

October 2023

## **COLD NORTHCOTT WIND FARM - TELECOMMUNICATIONS STATEMENT**

### **Introduction**

Wind turbines can potentially interfere with communication systems that use electromagnetic waves as the transmission medium (e.g. television, radio or microwave links). The significance of the effect is largely dependent upon the design and location of the wind turbine and whether or not the turbine's blades are rotating. Any tall structure can result in the potential disruption of electromagnetic signals, either where the development creates a 'shadow' or where it gives rise to a 'reflection'.

This Telecommunications Statement reviews and assesses the potential impacts of the proposed repowering and replacement of the wind farm at Cold Northcott on electromagnetic communication including television and radio reception and microwave links. The impacts on the civil and military aviation operational environment and on civil and military aviation radar and radio infrastructure air traffic control and radar have been considered within Chapter 8 – Aviation of the Environmental Statement.

### **Assessment Methodology**

Consultation is being undertaken as part of this assessment. Accordingly, relevant telecommunications organisations have been consulted with regard to existing infrastructure within and around the site as set out below:

- Ofcom (Spectrum.Licensing@ofcom.org.uk);
- Atkins (Windfarms@atkinsglobal.com);
- JRC (Joint Radio Company) (windfarms@jrc.co.uk); and
- Telecommunications Link Operators including but not limited to BT, Virgin Media O2 and Vodafone via Pager Power.

### **Construction Impacts and Mitigation Measures**

The effects on electromagnetic communications are only likely to occur once the proposed development has been erected and is fully operational. Therefore, no adverse impacts on electromagnetic communications would arise during the construction phase and no mitigation is necessary.

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## **Operational Impacts and Mitigation Measures**

### Telecommunications

Ofcom manages fixed microwave links across the UK on behalf of individual telecommunication organisations. Consultation is currently being undertaken for the proposed development and a response has yet to be received.

The potential impact of the proposed development upon communications infrastructure (microwave and UHF wireless links and masts) in the vicinity of the site is being considered. Consultation with the relevant communications stakeholders to gain the most up-to-date details of the communications infrastructure operating nearby is being undertaken by Pager Power.

### Water, Electricity and Utilities Industry

Atkins and the Joint Radio Company (JRC) manage microwave links operated by the water, electricity and utilities industries. Consultation is currently being undertaken for the proposed development and a response has yet to be received.

### Television Interference

Terrestrial television transmissions for domestic reception within the UK are the joint responsibility of the BBC and Ofcom. Distribution links and other communication links are provided and operated on behalf of the broadcasters.

It is rare but, in certain circumstances, TV signals may experience interference due to the presence of wind turbines, predominantly due to a scattering effect when in direct line of site; however, the relevant transmitter for the site is understood to be at Caradon Hill located approximately 16 km south-east of the closest turbine to the site. There are no properties where it is anticipated that this could be an issue (i.e. none close to the proposed wind turbines in direct line of sight).

Digital television is much more robust to interference than the former analogue system. Digital UK led the implementation of digital TV switchover in the UK. It is understood from the Digital UK website that the local area currently receives 'good' reception for 79 channels and 'variable' reception for 20 channels. It also receives 'good' reception for 6 high-definition (HD) channels.

As digital TV greatly compresses sound and pictures in order to be transmitted on the digital signal, several television channels can be transmitted using the same bandwidth as just one analogue channel. This makes it a much more effective way to transmit television signals. Digital television transmission does not generally suffer from ghosting, which can be caused by minor reflections of the signal, but sudden picture degradation may occur only in extreme circumstances due to signal reflections. Therefore, as the properties in the area have switched over to digital television, the likely effect of the proposed development on television interference is considered to be negligible.

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## Summary

Detailed consultation study is on-going to understand the operational impacts of the repowering and replacement of the wind farm on telecommunications. It has been concluded that the reception of digital television reception at any property in the area of the proposed development is very unlikely to be affected.

The impacts associated with the telecommunications and NATS infrastructure at Davidstow has been mitigated by changes to the development layout and the removal of the turbines having the greatest effect as discussed within Chapter 8: Aviation of the Environmental Statement. Similarly, this chapter covers the impacts on the civil and military aviation operational environment and on civil and military aviation radar and radio infrastructure air traffic control and radar.

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