

16. Infrastructure and Other Issues

16.1 Introduction

- 16.1.1 Turbines have the potential to interfere with electromagnetic signals, which can impact communication networks, television reception and the telemetry systems used by utilities providers, while construction activities have the potential to affect existing utility infrastructure, including electricity, water and gas. This chapter of the EIA Report therefore assesses the likely significant effects of the Proposed Development with respect to existing infrastructure (e.g. telecommunications, gas, water and electricity transmission related). LineSearchBeforeUDig (LSBUD)¹ is an online service that provides data on existing utility assets, the results of which have informed this chapter. A collection of utilities reports from Forestry and Land Scotland (FLS) and Open Reach report can be found in **Appendix 16A**, outlining key utility infrastructure within the vicinity of the Proposed Development.
- 16.1.2 In addition, this chapter also considers 'other issues' of relevance to the Proposed Development where these have not been specifically captured in other chapters. In this case, the other issues considered in this chapter which may affect people are health and safety and , major accidents and disasters (this also potentially affecting existing infrastructure/infrastructure of the Proposed Development). Forestry is also considered in the context of 'other issues' for the purpose of this EIA Report, and an assessment undertaken by DGA Forestry is provided in **Appendix 4A: Forestry Report** .
- 16.1.3 Argyll and Bute Council (ABC) confirmed that an assessment of the effect known as 'shadow flicker' could be scoped out of the EIA Report as the nearest residential property to a turbine location, Kirn Lodge, is located 2.5km to the northwest of the nearest turbine location and this phenomenon will not occur at this distance².

16.2 Limitations of this Assessment

- 16.2.1 There are no limitations relating to infrastructure and other issues that affect the robustness of the assessment of the likely significant effects of the Proposed Development.

¹ LSBUD "provides a single point of contact for all initial enquiries relating to the apparatus owned and/or operated by our Members, which now totals over 30,000km of assets such as buried underground transmission gas/oil pipelines and fibre optic cable ducts".

² Under certain circumstances, moving turbine blades briefly blocks/reduces the intensity of light entering an opening to a room on each rotation, causing a flickering to be perceived. For shadow flicker to occur, the receptor must be directly in line with the wind turbines when the sun is low in the sky and within 10 rotor diameters of a turbine where they are located within 130 degrees either side of north of any turbine. Residential properties are well beyond the area potentially affected by shadow flicker which would be 1,600m assuming 10 x 155m rotor diameter plus 50m micro-siting allowance).

16.3 Relevant Legislation, Planning Policy, Technical Guidance

- 16.3.1 **Chapter 5: Planning Policy** of the EIA Report provides a review of applicable planning policies, advice, and guidance of relevance to the Proposed Development.
- 16.3.2 Of specific relevance to the technical assessments provided in this chapter is the National Planning Framework 4 (NPF4) (2023), Policy 11 - Energy.
- Policy 11(e)(i) notes that considerations in determining applications for energy infrastructure developments are likely to include *“Impacts on communities and individual dwellings, including residential amenity, visual impact, noise and shadow flicker.”*
 - Policy 11(e)(iii) notes that considerations in determining applications for energy infrastructure developments are likely to include *“Public access, including impact on long distance walking and cycling routes and scenic routes.”*
 - Policy 11(e)(v) notes that considerations in determining applications for energy infrastructure developments are likely to include *“impacts on telecommunications and broadcasting installations, particularly ensuring that transmission links are not compromised”*.
- 16.3.3 The Scottish Government’s Specific Advice Sheet regarding Onshore Wind (updated May 2014) states that: *“Wind turbines (in common with all electrical equipment) produce electromagnetic radiation which can interfere with broadcast communications and signals. The Radiocommunications Agency (RA) register of all civil radio communications installations in the UK can identify any radio installations in the neighbourhood of a wind farm site, but will not identify their owners. Applicants should make direct contact with any authorities or bodies likely to have an interest, in particular, the local emergency services, local authority services departments, gas and electricity companies”*. It also mentions the safety consideration of ice throw, stating *“as an added precaution to equipment safety standards, warning signage may be a useful precaution”*.
- 16.3.4 Policy 30 – The Sustainable Growth of Renewables of Argyll and Bute Local Development Plan 2 (2024) states that *“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 communities, natural and historic environments, landscape character and visual amenity, and that the proposals would be compatible with adjacent land uses. Applications for all wind turbine developments will be assessed against a range of criteria:” including..... “Impacts on telecommunications and broadcasting installations, particularly ensuring that transmission links are not compromised; Impacts on trees, woods and forests.”*
- 16.3.5 HSE GS6 *Avoiding danger from overhead power lines*, which describes the precautionary steps to be taken when working near overhead lines, will also be followed.

