




APPENDIX 15-6

TELECOMMUNICATIONS IMPACT ASSESSMENT

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Report


Lemanaghan Wind Farm Telecommunications Impact Assessment Report

Document Number:

Author: PT\DMG

Approved for Release: Rev 2.1 KH **Date:** 30/05/25

Document Filename: *Lemanaghan Wind Farm Telecommunications Impact Assessment*

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Executive Summary

Ai Bridges was commissioned to evaluate the possible impacts that the proposed wind farm development at Lemanaghan, Co. Offaly could have on the existing telecommunications operator networks. The scope of work included field and desktop surveys to determine telecommunications network infrastructure that could be impacted by the proposed development. Consultations with telecom operators were also undertaken to assist in identifying network infrastructure that could be impacted by the proposed wind farm.

Telecommunications mast-sites with network infrastructure that could potentially be impacted by the development were identified and a field survey of each of these sites was carried out. During the field surveys, radio antennas with bearings in the direction of the wind farm were recorded. The findings of the field surveys are provided in Appendix B of this report.


The consultations undertaken by Ai Bridges were first commenced in January 2021. The telecom operators were contacted again in March 2025 and were requested to raise any concerns they may have regarding impacts to their networks due to the proposed development. The responses received (i.e. the 2021 and 2025 responses) from each of the telecom operators are presented in Section 3 of this report.

Using the information obtained from the consultation responses and the field survey assessments, a desktop impact analysis was carried out, and all of the telecommunication operator networks were analysed using radio planning \ modelling software.

Results from the consultation process indicate that there are twelve radio links that cross over/through the proposed development. These radio links are listed below in Table 1.


Network analysis indicates that only one of the radio links would be impacted by the proposed turbine layout. The impacted radio link is an Enet link between Corr Hill and to Scoil Muire Naofa, Castlecuffe. Although the link would be obstructed by three of the proposed turbines, Enet have stated that the link is scheduled to be decommissioned in the coming months. As the proposed turbines would not be erected for a number of years, it is deemed that there would be no impact of the Enet link (which would be decommissioned).

Link No	Operator	Radio Link Description	Nearest Turbine	Impacts of Proposed Turbine Layout / Observations
1	2RN	Cairn Hill to Kilduff	T01	No impacts
2	Eir	Capard to Roslevin,	T10	No impacts
3	Enet	Corr Hill to BCP Primo Coaches	T01	No impacts
4	Enet	Corr Hill to Scoil Muire Naofa Castlecuffe	T01, T02, T03	Network analysis indicates that Turbines T01, T02 and T03 would have an impact on this radio link. However, Enet have stated that the link is due to be decommissioned in the coming months
5	Enet	Corr Hill to Ardan	T15	No impacts
6	Three Ireland	Corr Hill to Ballycumber	T10	No impacts
7	Three Ireland	Corr Hill to Clara	T10	No impacts

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

8	Three Ireland	Corr Hill to Lemanaghan	T05	No impacts
9	Viatel	Sheraton Athlone to Wolftrap	T01	No impacts
10	Virgin Media	Athlone to Wolftrap	T01	No impacts
11	Vodafone	Corr Hill to Ougher	T01	No impacts
12	Vodafone	Cairn Hill to Kilduff	T01	No impacts

Table 1. Microwave radio links that cross over/through the proposed wind farm.


	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Sections


Section 1 - Wind Farm Site Information.....	5
Section 2 - Methodology.....	7
Section 3 - Telecom Operator Consultations.....	10
Section 4 - Field Surveys.....	22
Section 5 - Desktop Survey Analysis.....	24
Section 6 - Conclusions.....	39

Appendix

Appendix A – Lemanaghan Wind Farm Turbine Co-ordinates.....	42
Appendix B – Field Survey Findings.....	44

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Section 1 - Wind Farm Site Information

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

1. Introduction

In this section a brief summary of the wind farm site is provided. Details regarding the site’s geographic location and the proposed wind turbine dimensions are presented.

1.1 Wind Farm Site Information

The wind farm development is located in County Offaly approximately 14 km west of Tullamore. For the purpose of this study, a 15-turbine layout has been considered. The coordinates of the turbines assessed in this report are provided in Appendix A. The dimensions of the turbines assessed in this report are provided in Table 2 below.


Wind Farm	Number of Turbines	Turbine Hub Height	Turbine Rotor Diameter
Lemanaghan	15	145 m	150 m

Table 2. Wind Farm Turbine Details


The location of the proposed wind farm development is shown below in Figure 1.



Figure 1. Location of proposed wind farm.

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Section 2 - Methodology

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

2. Introduction

In this section a brief summary of the Telecommunication Impact Study Methodology is provided.

2.1 Methodology

There are four primary stages in preparing and compiling a communication impact study:

- Telecom Operator Consultations
- Field Surveys
- Desktop Survey Network Modelling and Analysis
- Report Generation

A summary of each of these stages is provided below:

Telecom Operator Consultations


Consultations are commenced with telecom operators who are requested to raise any concerns they have regarding the impact of the proposed wind farm on their networks. The consultation process is used to assist in identifying telecoms infrastructure that could be impacted by the proposed wind farm development.

Field Surveys

Field surveys are undertaken and the co-ordinates of communication masts are recorded. During the field surveys of the communication sites, approximations of antenna size, bearing and height are made for the antennas installed on each of the masts surveyed.

Desktop Survey and Analysis

A desktop survey is carried out to plot the wind turbines in a radio planning tool. The radio planning tool uses GIS and terrain mapping databases to enable accurate modelling. A selection of mast-site coordinates is then obtained and inputs from various operators \ service providers are converted from Irish National Grid (Easting and Northing in meters) to degrees minutes seconds format and then imported into the radio planning tool. This provides a means of graphically showing telecommunications sites in the vicinity relative to the proposed wind farm at Lemanaghan. Figure 2 below shows the proposed wind farm site plotted in the radio planning tool.

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

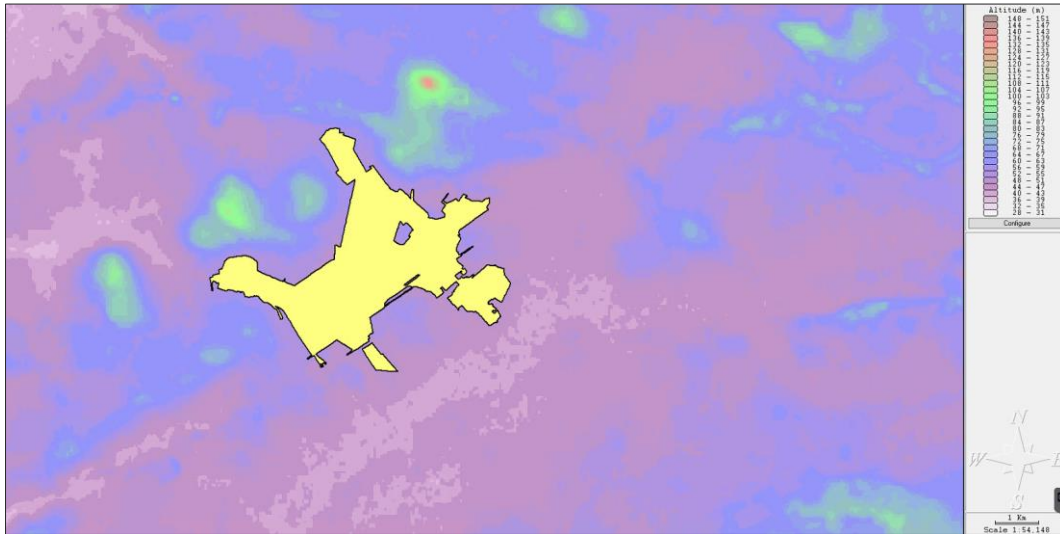


Figure 2. Wind Farm Site plotted in Radio Planning Software

The findings from the consultations and field surveys are collated and the communications networks requiring further analysis are identified. Network modeling is used to assess the impact of the turbines on the communications networks. The results from the network modeling are used to determine if mitigation measures are required. Figure 3 below shows an example of a microwave radio link that crosses over the wind farm site boundary modelled in radio planning software.

