

15 Telecommunication

Contents

15.1	Executive Summary	15-1
15.2	Introduction	15-1
15.3	Legislation, Policy and Guidelines	15-2
15.4	Consultation	15-2
15.5	Assessment Methodology	15-3
15.6	Baseline Conditions	15-3
15.7	Receptors Brought Forward for Assessment	15-4
15.8	Potential Effects	15-4
15.9	Cumulative Assessment	15-4
15.10	Summary	15-4
15.11	References	15-6

This page is intentionally blank.

15 Telecommunications

15.1 Executive Summary

- 15.1.1 This chapter considers the potential effects of the Proposed Development on existing and planned telecommunications infrastructure, both within the site and in the wider area, during the construction, operation and decommissioning phases of the Proposed Development. Assessment of effects to television reception has been scoped out within the EIA Scoping Report (refer to Appendix 4.2).
- 15.1.2 The telecommunications assessment, as informed by current guidelines and legislation, has been undertaken through consultation with the appropriate consultees, namely:
- Airwave Solutions;
 - Arqiva;
 - Atkins;
 - BT;
 - EE;
 - Joint Radio Company (JRC);
 - Spectrum Licensing; and
 - Vodafone.
- 15.1.3 The consultation process identified one link located in the north-eastern corner of the site operated by Airwave Solutions, who provide telecommunication links for the emergency services.
- 15.1.4 The link is located approximately 120 m and 160 m east of Turbine 1 and Turbine 4 respectively (refer to Figure 15.1).
- 15.1.5 No effects on telecommunications from the construction, operation or decommissioning of the Proposed Development were identified.
- 15.1.6 As the Proposed Development will not impact any telecommunication links, the Proposed Development will not have any cumulative effects on telecommunication links with other developments.

15.2 Introduction

- 15.2.1 Wind turbines, like any other large structure, have the potential to interfere with electromagnetic signals, which are used in a variety of communications, through signal blocking and signal reflections. Relevant infrastructure given consideration in this chapter includes telecommunication links and microwave links.
- 15.2.2 The Office of Communications (Ofcom) is the regulator for the UK communications industries and, under the Wireless Telegraphy Act 2006, is responsible for dealing with any complaints regarding interference to television, radio or telecommunications. Operators of electromagnetic links will ascribe a safeguarding buffer zone around their transmitters and line of sight pathways to ensure that they remain unobstructed. Consequently, individual telecommunication providers/operators have been consulted as part of this assessment.
- 15.2.3 Assessment of effects to television reception has been scoped out within the EIA Scoping Report (refer to Appendix 4.2). This is because the strength of the digital signal in the area, and the inherently resilient nature of digital television broadcasting, mean that there is a low risk of interference with domestic television reception from a wind energy development at this location.

- 15.2.4 Any impact on aviation and radar is covered separately in Chapter 14.
- 15.2.5 This assessment has assessed the design which includes turbine layout F and infrastructure layout 4 as described in Chapter 2. For the purpose of this assessment, it has been assumed that the Proposed Development turbines will not exceed 135 m to blade tip. In addition, the candidate turbine that has been used to inform the assessment has a hub height of 77.8 m and rotor diameter of 117 m. It is recognised that turbine selection will be subject to commercial tendering and availability and the specific parameters of hub height and rotor diameter may therefore vary; it is however unlikely that a change to the hub height or rotor diameter from that assessed would result in a material change in the findings of the assessment.

15.3 Legislation, Policy and Guidelines

15.3.1 The assessment has been informed by relevant legislation, policy and guidelines, details of which are provided below:

- Wireless Telegraphy Act (UK Government, 2006);
- The Highland-wide Local Development Plan (THC, 2012);
- The Highland-wide Development Plan. Onshore Wind Energy Supplementary Guidance (THC, 2016);
- Planning Advice Note: PAN 62 Radio Telecommunications (Scottish Government, 2001); and
- Tall Structures and their Impact on Broadcast and Other Wireless Services (Ofcom, 2009).

15.3.2 The potential impacts as a result of the Proposed Development have been assessed with reference to the above documents.

15.4 Consultation

15.4.1 Consultation was undertaken with THC, through the request for an EIA Scoping Opinion (refer to Appendix 4.2), and other relevant stakeholders (refer to Appendix 4.4), to identify any fixed wireless links or scanning telemetry links in the area¹, and a summary of their responses are set out in Table 15.1 below.

Table 15.1 - Consultee Responses for Telecommunications

Consultee	Response	Actions
THC (Scoping Opinion) (01/03/2018)	The scoping report recognises the potential impact on community assets that are currently in operation, for example road network (see below), footpaths, TV, radio, telecommunication links, radar, aviation interests, etc. It is expected that mitigation will be offered in respect of these matters.	No mitigation is required as no impacts have been identified.
Airwave Solutions (04/08/2020)	No objection.	No further action is required.
Arqiva (22/06/2020)	No objection.	No further action is required.