16.4 Data Gathering Methodology

- 16.4.1 This has been informed by the **Appendix 2A: Scoping Opinion, Chapter 1: Introduction, Chapter 2: EIA Approach, Appendix 2B: Scoping Report** and by a separate consultation exercise, the results of which are reported in **Table 16.1**.
- 16.4.2 As this chapter primarily considers existing infrastructure that may be affected by the Proposed Development, as well as people from a health and safety perspective, the Study Area is focussed on the Development Site, particularly the footprint of the Proposed Development itself.
- 16.4.3 A utilities search was conducted by FLS and Open Reach, the results of which are provided in **Appendix 16A**. An enquiry was also entered into the LSBUD website in January 2024, and the results are presented in **Section 16.5** below.

16.5 Overall Baseline

Current baseline

- 16.5.1 The Development Site, the boundary of which is shown on **Figure 1.2 of Chapter 1: Introduction**, is located in Argyll and Bute and lies on land between Loch Awe to the west and Loch Fyne to the east.
- 16.5.2 The Development Site access will be via the existing An Suidhe ind Farm access, east of the Development Site, then via a new access track through the forestry.
- 16.5.3 The majority of the Development Site is used for commercial forestry operations, within Eredine Forest (western area of the Development Site) and Brenchoillie Forest (eastern area of the Development Site). For details regarding felling operations within the Development Site, see **Appendix 4A: Forestry Report** and the associated Eredine Proposed Development Construction Felling Plan (**Figure 4A.6**), which outlines parcels of land for felling. **Chapter 8: Landscape and Visual, Chapter 9: Historic Environment and Chapter 10: Ecology** also consider **Appendix 4A: Forestry Report** within their assessments.

Utilities and Infrastructure

- 16.5.4 Utilities and Infrastructure consultations are summarised in **Table 16.1**.
- 16.5.5 By using OFCOM Spectrum Information System (SIS) (2023), ten service providers were identified that have radio-communication links within the wider area surrounding the Proposed Development, and six operators confirmed links within the vicinity of the study area including the Joint Radio Company (JRC), BT, Cable and Wireless, Arqiva, MII Telecom and Atkins.
- 16.5.6 Three water pipelines and an underground power line are present within the Development Site (see **Figure 16.1**). These are located in a relatively central area of the Development Site, approximately 750m from the nearest turbine (T18), and approximately 480m from the closet infrastructure associated with the Proposed Development – a borrow pit search area (BP8).
- 16.5.7 It was confirmed that one LSBUD member has assets registered within the vicinity of the Proposed Development; Scottish and Southern Electricity Networks (SSEN). No other LSBUD members were affected.

16.6 Consultation

- 16.6.1 A desk-based consultation exercise was undertaken and this is summarised in **Table 16.1**.
- 16.6.2 Telecoms consultation correspondence were issued on 16/01/2024 with responses received between 17/01/2024 and 23/01/2024. The majority of the consultation was conducted via email, with two instances where submission was via online web portals.