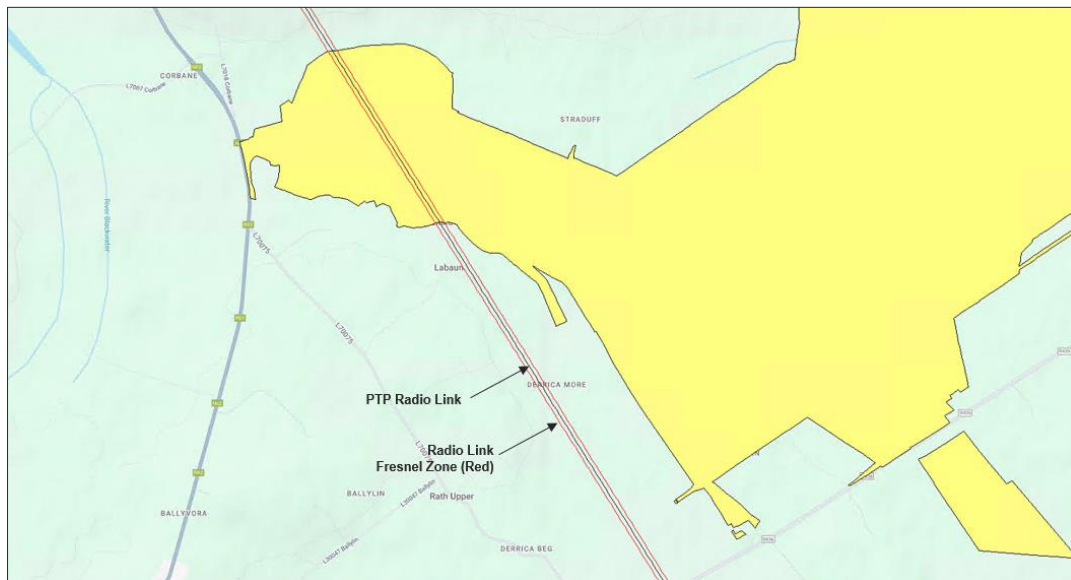




Figure 3. Example of microwave radio link crossing over the wind farm site modelled in radio planning software.

Report Generation

The final stage of the communications impact study process is to collate the data and present the findings & analysis into a report for submission.

 <i>Total Broadband Solutions</i>	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Section 3 - Telecom Operator Consultations

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

3. Introduction

In this section the consultation process undertaken with telecom operators is described. The response received from each operator is also provided.


3.1 Telecom Operator Consultations

Ai Bridges Ltd first commenced consultations with telecom network operators in January 2021. The operators were requested to raise any concerns they may have regarding impacts to their networks due to the proposed development. Subsequent consultations were also undertaken by Ai Bridges in March 2025.

Table 3 lists the telecom operators contacted by Ai Bridges, and the issues raised by each operator. The responses received from each of the telecom operators are provided in Sections 3.1.1 to 3.1.19 that follow.

Note: Prior to the consultations undertaken by Ai Bridges (2021), the EIAR consultants (MKO) contacted a number of the telecom operators in relation to the proposed development.

ID	Operator	Issues raised by Operator \ Observations.	
		2021	2025
1	2RN	N/A. 2RN had previously reported to the EIAR Consultants that they did not have radio links in the area.	2RN raised a concern regarding one PTP UHF radio link. 2RN also requested that a protocol document be signed should the wind farm go ahead (regarding the TV broadcast service in the area).
2	Airwave*	N.A.	No response.
3	An Garda Síochána*	N.A.	No response.
4	Coimisiún na Meán**	No issues.	No issues.
5	BT Ireland	No issues.	No issues.
6	CIE/Irish Rail*	N.A.	No response.
7	Dept. of Defence*	N.A.	No issues regarding telecommunication links; however, the DoD did make observations regarding aviation lighting requirements, should the wind farm go ahead.
8	Eir	Eir raised concerns regarding one PTP radio link.	Eir raised concerns regarding one PTP radio link.
9	Enet	No response to AiBridges; however, Enet did raise concerns (to MKO) regarding five PTP radio links.	Enet raised a concern regarding three Licensed PTP microwave radio links.
10	ESB Networks	No issues.	No issues.
11	Imagine Broadband	No issues.	No issues.


 Total Broadband Solutions	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

12	AirNav (Formerly the IAA)	No response.	No issues.
13	Uisce Éireann*	N.A.	No response.
14	Offaly Co Co	No response.	No response.
15	Tetra Ireland	No issues.	No issues.
16	Three Ireland	Three Ireland raised concerns regarding two PTP radio links.	Three Ireland raised a concern regarding three Licensed PTP microwave radio links.
17	Viatel / Ripplecom	Ripplecom raised concerns regarding one PTP radio link.	No response.
18	Virgin Media	Virgin Media raised concerns regarding one PTP radio link.	Virgin Media raised concerns regarding one PTP radio link.
19	Vodafone	Vodafone raised concerns regarding two PTP radio links.	Vodafone raised concerns regarding two PTP radio links.

Table 3. Telecom Operators Consulted

*Telecom Operator not contacted in original (2021) round of consultations conducted by Ai Bridges Ltd.

** Formerly known as the Broadcast Authority of Ireland

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

3.1.1 2RN Response to Consultations

2RN provided the following email response to consultations.

2021 Response:

N.A. 2RN had previously reported to the EIAR Consultants that they did not have radio links in the area.

2025 Response:

“We have a DTT link between Cairn Hill and Kilduff passing close to the west of the profile in your email.

I have added the details to your table below.

There is also a risk of interference to Broadcast Services in the area, we would therefore ask a protocol be signed between 2rn and the developer should the site go ahead.”

Link Name / ID	Band MHz/GHz	Link Length	Site A			Site B		
			Lat	Long	Ant Height	Lat	Long	Ant Height
CHL_KDF_DTT	658MHz	109km	53.807227	-7.71535	132	52.83521	-7.90999	23.5

3.1.2 Airwave Response to Consultations

Airwave provided the following email response to consultations:

2021 Response:

N.A. (Not contacted in 2021)

2025 Response:

No response received.

3.1.3 An Garda Síochána Response to Consultations

An Garda Síochána provided the following email response to consultations:

2021 Response:

N.A. (Not contacted in 2021)

2025 Response:

No response received.

3.1.4 Coimisiún na Meán (Formerly the BAI) Response to Consultations


Coimisiún na Meán provided the following email response to consultations:

2021 Response:

“The BAI does not perform an in-depth analysis of the effect of wind turbines on FM networks. However, we are not aware of any issues from existing windfarms into existing FM networks.”

2025 Response:

“Coimisiún na Meán does not perform an in-depth analysis of the effect of wind turbines on FM networks. However, we are not aware of any issues from existing windfarms into existing FM networks. Also, the proposed windfarms are not located close to any existing or planned FM transmission sites.”

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

3.1.5 BT Ireland Response to Consultations

BT provided the following email response to consultations:

2021 Response:

No response received.

2025 Response:

"BT no longer have a radio microwave network."

3.1.6 CIE/Irish Rail Response to Consultations

CIE provided the following email response to consultations:

2021 Response:

N.A. (Not contacted in 2021)

2025 Response:

No response received.

3.1.7 Department of Defence (DoD) Response to Consultations

The DoD provided the following email response to consultations:

2021 Response:

No response received.

2025 Response:

"I refer to your e-mail below, dated 26th March 2025, in relation to the proposed windfarm development at Lemanaghan, Co. Offaly.


I wish to advise at the outset that any determination in relation to a planning consent is solely a matter for the planning authorities and/or ABP, as appropriate. Therefore, the following observations are made on a non-prejudicial basis, and are not intended to be used to rely on for a prospective planning application, nor are these observations to be relied on in the event of any commercial transaction pertaining to such lands and they are not to be relied on in the event of any contract exchange pertaining to same.