¹ The site centre, the turbine co-ordinates and a search radius of 700 m was provided to consultees.

Consultee	Response	Actions
THC (Scoping Opinion) (01/03/2018)	The scoping report recognises the potential impact on community assets that are currently in operation, for example road network (see below), footpaths, TV, radio, telecommunication links, radar, aviation interests, etc. It is expected that mitigation will be offered in respect of these matters.	No mitigation is required as no impacts have been identified.
Atkins	No response at time of writing (October 2020).	None Received
BT (30/06/2020)	No objection - no links present within the infringement areas.	No further action is required.
EE (25/06/2020)	No objection – no links within 100m and no mast within 250m of the proposed turbine locations.	No further action is required.
JRC (22/06/2020)	No objection – no links within 700m of the site.	No further action is required.
Spectrum Licensing (Ofcom) (01/09/2020)	Spectrum Licencing no longer replies to consultation on telecommunications.	No further action
Vodafone (03/07/2020)	No objection – no links within 700m of the site.	No further action is required.

15.5 Assessment Methodology

- 15.5.1 This section describes the methods by which the key baseline conditions were identified and also how the potential effect, posed by the Proposed Development, on the baseline was assessed.
- 15.5.2 Interference with mobile phone networks and other wireless data networks can occur through the interference of microwave and UHF band fixed links. These networks are operated by or on behalf of the mobile service providers, the utility companies, the emergency services and occasionally by small private networks.
- 15.5.3 The impact assessment has been conducted through consultation with the operators of these networks to identify potential impacts and residual impacts, and then go on to determine appropriate mitigation measures.

15.6 Baseline Conditions

- 15.6.1 The baseline was established through consultation as detailed in Section 15.4 and through review of the Ofcom freely available data (Ofcom 2020). This process identified one link located in the north-eastern corner of the site operated by Airwave Solutions, who provide telecommunication links for the emergency services.
- 15.6.2 The link is located approximately 120 m and 160 m east of Turbine 1 and Turbine 4 respectively (refer to Figure 15.1).

15.7 Receptors Brought Forward for Assessment

15.7.1 The only receptor relevant for assessment is the Airwave Solutions link.

15.8 Potential Effects

15.8.1 Airwave Solutions ran an interference analysis and confirmed that the Proposed Development will not present interference to their link (refer to Section 15.6). Consequently Airwave Solutions confirmed that because the Proposed Development creates no impacts or effects upon their link, during construction, operation or decommissioning, then no mitigation is required.

15.9 Cumulative Assessment

15.9.1 As the Proposed Development will not impact any telecommunication links individually, the Proposed Development will not have any cumulative effects on telecommunication links with other developments.

15.10 Summary

15.10.1 This chapter has considered the potential effects of the Proposed Development on existing and planned telecommunications infrastructure. It has not considered any effects on aviation radar as this has been covered separately in Chapter 14.

15.10.2 Consultations have been undertaken with relevant consultees including; Airwave Solution, Arqiva, Atkins, BT, EE, JRC, Spectrum Licensing and Vodafone. No response has been received to date from Atkins.

15.10.3 No objections were raised to the Proposed Development with regards to telecommunications infrastructure. No impacts or effects were identified and therefore no mitigation measures are deemed necessary.

Table 15.2 – Summary of Effects

Description of Effect	Significance of Potential Effect		Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Construction/Operation/Decommissioning					
Effects on telecommunication	No effect	N/A	None required	No effect	N/A

Table 15.3 – Summary of Cumulative Effects

Receptor	Effect	Cumulative Developments	Significance of Cumulative Effect	
			Significance	Beneficial/ Adverse
Effects on telecommunication	No effect	None identified	No effect	N/A

15.11 References

Ofcom (2009). *Tall structures and their impact on broadcast and other wireless services*. Available at: <https://www.ofcom.org.uk/manage-your-licence/radiocommunication-licences/fixed-terrestrial-links>

Ofcom (2020). *Spectrum information portal*. Available at: <https://www.ofcom.org.uk/spectrum/information/spectrum-information-system-sis/spectrum-information-portal>

Scottish Government (2001). *Planning Advice Note: PAN 62 Radio Telecommunications*. Available at: <https://www2.gov.scot/Publications/2001/09/pan62/pan62->

The Highland Council (2012). *Local Development Plan*. Available at: https://www.highland.gov.uk/info/178/local_and_statutory_development_plans/199/highland-wide_local_development_plan

The Highland Council (2016). *Onshore Wind Energy Supplementary Guidance*. Available at: https://www.highland.gov.uk/downloads/file/18793/onshore_wind_energy_supplementary_guidance_november_2016

UK Government (2006). *Wireless Telegraphy Act*. Available at: <https://www.legislation.gov.uk/ukpga/2006/36>