Table 16.1 Summary of Issues Raised during Consultation Regarding Utilities and Infrastructure

Consultee(s)	Latest Response Date	Response
Argyll and Bute Council (ABC)	31 May 2023 (Scoping Opinion Addendum)	ABC is satisfied with the intended approach as detailed in the Scoping Report.. ABC understands that advice from relevant consultees with expertise in Aviation and Existing Infrastructure, Telecoms & Broadcast Services will be sought in these regards.
Airwave Solutions	January 2024	No objection
Arqiva	January 2024	No objection
BT	January 2024	The Proposed Development should not cause interference to BT's radio network.
City Fibre	January 2024	No infrastructure in the vicinity of the Proposed Development
Colt Technology Services	January 2024	No apparatus near the Proposed Development.
CSS Telecoms	January 2024	No objection
Equans	January 2024	No buried plant in vicinity.
GTC	January 2024	No assets in vicinity.
Joint Radio Company (JRC)	January 2024	No objection
Mobile Broadband Network Ltd (MBNL)	February 2024	There are assets within vicinity of the Development Site but these would not be affected by the Proposed Development.
MLL Telecom	January 2024	No existing links within a 3km radius.
O2	February 2024	No objection.
SSEN	February 2024	Determined via LSBUD – there are assets within vicinity of the Development Site but these would not be affected by the Proposed Development.

Consultee(s)	Latest Response Date	Response
Utility Assets	February 2024	No plant in vicinity.
Verizon Business	January 2024	No apparatus in the concerned areas.
Virgin Media	February 2024	No objection
Vodafone	January 2024	No apparatus within the vicinity.

- 16.6.3 The consultation flagged assets owned by MBNL (that provide mobile services to EE and Three) are within proximity of the Proposed Development. However, these are not within the Development Site and MBNL has advised these would not be affected by the Proposed Development.

16.7 Scope of the Assessment

Potential Receptors

- 16.7.1 The impact of the Proposed Development on the following potential receptors were considered:
- Utility infrastructure;
 - Telecommunications;
 - People (Health and Safety); and
 - Major Accidents or Disasters.
- 16.7.2 As noted in **Section 16.1**, no shadow flicker effects are predicted to occur due to the distance between turbines and residential properties and this phenomenon is not considered further in this chapter.

Potential Effects on Utility Infrastructure

- 16.7.3 Construction activities, such as excavation of foundations, cable trenches and drainage ditches, have the potential to cause damage to existing utility infrastructure, if the location of the infrastructure is unknown. If, during construction, any unknown buried cables and pipes are struck which are still in use or have not been made safe, there would be a considerable health and safety risk, as well as disruption to public and commercial consumers, potential environmental damage and requirement for emergency resources to be provided to consumers during repairs.

Potential Effects on Telecommunications

- 16.7.4 Microwave telecommunications use point-to-point transmission. The signal is likely to be affected if wind turbine towers are sited within 100m of the line of sight between telecommunication towers. In this scenario there is a potential for the signal to be degraded by obstructing, reflecting or scattering of telecommunication microwaves by the rotating turbine blades.

- 16.7.5 Mobile telecommunications use transmission towers that can provide service in a 360-degree arc around each tower location. A mobile device will usually connect to multiple transmission towers simultaneously. There is a potential for the signal to be degraded by obstructing, reflecting or scattering of telecommunication radio waves by rotating turbine blades.
- 16.7.6 Digital television signals are transmitted using Ultra High Frequencies (UHF) and there are two main mechanisms whereby a wind farm could potentially interfere with television reception - 'shadowing' effects and 'reflection'/'scattering' effects. The Proposed Development could interfere with television signals during operation, although this is less likely to occur with digital receivers which are more robust.
- 16.7.7 It is unlikely for impacts on telecommunication signals to arise during construction or decommissioning. In the unlikely event that effects do occur, this is considered in **Section 16.8** below.

Potential Effects on People (Health and Safety)

- 16.7.8 The Proposed Development may affect people, for example, as a result of health and safety risks to those on the Development Site during construction, operation and decommissioning. Safety measures and precautions for workers and the general public will be implemented in accordance with relevant legislation and guidance – see **Section 16.3**.
- 16.7.9 Wind turbines can be susceptible to lightning strike, and a very small number of wind turbines have been known to fail due to lightning strike, though such incidents are very rare. A lightning strike to a turbine(s) has health and safety implications to workers and / or the public in the immediate vicinity.
- 16.7.10 In cold weather, ice can build up on blade surfaces when operating which can be thrown from the blades. This can subsequently cause harm to surrounding receptors. The Applicant is an experienced wind farm operator and has stringent operational procedures to minimise the health and safety risk posed by ice thrown (see **Paragraph 16.8.10**).