As a matter of practice, the Department of Defence does not provide observations or advice in the scoping process, except where the relevant parties have been directed by a planning authority to seek the Department's views.

Having consulted with the Military authorities, the Department of Defence wishes to make the following observations:

- All turbines should be illuminated by Type C, Medium intensity, Fixed Red obstacle lighting with a minimum output of 2,000 candela to be visible in all directions of azimuth and to be operational H24/7 days a week. Obstacle lighting should be incandescent. If LED or other lighting types are used, should be a type visible to Night Vision equipment. Obstacle lighting must emit light at the near Infra-Red (IR) range of the electromagnetic spectrum, specifically at or near 850 nanometres (nm) of wavelength. Light intensity to be of similar value to that emitted in the visible spectrum of light.*
- In the event negative impacts on future military radar systems, the owner will engage with the Department of Defence and will provide suitable mitigations as soon as practical*

Nothing in the above observations shall be taken as a binding response by the Minister for Defence in the event that a planning application is made. The Minister reserves the right to comment on an actual planning application as and when it is submitted in accordance with the provisions of the planning regulatory code.

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

We would appreciate if you could keep us informed on any progress relating to this proposed development, in particular if this development was to progress to the pre-planning stage.”

3.1.8 Eir Response to Consultations

Eir provided the following email responses to consultations:

2021 Response

“eircom LTD fixed microwave network has one link traversing the site as detailed below.”

Location ID:			
Site ID:	CPD	RSL	
Name:	CAPARD NEW	ROSLEVIN	
Gov't Approval #:			
Structure Height:	40.00 m	92.00 m	
Lat Lon:	53-06-36.9 N 7-27-10.8 W	53-25-39.9 N 7-55-59.4 W	
Irish Grid N E:	206769.0 236627.0	241961.0 204442.0	
Azimuth:	317.99 Deg	137.61 Deg	
Tilt:	0.46 Down	0.13 Up	
Length:		47.69 km	
Band:	13.00 GHz	Frequency Assignment:	Paired

2025 Response

“Eir still have a single link crossing the Lemanaghan study area and would require a space buffer to avoid impact from the turbines placement.”

Location ID:			
Site ID:	CPD	RSL	
Name:	CAPARD NEW	ROSLEVIN	
Gov't Approval #:			
Structure Height:	40.00 m	92.00 m	
Lat Lon:	53-06-36.9 N 7-27-10.8 W	53-25-39.9 N 7-55-59.4 W	
Irish Grid N E:	206769.0 236627.0	241961.0 204442.0	
Azimuth:	317.99 Deg	137.61 Deg	
Tilt:	0.46 Down	0.13 Up	
Length:		47.69 km	
Band:	13.00 GHz	Frequency Assignment:	Paired

3.1.9 Enet Response to Consultations


Enet provided the following email responses to consultations:

2021 Response

Enet did not respond to the consultation request made by Ai Bridges Ltd, however they previously indicated to the EIAR Consultants (MKO) that they have five PTP radio links impacted by the proposed wind farm development. The response received in November 2020 by MKO is shown below.

The below Enet links will be potentially affected:

A-End Coordinates	A-End Antenna Height	B-End Coordinates	B-End Antenna Height	Frequency
53°18'52.56"N 7°48'45.51"W	15m	53°16'54.40"N 7°46'38.70"W	5m	23GHz
53°18'52.56"N 7°48'45.51"W	15m	53°16'57.45"N 7°43'14.12"W	7m	23GHz
53°18'52.56"N 7°48'45.51"W	15m	53°16'15.58"N 7°29'26.52"W	7m	13GHz
53°18'52.56"N 7°48'45.51"W	15m	53°18'0.67"N 7°29'14.16"W	12m	11GHz
53°18'52.56"N 7°48'45.51"W	15m	53°20'26.09"N 7°36'45.83"W	7m	15GHz

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

2025 Correspondences

27.03.25 - Email response received from Enet

“The below links pass through this area now.”

Link Name	A-End Coordinates	A-End Antenna Height	B-End Coordinates	B-End Antenna Height	Frequency	Buffer
VDF Cor Hill - BCP Primo Coaches	53.314583 -7.812639	15m	53.281744 -7.77514	6m	23GHz	50m
VDF Cor Hill - SCP1476 Muire Naofa Castlecuffe	53.314583 -7.812639	15m	53.151685 -7.587565	6m	11GHz	50m
VDF Cor Hill - VDF Ardan	53.314583 -7.812639	15m	53.300186 -7.487267	15m	11GHz	50m

01.05.25 – Ai Bridges Ltd email response to Enet

“In relation to the connection to Muire Naofa Castlecuffe, could you confirm that the link from Cor Hill is still installed.

We have noted an antenna installed on at the rear of the school – but it is aligned to the northeast (i.e. not towards Cor Hill).


So that we can model your network as accurately as possible we would be grateful if you confirm the details for the radio link into Scoil Muire Naofa Castlecuffe.

Scoil Muire Naofa Castlecuffe – Aerial View showing bearing to Cor Hill (to northwest)



Scoil Muire Naofa Castlecuffe – Streetside View showing antenna aligned to northeast”



	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

01.05.25 - Email response received from Enet

*“Hi David,
This is the link below facing towards VDF Cor Hill,
The good news is that it is due for decommission in the coming months.”*



3.1.10 ESB Response to Consultations

ESB provided the following email responses to consultations:

2021 Response

N.A. ESB had previously reported to the EIAR Consultants that they did not have radio links in the area.

2025 Response

*“I am writing to inform you that we have successfully assessed your windfarm proposal. We are pleased to advise that the proposed wind farm has been reviewed and cleared.
We appreciate your patience during this assessment process.”*

3.1.11 Imagine Broadband Response to Consultations


Imagine Broadband provided the following email response to consultations:

2021 Response

N.A. Imagine Broadband had previously reported to the EIAR Consultants that they did not have radio links in the area.

2025 Response

“Imagine has no MW links affected by this development.”

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

3.1.12 AirNav Ireland Response to Consultations

AirNav Ireland provided the following email response to consultations:

2021 Response

No response received.

2025 Response

“No issue for Airnav nav aids.”

3.1.13 Uisce Éireann Response to Consultations

Uisce Éireann provided the following email response to consultations:

2021 Response

N.A. (Not contacted in 2021).

2025 Response

“I can confirm that Uisce Éireann have no communications links traversing the proposed development.”

3.1.14 Offaly County Council Response to Consultations

Offaly County Council provided the following email response to consultations:

2021 Response

No response received.

2025 Response

No response received.

3.1.15 Tetra Ireland Response to Consultations

Tetra Ireland provided the following email response to consultations:

2021 Response

N/A. Tetra Ireland had previously reported to the EIAR Consultants that their network would not be impacted by the proposed wind farm development.

2025 Response


“We anticipate no impact from the development as proposed. Can you ensure the development is also reviewed by eir please.”

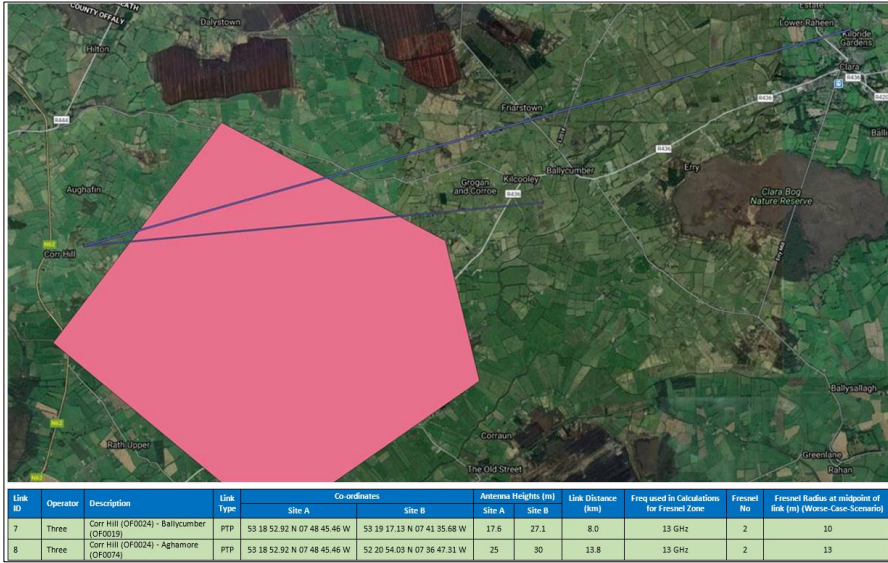
3.1.16 Three Ireland Response to Consultations

Three Ireland provided the following email response to consultations:

2021 Response

“I have reviewed the analysis below and I am satisfied with the data.”

