impact on aviation operations in the area.

Construction Effects

As none of the turbines will be functional and rotating during the construction phase, there will be no effects on aviation. During the erection of the wind turbines, cranes will be fitted with appropriate aviation warning lighting to alert pilots to the presence of tall structures.

Operational Effects

The Proposed Development is over 30km from the extended centreline of Runway 08/26 (Cork Airport) and also over 30km from the Aerodrome Reference Point of Kerry Airport.

An outer horizontal surface is a specified portion of a horizontal plane around an aerodrome. It represents the level above which consideration needs to be given to the control of obstacles in order to facilitate practicable and efficient instrument approach procedures. The maximum extent of the OHS for any runway is 15km.

The Proposed Development is, therefore, over 15km outside the Outer Horizontal Surface (which extends from the Aerodrome Reference Point out to a distance of 15km). The Proposed Development therefore will have no effect on the operations of Cork and Kerry Airport.

Furthermore, as requested by the Irish Aviation Authority, an IFP assessment has been carried out and found that there will be no significant effects from the Proposed Development on Aviation receptors. Details of this assessment can be found within Technical Appendix 16-2.

Decommissioning Effects

Due to the nature of the decommissioning phase there will be no risk once the turbines are removed

Cumulative Effects

Due to the lack of significant effects, there is no potential for cumulative effects with other schemes.

16.3.5 Residual Effects and Conclusions

Proposed Mitigation/Monitoring

The Proposed mitigation is embedded into the design of the Proposed Development in the form of aviation safety lighting. This will be sufficient to remove the potential for significant impacts and will satisfy the requirements of the Department of Defence. Their consultation response can be found in Table 16-1. No other mitigation is required.

As such there will be no residual effects post mitigation during all phases of the Proposed Development.

16.4 Telecommunications

16.4.1 Introduction

This section considers the likely effects of the Proposed Development upon a range of communications infrastructure, including telecommunications networks, broadcast radio and television and fixed infrastructure such as telecommunication masts.

As there is no equivalent Irish guidance at the time of writing, the guidance document *"Tall structures and their impact on broadcast and other wireless services"* by OFCOM has been used. This document provides an overview for developers and planning authorities on how tall structures such as wind turbines may affect reception of wireless services (Ofcom, 2009).

Two potential problems can occur due to interference from tall structures, signal blocking, and reflection. Signal blocking can occur when a tall structure is situated between the transmitter and receiver. The structure itself can act to block and reduce signal levels picked up by the receiver producing interference.

Signal reflection can occur when wireless signals are reflected from the sides of structures. In the case of wind turbines, because the blades are rotating, the reflections can fluctuate and be quite complex.

Reflections from turbines can also vary depending on the speed at which the blades are rotating and the angles of the blades. This is accounted for in Technical Appendix 16-1 Telecoms Impact Study where the turbines are shown to have no impact on the telecommunications links due to the distance between the links and the turbines.

It should be noted that all parameters in the proposed range have been considered in this assessment.

16.4.2 Methodology

A radio link GIS model was used to map out the turbines and Fresnel zones of each telecommunications link. The distance between the closest point of each turbines rotor envelope to each telecommunications links Fresnel zone was measured to determine the likelihood of impacts on these links.

The turbine with the largest rotor diameter in the Proposed Turbine Range was used as the other turbines in the Proposed Turbine Range will have a smaller envelope due to the smaller rotor diameter. This means if there is no impact upon the Fresnel zones of each radio link with the largest turbine envelope, the smaller turbines will have no impact either.

16.4.3 Baseline Conditions

There are five telecom operators with networks in the vicinity of the proposed wind farm that require a detailed technical analysis:

- ESB Network;
- 2RN Network (RTÉ Networks)
- Virgin Media Network;
- Vodafone Network; and
- Enet Network.

A description of telecommunication links taken through to assessment are detailed in Technical Appendix 16-1 Telecommunications Impact Study.

16.4.4 Assessment of Effects

Do-Nothing Scenario

If the Proposed Development were not to proceed, there would be no impact on telecommunication links in the area.

Construction Effects

During the construction phase, there are likely to be several sources of temporary electromagnetic emissions. Including the brief use of electrical power tools and the use of electrical generators which may be brought onsite before mains electricity is provided.

These devices are required by Irish and European law to comply with the EMC Directive 2014/30/EU. Compliance with this Directive will mean that the electromagnetic emissions from these devices will not cause interference to other equipment.

Other potential effects during the construction phase are likely to be as a result of tall cranes used for constructing the turbines. These cranes will be beside the proposed turbines.

As such no significant effects are anticipated as the turbines and crane hardstands are sufficiently buffered spatially from the telecommunications links.

Operational Effects

As analogue television has been phased out in Ireland, digital terrestrial television was instated in October 2010. According to Ofcom the digital television signal is much better at coping with signal reflection³. Since the digital switchover, the power of transmitters emitting the digital signal has been increased to deal with the demand.

This higher output is likely to overcome any signal interference and is not likely to affect the reception received on televisions. Overall, the likely extent of any potential problems is much less significant with digital television than with analogue television.