Major Accidents or Disasters

- 16.7.11 The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (the EIA Regulations) state that the potential for a proposed development to result in, or be affected by, major accidents or disasters, either as a result of the location of the Development Site or from the Proposed Development itself, should be assessed. Major accidents or disasters are therefore considered in this chapter under a range of topics as discussed further within **Section 16.14**.

16.8 Embedded Measures

Television

- 16.8.1 If a reduction in television reception quality does occur in the area surrounding the Proposed Development, it is most likely to become apparent once the Proposed Development becomes operational. However, due to the prevalence of digital television, effects are unlikely. If effects to television do arise, this will be dealt with through additional mitigation measures, as outlined in **Table 16.4** (Summary of Environmental Measures to be Implemented).

Public Safety

Construction

- 16.8.2 To ensure the risk to public safety is minimised during the construction phase of the Proposed Development, the appointed Contractors will adhere to the Construction (Design and Management) Regulations 2015³ and other relevant UK health and safety legislation including:
- Health and Safety at Work Act 1974;
 - Management of Health and Safety at Work Regulations 1999;
 - Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013; and
 - Onshore Wind Health and Safety Guidelines, RenewableUK, 2015.
- 16.8.3 All potentially hazardous areas such as excavations and electrical installation works will be fenced off and all unattended machinery will be stored in the site compound or immobilised to prevent unauthorised use.
- 16.8.4 Appropriate warning signage will be installed to provide notification of any hazards, any areas where access is restricted or prohibited (such as in the vicinity of transformers, switchgear and metering systems), and to alert any Development Site users to the potential for increased risks under certain meteorological and operating conditions.

Operation

- 16.8.5 Wind turbines installed at the Development Site will comply with the BS EN 61400 series which provides the design requirements for onshore and offshore wind turbines.
- 16.8.6 Access to all turbines and electrical infrastructure will be controlled to authorised individuals only.
- 16.8.7 Wind farms have a proven good public safety track record. Appropriate measures are included in the turbine design to conduct lightning strike down to earth and minimise the risk of damage to turbines. Occasionally, lightning can strike and damage a wind turbine blade. Modern wind turbine blades are manufactured from a glass-fibre or wood-epoxy composite in a mould, such that the reinforcement runs predominantly along the length of the blade. This means that blades should stay attached to the turbine if damaged by lightning and in all cases, the turbine will automatically shut down if damaged.
- 16.8.8 In cold weather, ice can build up on blade surfaces when operating. The turbine can continue to operate with a very thin accumulation of snow or ice but will shut down automatically as soon as there is a sufficient build up to cause aerodynamic or physical imbalance of the rotor assembly. After shutdown due to icing, the turbine can be restarted remotely further to a manual, visual or technical inspection to ensure that the turbine blades are free of ice, thereby eliminating the potential for 'ice-throw'. The wind turbines

³ If planning permission is granted, the Applicant will produce a Construction Phase Health and Safety Plan in accordance with the Construction (Design and Management) Regulations (CDM) 2015. The purpose of the Health and Safety Plan would be to outline and define the approach to health and safety that will be adopted specifically for the Proposed Development and to draw attention to the hazards known to the Applicant regarding the construction site which may affect the execution of the works. The Applicant will appoint a Project Manager for the duration of the detailed design, procurement and construction phases who will work with the Principal Contractor and CDM Co-ordinator as defined in the CDM Regulations 2015.

will also be fitted with vibration sensors which would detect any imbalance which might be caused by icing, which would allow the turbines to be shut down automatically.

- 16.8.9 Turbine power and monitoring systems operate with several levels of redundancy to protect the plant from damage. In the case of faults arising, including over-speed of the blades, overpower production, or loss of grid connection, turbines shut down automatically through braking mechanisms. In addition, turbines may be fitted with vibration sensors so that in the unlikely event a blade is damaged, the turbine will automatically and immediately shut down.