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25



2025 Response

“We now have a 3rd link that passes through this area since 2021. Link details below;”

Link Name / ID	Band MHz/GHz	Link Length	A End site ID	Site A					B End site ID	Site B				
				Lat	Long	Easting	Northing	Ant Height		Lat	Long	Easting	Northing	Ant Height
ML017569	26	8km	OF0024	53.31467	-7.81266	212538	229368	18m	OF0019	53.32141	-7.69328	220492	230145	27m
ML020796	18	13.8km	OF0024	53.31467	-7.81266	212538	229368	16m	OF0074	53.3483	-7.61311	225818	233165	30m
ML021134	26	7.1km	OF0024	53.31467	-7.81266	212538	229368	15m	OF0116	53.2816	-7.72128	218643	225712	21m




3.1.17 Viatel / Ripplecom Response to Consultations

Viatel / Ripplecom provided the following email response to consultations:

2021 Response

Yes it’s just that link that may be impacted

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25



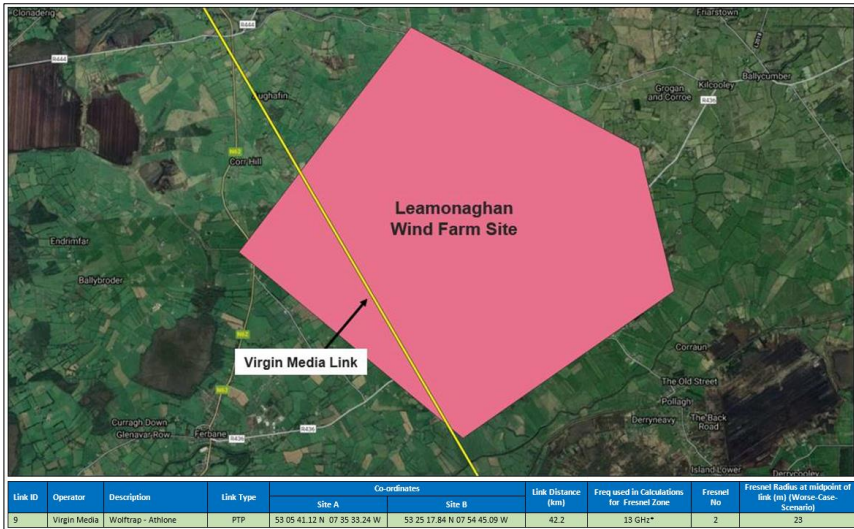
2025 Response
No response received.

3.1.18 Virgin Media Response to Consultations

Virgin Media provided the following email response to consultations:

2021 Response


“This link is a COMREG licenced Virgin Media Data Backhaul link between Woltrap and Athlone carrying premium business data. We requested a 52m exclusion zone from line of sight to blade tip on this link. The Frequency of this link is 6GHz...”



2025 Response

*“Yes we have a radio link in this area
Link details below*

A. 53° 25.298'N 7° 54.751'W 15mts high B. 53° 5.687'N 7° 35.556'W 15mts High 6GHz link clear zone is 75MTs from beam centre.”

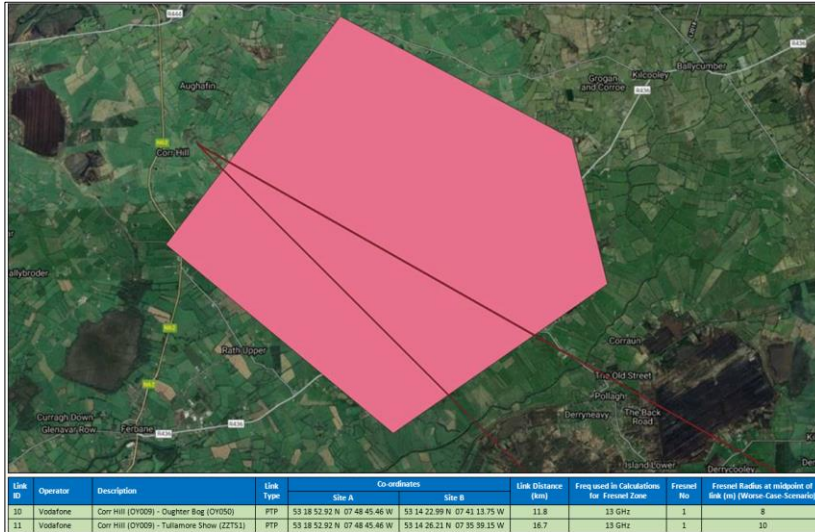
	Procedure: 001	Rev: 2.1
	Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH

3.1.19 Vodafone Ireland Response to Consultations

Vodafone provided the following email response to consultations:

2021 Response

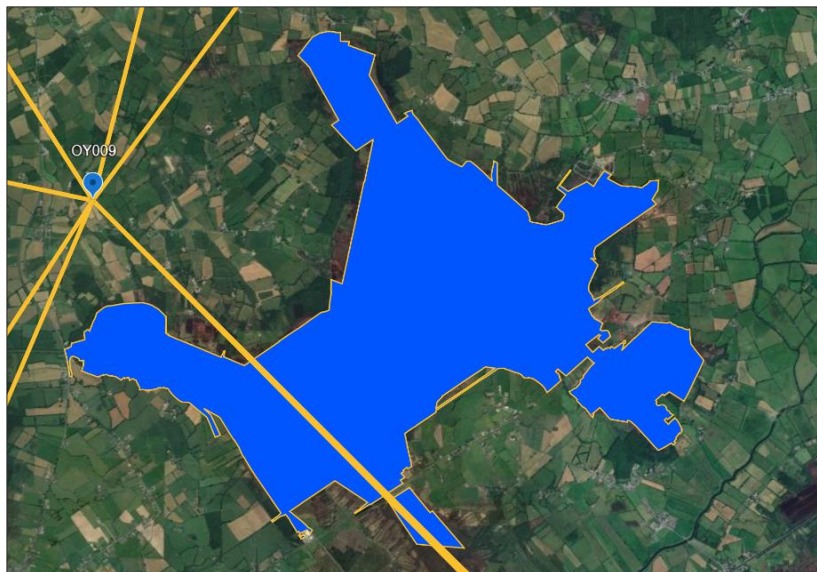
“The two microwaves identified are correct. There other microwaves at Corr Hill, but they do not cross the boundary indicated. Please ensure a minimum exclusion of 30m between rotor edge and 1st Fresnel zone is maintained. Note, this minimum is not a target, so any increase of the exclusion is welcomed. Also, please avoid turbine positions between the two indicated microwaves, particularly close to the Corr Hill side.”




2025 Response


“There are two Vodafone links passing through the proposed area. See details below. A clearance of 30m from the first Fresnel zone is desired. Please let me know if you required any additional information.”

Link Name / ID	Band GHz	Link Length Km	Site A			Site B		
			Northing (Irish Grid)	Easting (Irish Grid)	Ant Height m	Northing (Irish Grid)	Easting (Irish Grid)	Ant Height m
OY009-OY050	15	11.813	229358	212537	12	221059	220944	14
OY052-OY009	13	16.088	217970	223901	10	228358	212537	15



 <i>Total Broadband Solutions</i>	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Section 4 - Field Surveys

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

4. Introduction

To assess the accuracy of the network information (radio link co-ordinates, antenna heights etc.) provided by the telecom operators, field surveys of the telecom-mast sites in the vicinity of the proposed wind farm were carried out. During the field surveys, radio antennas with bearings in the direction of the wind farm were recorded.