³ At the time of writing, Comreg does not outline their position on digital vs terrestrial resistance to signal reflection.

Ai Bridges undertook a telecommunications impact assessment into the potential effects the Proposed Development may have on nearby telecommunications links which cross the Proposed Development boundary (Technical Appendix 16-1 Telecommunications Impact Study).

Ai Bridges found sufficient clearance between all turbines and all telecommunication links during consultation therefore no impacts have been determined and as such there will be no significant effects as a result of the Project.

Decommissioning Effects

When decommissioning of the Development takes place, effects associated with this phase on telecommunications will be similar to those at the construction phase.

Cumulative Effects

Due to the lack of significant effects, there is no potential for cumulative effects with other schemes.

16.4.5 Residual Effects and Conclusions

Proposed Mitigation

Mitigation measures were undertaken in the design phase through mitigation by avoidance i.e., the known routes of the telecommunication links were plotted and a buffer was applied to them, outside of which the proposed turbines were located. Compliance with the EMC Directive 2014/30/EU will mean that the electromagnetic emissions from devices used will not cause interference to other equipment.

As the proposed mitigation has been embedded into the project design it has ensured there will be no significant impacts, there are no proposed mitigation measures required.

During the consultation process, 2RN requested for a protocol agreement between 2RN and Cummeennabuddoge DAC to be signed. The protocol agreement will be in place prior to construction.

Residual Effects

No significant residual effects are predicted on telecommunications or radio/TV reception as a result of the Proposed Development.

Summary

While there are multiple telecommunication links which cross the Proposed Development Site, none of the Fresnel zones of these links are close enough to the any turbine in the Proposed Turbine Range to experience interference.

As interference is dependent on distance between turbines and links, smaller turbines in the Proposed Turbine Range will also have no impact as they will experience greater distances to the telecommunication links.

Therefore, no significant effects are predicted on telecommunications or radio reception as a result of the Proposed Development.

16.5 Resources and Utility Infrastructure

This section details the likelihood of significant effects on or interactions with existing resources and utility infrastructure.

In order to assess the potential for significant effects on built services: electricity, gas, water and waste in the vicinity of the Proposed Development, scoping requests were made to key consultees: Uisce Éireann, Kerry and Cork County Council, EPA, ESB and Eirgrid.

16.5.1 Quarries

There are no quarries located within the Site or in the immediate vicinity.

The nearest quarry is MC Group Keim, located approximately 5km from the nearest turbine within the Proposed Development. A list of quarries potentially supplying the Proposed Development is presented in Chapter 7: Traffic and Transport of this EIA Report.

Assessment of Potential Effects

Do Nothing Scenario

If the Development were not to proceed, there would be no associated impact on quarry operations in the area and quarrying activities would continue.

Construction Effects

The construction of the Development will impact on natural resources as aggregates which will be sourced from the quarries in proximity to the Proposed Development Site.

The use of imported material during the construction phase will have a slight, permanent negative impact on non-renewable resources of the area. This impact is considered to be imperceptible in the long-term.

Operational Effects

It is likely that a small amount of granular material may be required to maintain access tracks during operation which could impact the source quarry.

Decommissioning Effect

The decommissioning phase will have no impact on the source quarry as no groundworks entailing the importation of aggregate would be required.

Cumulative Effects

All existing and approved projects in Appendix 2-3 have been considered.

The very nature of a quarry is that it will be subject to cumulative effects as it is the source of stone for almost all developments in the area.

The use of imported material during the construction phase will have a slight, cumulative permanent negative impact on non-renewable resources of the area. This impact is considered to be imperceptible in the long-term.

16.5.2 Electricity Infrastructure

Introduction and baseline

The Proposed Development consists of a 3.3km underground grid connection route to Ballyyou skill 220/110kV substation.

The nearest overhead electricity line is the Clonkeen to Clashavoon 110kV line which runs northwest - south east on the opposite side of the N22 from the proposed Site entrance.

No underground electricity lines have been identified with the potential to be affected by the Proposed Development.

Assessment of Potential Effects

There is no potential effect on electricity infrastructure.

Cumulative Effects

No cumulative effects on electricity networks are likely during the operational and decommissioning phases.

16.5.3 Other utilities (Gas Utilities, Water and Waste)

Gas Utilities

There are no gas mains located within the Proposed Development Site. Gas Networks Ireland have responded to consultation illustrating there are also no existing services along the Grid Connection Route or the Turbine Delivery Route.

There is therefore no potential for impact.

Water Utilities

Potential impacts arising from the Development relating to existing water services have been assessed and are detailed in Chapter 12 Hydrology, Water Quality and Flood Risk.

Waste Utilities

A desk study of available information from the EPA did not identify any waste facilities, illegal waste activities, chemical monitoring points or industrial EPA licensed facilities within 5km of the Proposed Development.

A list of licensed waste facilities is provided in Technical Appendix 4-1 CEMP (Annex B: Waste Management Plan).