16.9 Assessment Methodology

- 16.9.1 This assessment adopts a qualitative approach based on accepted best practice, as employed in previous wind farm assessments, to assess the significance of effects.
- 16.9.2 When considering existing infrastructure and telecommunications, appropriate design of a wind farm will result in the avoidance of potential impacts on these interests and, where this is the case, no assessment is required. Where siting of turbines or associated infrastructure to avoid potential impacts is not feasible, a range of technical solutions can be implemented to mitigate effects and residual impacts are assessed.
- 16.9.3 The risk presented to the public from the construction, operation and decommissioning of the Proposed Development (due to public access to the Development Site and general health and safety risks) has been qualitatively assessed using relevant guidance documents (Specific Advice Sheet Onshore Wind Turbines (Scottish Government, 2011 (updated 2014)) and professional judgement based on experience gained from previous wind farm projects. Public access to working areas of the Development Site will be prevented during construction and decommissioning for health and safety purposes and therefore it is recognised that the risk to the public during these phases will be prevented.
- 16.9.4 A qualitative desk-based assessment has been undertaken in relation to the issue of 'major accidents and disasters' which require consideration under the EIA Regulations. This draws from, and cross references, other relevant assessments undertaken for the EIA, for example noise and landscape and visual.
- 16.9.5 Where relevant, the assessment of residual effects is based on a consideration of the extent to which proposed mitigation measures are effective, as follows:
- Fully – Effect fully mitigated and no significant residual effects predicted;
 - Substantially – Mitigation would be largely successful at reducing significant effects though some residual significant effects are possible; and
 - Partially – Mitigation would be successful at reducing effects, but some significant residual effects are likely.
- 16.9.6 Effects on population and human health are considered in **Table 16.2 below**, and within the methodology of the relevant chapters of this EIA Report, as follows:
- Chapter 7: Noise;
 - Chapter 8: Landscape and visual;
 - Chapter 13: Traffic and Transport;
 - Chapter 12: Geology, Hydrology and Hydrogeology; and
 - Chapter 15: Socio-Economics and Tourism.

- 16.9.7 Major accidents and disasters are scoped in for assessment where there is a high risk for the Proposed Development to result in, or be affected by, a major accident or disaster. A high risk is considered to be where there is a reasonable likelihood of the accident or disaster occurring, or where the effect of the accident or disaster would lead to mitigation requirements beyond the usual scope of construction or operational activities. The effects of the major accidents and disasters assessment are summarised in **Table 16.3** below.

16.10 Assessment of Effects

Utility Infrastructure

- 16.10.1 Utility infrastructure has been identified within the Development Site boundary (see **Figure 16.1**). This includes water pipelines and underground power lines. However, these are located over 750m away from the nearest turbine (T18), and approximately 480 m from the closet infrastructure asset associated with the Proposed Development – a borrow pit search area. Construction works are not anticipated to encroach on any existing utilities. All other existing utilities are located outside of the Development Site boundary. Therefore, **no significant** effects are anticipated in regard to utility infrastructure.

Telecommunications

- 16.10.2 As noted in **Section 16.6 (Table 16.1)**, SSEN and MBNL have both advised that they have infrastructure in close proximity to the Proposed Development and there may be a risk to those assets. Further consultation with SSEN is required to determine presence and extent of impact and discuss mitigation if necessary.
- 16.10.3 MBNL own infrastructure in the area, although not within direct proximity of any individual wind turbines. As set out at **Section 16.6.3**, it is unlikely that the Proposed Development would impact upon the service of EE or Three Mobile customers in the area (wind turbines typically do not impact upon mobile service). Mitigation measures are not anticipated to be needed.
- 16.10.4 By introducing additional mitigation measures as appropriate - as outlined in Table 16.4 - any unlikely television reception issues related to the Proposed Development should be fully mitigated.

People (Health and Safety)

- 16.10.5 As a result of the mitigation measures outlined in **Section 16.8**, it is considered there will be **no significant** effects on public safety.
- 16.10.6 The potential for significant effects arising from the Proposed Development in relation to population and human health has been considered in those technical chapters where changes may affect people (**Chapter 7:Noise, Chapter 8:Landscape and visual, Chapter 13:Traffic and Transport, Chapter 12: Geology, Hydrology and Hydrogeology and Chapter 15: Socio-Economics and Tourism** of the EIA Report). The results are summarised in **Table 16.2**, and **no significant** effects in relation to population and human health are predicted.