The telecom mast-sites surveyed for this study (labelled Mast-Site A to Mast-Site P) are shown relative to the proposed wind farm site in Figure 4 below. The findings from the field surveys of the mast-sites are presented in Appendix B of this report.

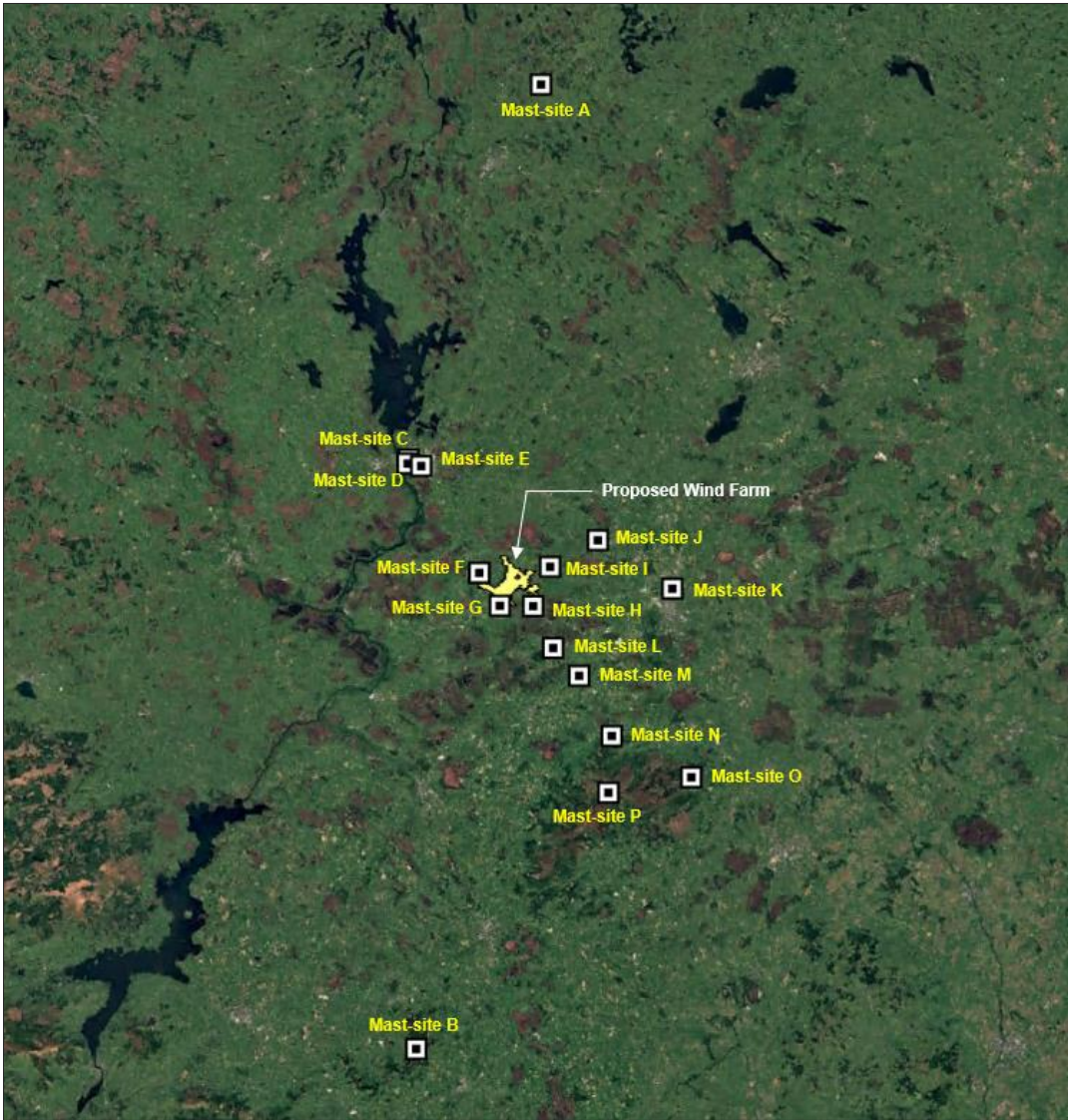




Figure 4. Telecom Mast-sites surveyed.

 <i>Total Broadband Solutions</i>	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Section 5 - Desktop Survey Analysis

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

5. Introduction

Based on the findings of the consultation process, there are seven Telecom Operators with networks in the vicinity of the proposed wind farm that require a detailed technical analysis:

- 2RN Network
- Eir Network
- Enet Network
- Three Ireland Network
- Viatel (Ripplecom) Network
- Virgin Media Network
- Vodafone Network

Sections 5.1 to 5.7 below outline the desktop survey analysis findings* for each of the Telecom Operator networks listed above.

5.1 2RN Network Analysis

The 2RN network in the vicinity of the proposed wind farm consists of one Point-to-Point (PTP) UHF radio link. The radio link is listed in Table 4 below and a Plan view of the 2RN network is shown in Figure 5.

Link ID	Link Description
2RN_L1	PTP UHF radio link from Cairn Hill to Kilduff

Table 4. 2RN Radio Links requiring Analysis

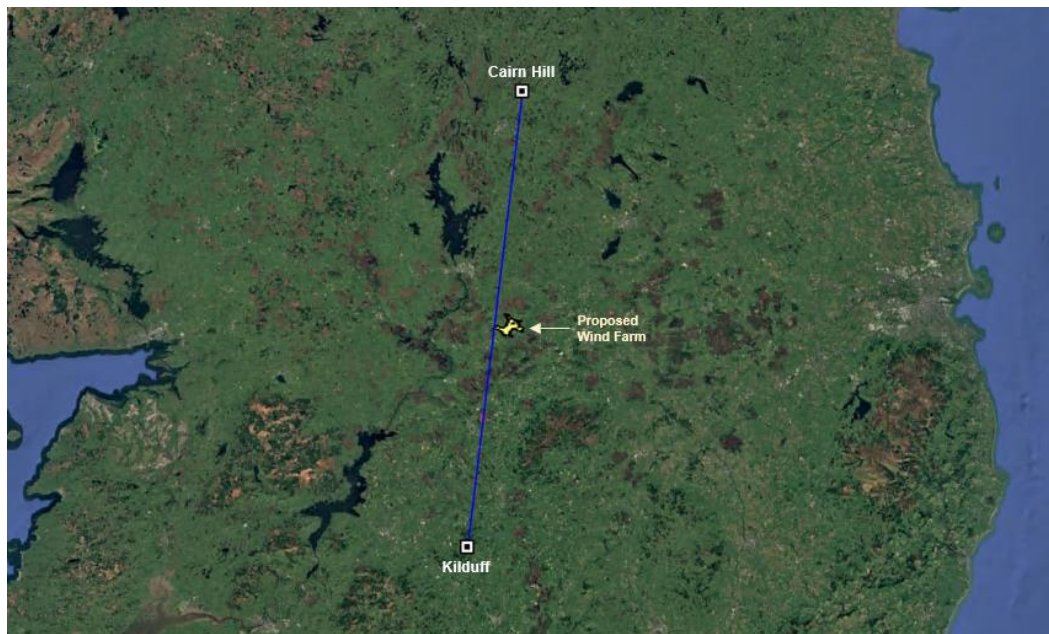


Figure 5. 2RN Radio Network – Plan View

* The Desktop Survey Analysis findings are subject to accuracy of the information (GPS co-ordinates, turbine dimensions, etc.) provided to Ai Bridges.


	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Figure 6 below shows a close-up view of the 2RN radio link relative to the proposed wind farm site. Desktop survey analysis indicates that the PTP radio link is over 1.9 km from the nearest of the proposed turbines (T01). At this distance there will be no impact to the radio link due to the wind farm development.