16.5.4 Assessment of Effects

Do-Nothing Scenario

If the Proposed Development does not proceed no impacts will occur with utilities remaining as per the baseline

Staff Facilities

Construction Phase

During the construction phase of the Proposed Development there will be the typical waste generated in an office environment such as left-over food and sandwich wrappers, this is classified as non-hazardous waste.

Estimates of such waste being generated average around 0.74kg per person per day (The World Bank, n.d). Actual amounts of waste produced will be less than this figure as personnel will be present at the Proposed Development for less than 24 hours a day

The effects of this waste will be not significant.

Operational Phase

No significant effects are assessed as likely to occur during the operational phase from staff facilities as no waste will be generated.

Decommissioning Phase

During the decommissioning phase of the Proposed Development there will be the typical waste generated in an office environment, the same as will be generated during the construction phase.

Estimates of such waste being generated average around 0.74kg per person per day (The World Bank, n.d). Actual amounts of waste produced will be less than this figure as personnel will be present at the Proposed Development for less than 24 hours a day

The effects of this waste will be not significant.

Sanitary Waste

Construction Phase

Self-contained port-a-loo units will be used during the construction phase. The waste produced by the port-a-loo units is designated as non-hazardous waste.

Maximum sanitary waste production during the construction phase is estimated at 60 litres per person per day (EPA, 1999).

There will be no on-site treatment of wastewater and the effects will be non-significant.

Operational Phase

No significant effects are assessed as likely to occur during the operational phase from sanitary waste as no waste will be generated.

Decommissioning Phase

Maximum sanitary waste production during the decommissioning phase is estimated at 60 litres per person per day (EPA, 1999).

There will be no on-site treatment of wastewater and the effects will be not significant.

Chemicals, Fuels and Oils

Construction Phase

Oil waste and diesel are classified as hazardous waste. There is no expected chemical/fuel/oil waste other than from rags and residual amounts in containers.

Without mitigation, the effects would be slight and medium-term in duration. However, through the implementation of the mitigation measures set out in Technical Appendix 4-1 CEMP (Annex B: Waste Management Plan), the residual effects will be non-significant.

Operational Phase

No significant effects are assessed as likely to occur during the operational phase from chemicals, fuels and oils as no waste will be generated.

Decommissioning Phase

There is no expected chemical/fuel/oil waste other than from rags and residual amounts in containers during the decommissioning phase.

Without mitigation, the effects would be slight and medium-term in duration. However, through the implementation of the mitigation measures set out in Technical Appendix 4-1 CEMP (Annex B: Waste Management Plan), the residual effects will be non-significant.

Refuelling

Construction Phase

There is no expected refuelling waste other than from absorbent materials containing small amounts of residual oil used to clean up small incidental spillages during the refuelling process.

Without mitigation, the effects would be slight and medium-term in duration. However, through the implementation of the mitigation measures set out in Technical Appendix 4-1 CEMP (Annex B: Waste Management Plan), the residual effects will be non-significant.

Operational Phase

No significant effects are assessed as likely to occur during the operational phase from refuelling as no on-site refuelling will take place.

Decommissioning Phase

There is no expected refuelling waste other than from absorbent materials containing small amounts of residual oil used to clean up small incidental spillages during the refuelling process.

Without mitigation, the effects would be slight and medium-term in duration. However, through the implementation of the mitigation measures set out in Technical Appendix 4-1 CEMP (Annex B: Waste Management Plan), the residual effects will be non-significant.

Packaging

Construction Phase

Packaging will be brought on site and can include cardboard, wood and plastics used to package turbine components.

The occurrence of 10kg of plastic per turbine blade, between 40 and 50 pallets and 50 to 60 cable drums are expected. This will be removed from site for re-use by an authorised person(s).

This waste is non-hazardous, and the effects of this waste are non-significant.

Operational Phase

No significant effects are assessed as likely to occur during the operational phase from packaging as no waste will be generated.

Decommissioning Phase

No significant effects are assessed as likely to occur during the decommissioning phase from packaging as no waste will be generated.

Excavated Materials

Construction Phase

Excavated materials will be required for habitat and ecological restoration, reprofiling and backfilling as described in Chapter 4: Description of Development. There is no surplus excavated material that will require removal from within the Proposed Development Site. As such, excavated materials are not classified as waste, as per the Waste Management Act 1996 (as amended).

There will be no significant effects.

Operational Phase

No significant effects are assessed as likely to occur during the operational phase as no excavated materials will be generated.

Decommissioning Phase

No significant effects are assessed as likely to occur during the decommissioning phase as no excavated materials will be generated.

Metals

Construction Phase

No significant effects are assessed as likely to occur during the construction phase from metals as no waste will be generated.

Operational Phase

No significant effects are assessed as likely to occur during the operational phase from metals as no waste will be generated.

Decommissioning Phase

During decommissioning, it is expected that 100 tonnes of steel will be removed from turbine bases. This waste is non-hazardous, and effects will be non-significant.

Cumulative Effects

The negligible quantities of waste generated as part of construction, operation and decommissioning phases will not give rise to cumulative effects.

16.6 Statement of Significance

No significant negative impacts on material assets have been identified.

16.7 Referencing

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