Table 16.2 Population and Human Health Effects

Technical Assessment	Effects	Effect on Population and Human Health	Rationale
Noise Chapter 7	Not significant	Not significant	No exceedances of the ETSU-R-97 criteria are predicted as a result of noise emissions from the Proposed Development. As such, the operational noise effects of the Proposed Development, either alone or in combination with other developments, would not be significant .
Landscape and Visual – Chapter 8	Significant	Not significant	Significant effects would be limited to partial sections of five transport routes and four recreational routes. However, these will not lead to significant effects on Population and Human Health.
Traffic and Transport – Chapter 13	Not significant	Not significant	The volume of traffic predicted and resulting relative increases during construction and operation of the Proposed Development would not have a significant impact on severance, driver delay, pedestrian delay, pedestrian amenity, fear and intimidation or accident and safety.

Major Accidents and Disasters

- 16.10.7 The potential for major accidents and disasters linked to the Proposed Development and its location was considered for a range of topics in the EIA Scoping Report (see **Appendix 2B**), the majority of which were scoped out, as no likely significant effects were identified. The remaining topics were considered for further assessment and are presented in **Table 16.3** below. It is considered that there would be **no significant** effects arising from the Proposed Development.

Table 16.3 Effects in Relation to Major Accidents and Disasters

Major Accident or Disaster	Risk due to location	Risk associated with the Proposed Development	Significant Effect	Rationale
Landslide / subsidence	Moderate	Moderate	No	A peat slide risk assessment has been undertaken (see Chapter 6: Renewable Energy and Peat , and also Appendix 6B: Landslide Risk Assessment). The assessment indicates that parts of T1, T3, T7, T8, T9, T11, T19, T21, BP2, BP6 and Temporary Construction Compound 1 are within areas of Moderate risk. This risk can be mitigated by using the micro-siting allowance, as well as minimising additional loading of

Major Accident or Disaster	Risk due to location	Risk associated with the Proposed Development	Significant Effect	Rationale
				susceptible peat covered slopes, maintaining the current drainage of the peat, avoiding ponding of surface water and where necessary redirecting drainage to a purpose-built network. A post-consent detailed ground investigation is also recommended to assist in detailed assessment of peat slope stability in the most sensitive areas of the Proposed Development.
Severe weather: extreme temperatures	Low	Very Low	No	Ice build-up could lead to ice throw, or to blade damage. However, design considerations explained in 16.8.11 has substantially reduced this risk.
Floods	Low	Very Low	No	Some isolated locations within the Development Site are prone to surface water flooding. However, provided watercourse crossings within the Development Site are designed to accommodate a 0.5% Annual Exceedance Probability (AEP) event, flooding will not cause an issue for the Proposed Development. The Proposed Development will also not increase the likelihood or severity of flooding outside the red line boundary. For more information related to hydrology, see Chapter 12: Geology, Hydrology and Hydrogeology .
Transport accidents	Low	Low	No	Abnormal loads or an increase in traffic could lead to an increased risk of accidents. Highway network may be unsuitable for such traffic, further increasing accident risk. However, a Route Survey Report (RSR) for Abnormal Indivisible Loads (AILs) has been produced (see Appendix 13A) and has identified temporary mitigation solutions required to facilitate AIL movements. Further mitigation measures such as the use of specific travel routes for heavy goods vehicles (HGVs) and delivery vehicles will ensure adverse effects are mitigated (See Chapter 13: Traffic and Transport).

Major Accident or Disaster	Risk due to location	Risk associated with the Proposed Development	Significant Effect	Rationale
Industrial accidents	Low	Low	No	Manual labour, working at height and use of specialist plant all bring risk of industrial accidents. All relevant UK health and safety legislation will be adhered to and site construction management practices will include, but are not limited to, exclusion of the public from construction areas, relevant signage and fencing of potentially hazardous construction areas where appropriate. If planning permission is granted, the Applicant will produce a Construction Phase Health and Safety Plan in accordance with the Construction (Design and Management) Regulations (CDM) 2015.
Electricity, gas, water supply or sewerage system failures	Low	Low	No	Construction activities or turbine collapse could damage existing infrastructure. No existing infrastructure is located within 480 m of the Proposed Development infrastructure. All relevant health and safety legislation will be followed, and industry best practice guidance adhered to. HSE GS6 <i>Avoiding danger from overhead power lines</i> will be followed.