Table 5 below provides a brief summary of the network analysis for the 2RN network in the vicinity of the proposed wind farm.

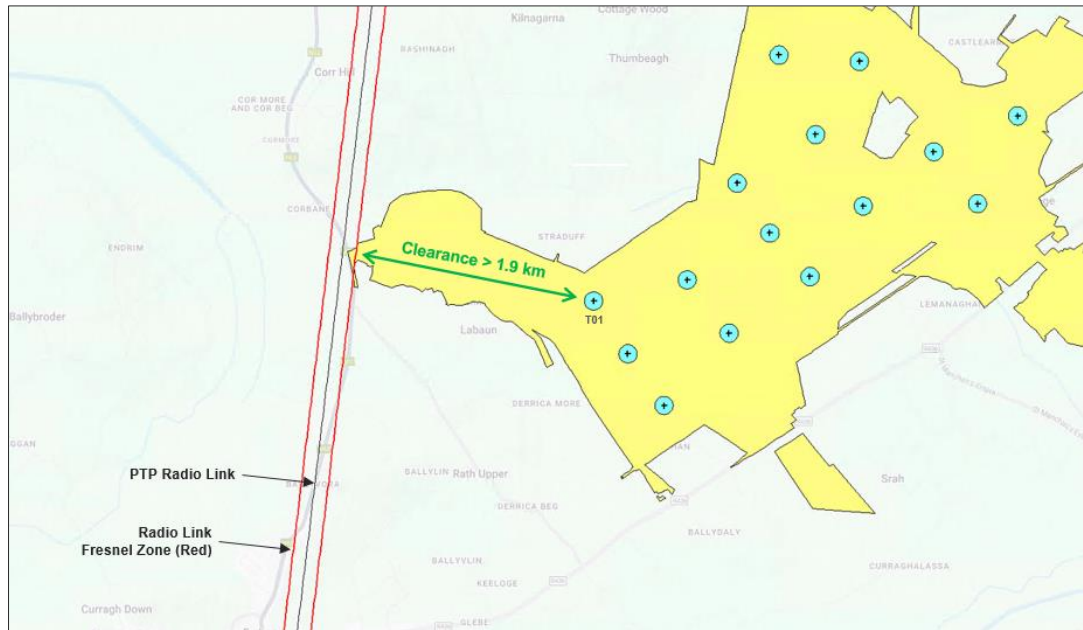



Figure 6. 2RN Network - Close-up Plan View

Link ID	Link Description	Nearest Turbine	Fresnel Zone (0.6F1) Clearance Distance	Wind Farm Impacts / Observations
2RN_L1	Cairn Hill to Kilduff	T01	> 1.9 km	No impacts.

Table 5. Analysis Summary – 2RN Network

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

5.2 Eir Network Analysis

The Eir network in the vicinity of the proposed wind farm consists of one Point-to-Point (PTP) microwave radio link. The radio link is listed in Table 6 below and a Plan view of the Eir network is shown in Figure 7.

Link ID	Link Description
Eir_L1	PTP microwave radio link from Capard to Roslevin, Athlone

Table 6. Eir Radio Links requiring Analysis



Figure 7. Eir Radio Network – Plan View

Figure 8 below shows a close-up plan view of the Eir radio link relative to the proposed wind farm site. The plan view shows that the nearest of the proposed turbines to the Eir link is T10.

Desktop analysis indicates that there would be a Clearance Distance of 46 m between the blade-tip of T10 and the Fresnel Zone (F1) of the radio link between Capard and Roslevin. At this distance there would be no impact on the radio link due to the proposed turbine.

Table 7 below provides a brief summary of the network analysis for the Eir network in the vicinity of the proposed wind farm.



	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25



Figure 8. Eir Network - Close-up Plan View

Link ID	Link Description	Nearest Turbine	Fresnel Zone (F1) Clearance Distance	Wind Farm Impacts / Observations
Eir_L1	Capard to Roslevin	T10	46 m	No impacts.

Table 7. Analysis Summary – Eir Network

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

5.3 Enet Network Analysis

The Enet network in the vicinity of the proposed wind farm consists of three Point-to-Point (PTP) microwave radio links. The radio links are listed in Table 8 below and a Plan view of the Enet network is shown in Figure 9.

Link ID	Link Description
Enet_L1	PTP microwave radio link from Corr Hill to BCP Primo Coaches
Enet_L2	PTP microwave radio link from Corr Hill to Scoil Muire Naofa, Castlecuffe
Enet_L3	PTP microwave radio link from Corr Hill to Ardan

Table 8. Enet Radio Links requiring Analysis



Figure 9. Enet Radio Network – Plan View

Figure 10 below shows a close-up plan view of the Enet radio links relative to the proposed wind turbines.

The plan view indicates that Enet_L1 and Enet_L3 would not be impacted by the proposed turbine layout.

Enet_L2 (Corr Hill to Scoil Muire Naofa, Castlecuffe) would be impacted by three of the proposed turbines (t01, T02 & T03); however, Enet have stated that the radio link is due to be decommissioned in the coming months.


	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Table 9 below provides a brief summary of the network analysis for the Enet network in the vicinity of the proposed wind farm.

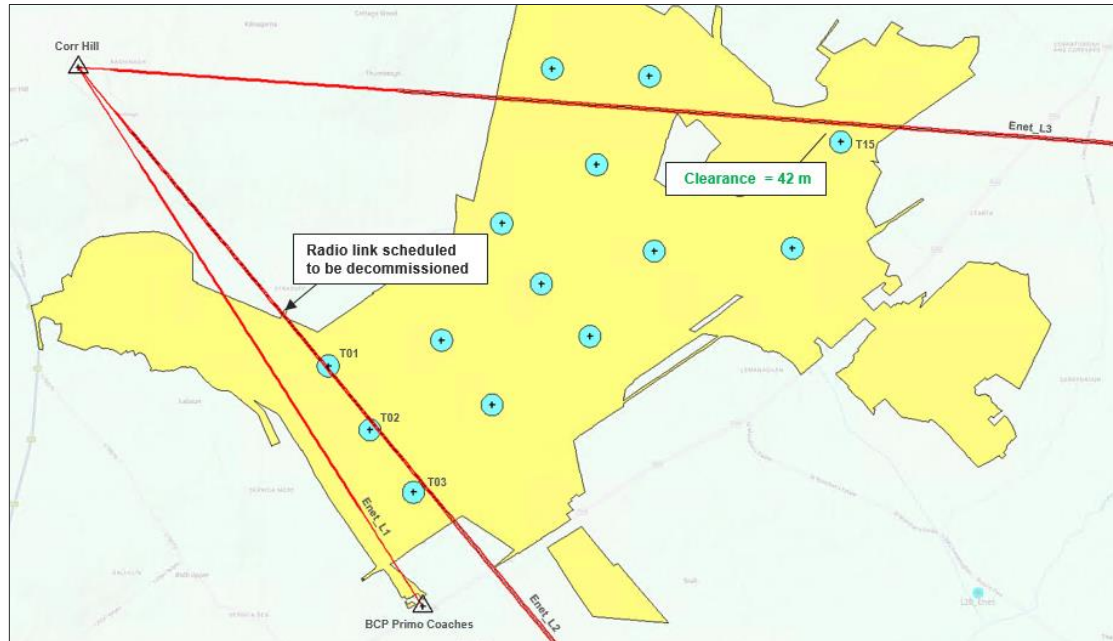



Figure 10. Enet Network - Close-up Plan View

Link ID	Link Description	Nearest Turbine(s)	Fresnel Zone (F1) Clearance / interference Distance	Wind Farm Impacts / Observations
Enet_L1	Corr Hill to BCP Primo Coaches	T01	> 100 m	No impacts.
Enet_L2	Corr Hill to Scoil Muire Naofa Castlecuffe	T01	- 68 m (Interference Condition)	Network analysis indicates that Turbines T01, T02 and T03 would have an impact on this radio link. However, Enet have stated that the link is due to be decommissioned in the coming months.
		T02	- 39 m (Interference Condition)	
		T04	< 10 m (Possible Interference Condition)	
Enet_L3	Corr Hill to Ardan	T15	42 m	No impacts.

Table 9. Analysis Summary – Enet Network

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

5.4 Three Ireland Network Analysis

The Three Ireland network in the vicinity of the proposed wind farm consists of three Point-to-Point (PTP) microwave radio links. The radio links are listed in Table 10 below and a Plan view of the Three Ireland network is shown in Figure 11.

Link ID	Link Description
3IRL_L1	PTP microwave radio link from Corr Hill to Ballycumber
3IRL_L2	PTP microwave radio link from Corr Hill to Clara
3IRL_L3	PTP microwave radio link from Corr Hill to Lemanaghan

Table 10. Three Ireland Radio Links requiring Analysis



Figure 11. Three Ireland Radio Network – Plan View

Figure 12 below shows a close-up plan view of the Three Ireland radio links relative to the proposed wind turbines.

The plan view indicates that each of the Three Ireland radio links would be more than 100 m away from the nearest of the proposed turbines. At this distance there would be no impact to the Three Ireland radio network due to the proposed turbine layout.

AiBridges Total Broadband Solutions	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Table 11 below provides a brief summary of the network analysis for the Three Ireland network in the vicinity of the proposed wind farm.

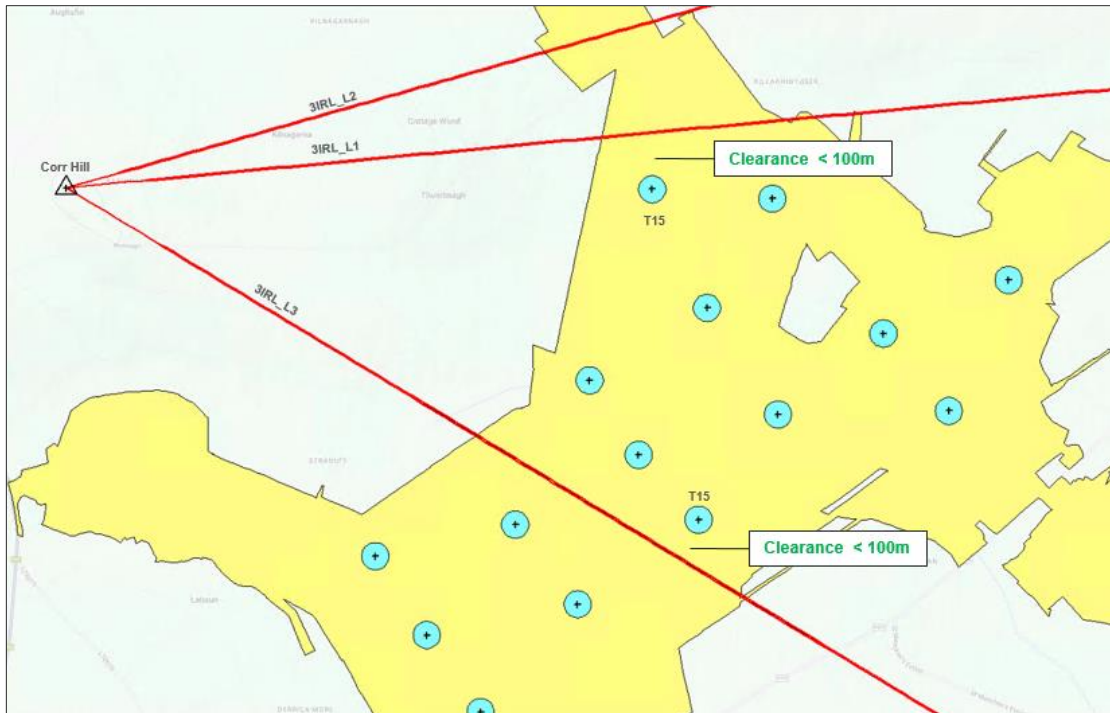



Figure 12. Three Ireland Network - Close-up Plan View

Link ID	Link Description	Nearest Turbine	Fresnel Zone (F1) Clearance	Wind Farm Impacts / Observations
3IRL_L1	Corr Hill to Ballycumber	T10	> 100 m	No impacts.
3IRL_L2	Corr Hill to Clara	T10	> 100 m	No impacts.
3IRL_L3	Corr Hill to Lemanaghan	T05	> 100 m	No impacts.

Table 11. Analysis Summary – Three Ireland Network

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

5.5 Viatel Network Analysis

The Viatel network in the vicinity of the proposed wind farm consists of one Point-to-Point (PTP) microwave radio link. The radio link is listed in Table 12 below and a Plan view of the Viatel network is shown in Figure 13.

Link ID	Link Description
VIA_L1	PTP microwave radio link from Sheraton Athlone to Wolftrap

Table 12. Viatel Radio Links requiring Analysis




Figure 13. Viatel Radio Network – Plan View

Figure 14 below shows a close-up plan view of the Viatel radio link relative to the proposed wind turbines.

The plan view indicates that the radio link would be more than 750 m away from the nearest of the proposed turbines (t01). At this distance there would be no impact on the Viatel radio network due to the proposed turbines.

Table 13 below provides a brief summary of the network analysis for the Viatel network in the vicinity of the proposed wind farm.

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

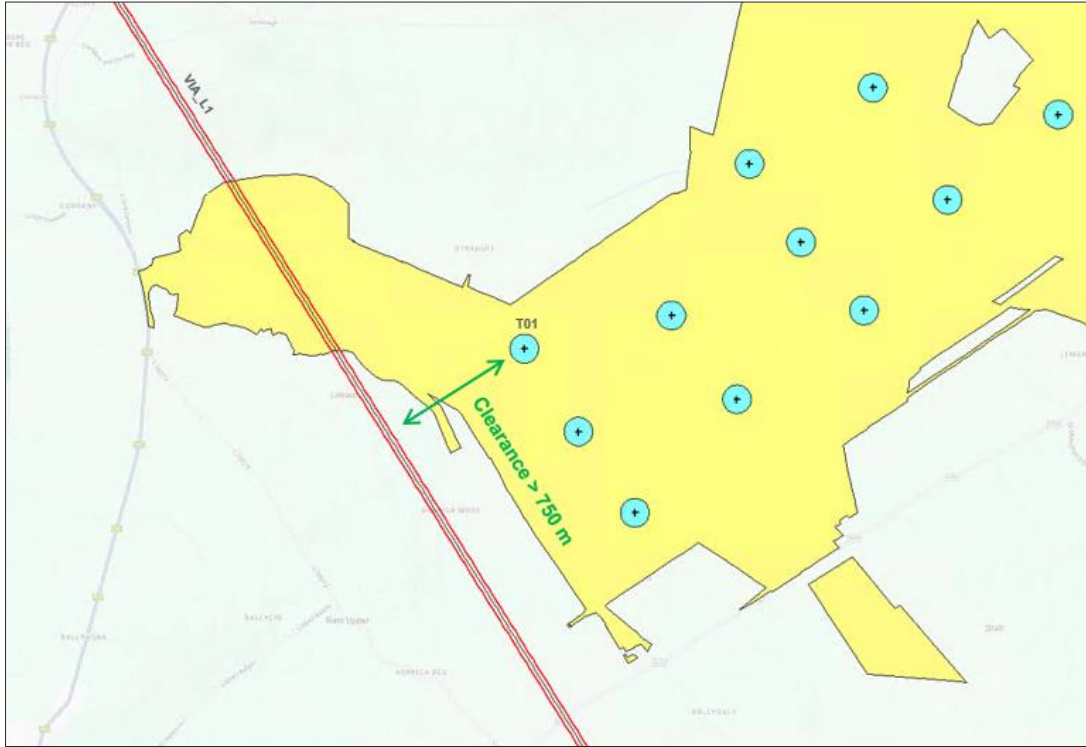



Figure 14. Viatel Network - Close-up Plan View

Link ID	Link Description	Nearest Turbine	Fresnel Zone (F1) Clearance	Wind Farm Impacts / Observations
VIA_L1	Sheraton Athlone to Wolftrap	T01	> 750 m	No impacts

Table 13. Analysis Summary – Viatel Network

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

5.6 Virgin Media Network Analysis

The Virgin Media network in the vicinity of the proposed wind farm consists of one Point-to-Point (PTP) microwave radio link. The radio link is listed in Table 14 below and a Plan view of the Virgin Media network is shown in Figure 15.