16.11 Assessment of Cumulative Effects

- 16.11.1 Potential effects have been considered in respect to telecommunications, utility infrastructure, People (Health and Safety) and major accidents and disasters. **No significant** cumulative effects as a result of the Proposed Development are predicted.

16.12 Additional Mitigation Measures

- 16.12.1 Existing utility infrastructure and telecommunications have been considered in the design of the Proposed Development, such that potential impacts on these interests are avoided. For further information, please refer to **Section 16.8**, and **Chapter 3: Design Evolution and Alternatives**.
- 16.12.2 It is unlikely that television reception quality will be directly affected by the Proposed Development, partly due to the prevalence of digital television. In the event that telecommunications are disturbed, this will become most apparent during operation. Additional measures to mitigate this effect are as follows, and outlined in **Table 16.4**:
- Within 12 months of the first export date, any individual claim regarding TV picture loss or interference shall be investigated by a qualified engineer appointed by the developer;

- The results shall be submitted to the planning authority; and
- Should any impairment to the TV or radio signal be attributable to the development, the developer shall remedy such impairment within 3 months.

16.13 Conclusions of Significance Evaluation

- 16.13.1 It is considered that there would be **no significant** effects arising as a result of the Proposed Development in respect of infrastructure and other issues.

16.14 Implementation of Environmental Measures

- 16.14.1 **Table 16.4** describes the environmental measures embedded within the Proposed Development and the means by which they will be implemented.

Table 16.4 Summary of Environmental Measures to be Implemented

Effect	Incorporated mitigation / enhancement measure	Extent to which effect mitigated ⁴	Monitoring requirements (if any)	Means by which mitigation, or enhancement measure may be secured
Construction				
Safety	All relevant UK Health Safety Security Environment (HSSE), legislation, guidelines and best practice will be adhered to. Site construction management practices will include, but are not limited to, exclusion of the public from construction areas relevant signage and fencing at potential hazardous construction areas where appropriate.	Fully	None	Standard site management practices incorporated into construction contracts.
Infrastructure	All relevant HSSE legislation guidelines and best practice will be adhered to, and industry best practice guidance adhered to.	Fully	None	All relevant HSSE guidance and best practice will be followed at all times.
Landscape and Visual	Addressed as far as possible through design and no additional mitigation measures proposed.	Partially	None	Panning Condition (CEMP)

⁴ Key to predicted success of mitigation:
 Fully - Effect fully mitigated and no effects predicted.
 Substantially - Mitigation would be largely successful at reducing effect. Some effects possible.
 Partially - Mitigation would be successful at reducing effects, but some effects likely.

Effect	Incorporated mitigation / enhancement measure	Extent to which effect mitigated ₄	Monitoring requirements (if any)	Means by which mitigation, or enhancement measure may be secured
	Site management to ensure adequate maintenance of site facilities and landscape features such as access tracks, field boundaries, gates and signage. It should be noted that this does not reduce the significance of effects however.			
Operation				
Possible interference to television reception to scattered properties near to the Proposed Development	Within 12 months of the first export date, any claim by any individual person regarding TV picture loss or interference at their house, business premises or other building, shall be investigated by a qualified engineer appointed by the developer and the results shall be submitted to the planning authority. Should any impairment to the TV or radio signal be attributable to the development, the developer shall remedy such impairment within 3 months	Fully	None	Planning Condition
Operational Safety	Turbines installed at the Development Site would comply with the BS EN 61400 series and relevant UK health and safety legislation. Safety measures also include the installation of appropriate warning signage where necessary on-site. Access to all turbines and electrical infrastructure will be controlled to authorised individuals only.	Fully	On-going variation	Site design and on-going maintenance.

16.15 References

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