Link ID	Link Description
VM_L1	PTP microwave radio link from Athlone to Wolftrap

Table 14. Virgin Media Radio Links requiring Analysis




Figure 15. Virgin Media Radio Network – Plan View

Figure 16 below shows a close-up plan view of the Virgin Media radio link relative to the proposed wind turbines.

The plan view indicates that there would be a Clearance Distance of 36 m between the blade-tip of the nearest turbine (T01) and the Fresnel Zone (F1) of the radio link. At this distance there would be no impact on the radio link.

Table 15 below provides a brief summary of the network analysis for the Virgin Media network in the vicinity of the proposed wind farm.

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

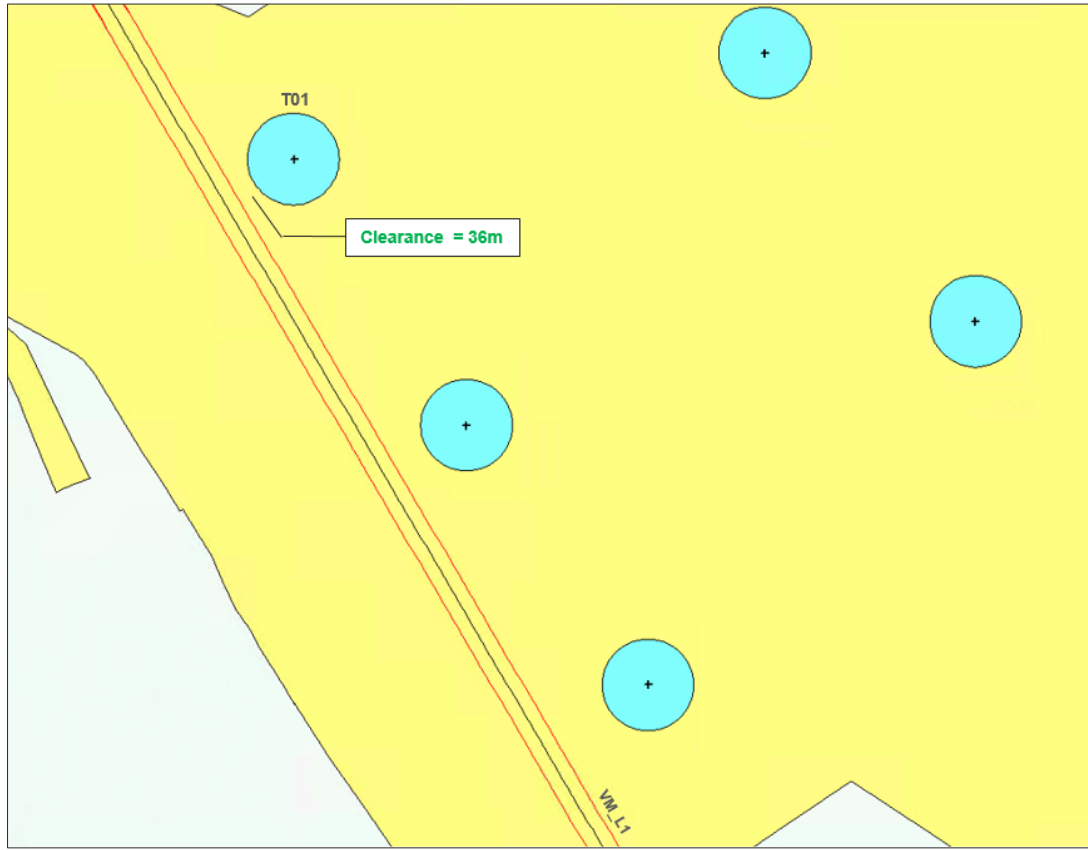



Figure 16. Virgin Media Network - Close-up Plan View

Link ID	Link Description	Nearest Turbine	Fresnel Zone (F1) Clearance / Interference	Wind Farm Impacts / Observations
VM_L1	Athlone to Wolftrap	T01	36 m	No impacts.

Table 15. Analysis Summary – Three Ireland Network

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

5.7 Vodafone Network Analysis

The Vodafone network in the vicinity of the proposed wind farm consists of two Point-to-Point (PTP) microwave radio links. The radio links are listed in Table 16 below and a Plan view of the Vodafone network is shown in Figure 17.

Link ID	Link Description
VF_L1	PTP microwave radio link from Corr Hill to Oughter
VF_L2	PTP microwave radio link from Corr Hill to Lowerton More

Table 16. Vodafone Radio Links requiring Analysis



Figure 17. Vodafone Radio Network – Plan View

Figure 18 below shows a close-up plan view of the Vodafone radio links relative to the proposed wind turbines.

The plan view indicates that both Vodafone radio links would be more than 100 m away from the nearest of the proposed turbines (T01). At this distance there would be no impact on the Vodafone radio links.


	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25


Table 17 below provides a brief summary of the network analysis for the Vodafone network in the vicinity of the proposed wind farm.




Figure 18. Vodafone Network - Close-up Plan View

Link ID	Link Description	Nearest Turbine	Fresnel Zone (F1) Clearance Distance	Wind Farm Impacts / Observations
VF_L1	Corr Hill to Ougher	T01	> 100 m	No Impacts.
VF_L2	Corr Hill to Lowerton More	T01	> 100 m	No Impacts.

Table 17. Analysis Summary – Vodafone Network

 <i>Total Broadband Solutions</i>	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Section 6 - Conclusions

 Total Broadband Solutions	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25


6. Conclusions

From the findings made in this report the following conclusions have been made:

- Results from the telecom operator consultations and desktop survey analysis indicate that there are twelve radio links that cross over/near the proposed development. These radio links are below listed in Table 18.
- Network analysis indicates that only one of the radio links would be impacted by the proposed turbine layout. The impacted radio link is an Enet link between Corr Hill and to Scoil Muire Naofa Castlecuffe. Although the link would be obstructed by three of the proposed turbines, Enet have stated that the link is scheduled to be decommissioned in the coming months.

Operator	Radio Link Description	Nearest Turbine	Fresnel Zone Clearance Distance to Blade-tip of Turbine	Impact of Wind Farm / Observations
2RN	Cairn Hill to Kilduff	T01	> 1.9 km	No Impacts.
Eir	Capard to Roslevin,	T10	46 m	No Impacts.
Enet	Corr Hill to BCP Primo Coaches	T01	> 100 m	No Impacts.
Enet	Corr Hill to Scoil Muire Naofa Castlecuffe	T01, T02, T03	No Clearance	Network analysis indicates that Turbines T01, T02 and T03 would have an impact on this radio link. However, Enet have stated that the link is due to be decommissioned in the coming months
Enet	Corr Hill to Ardan	T15	42 m	No Impacts.
Three Ireland	Corr Hill to Ballycumber	T10	> 100 m	No Impacts.
Three Ireland	Corr Hill to Clara	T10	> 100 m	No Impacts.
Three Ireland	Corr Hill to Lemanaghan	T05	> 100 m	No Impacts.
Viatel	Sheraton Athlone to Wolftrap	T01	> 750 m	No impacts
Virgin Media	Athlone to Wolftrap	T01	36 m	No impacts.
Vodafone	Corr Hill to Ougher	T01	> 100 m	No Impacts.
Vodafone	Corr Hill to Lowerton More	T01	> 100 m	No Impacts.

Table 18. Radio Links in vicinity of proposed development.

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

- Figure 19 below has been provided to illustrate each of the telecommunication links that cross over/through the proposed wind farm development.

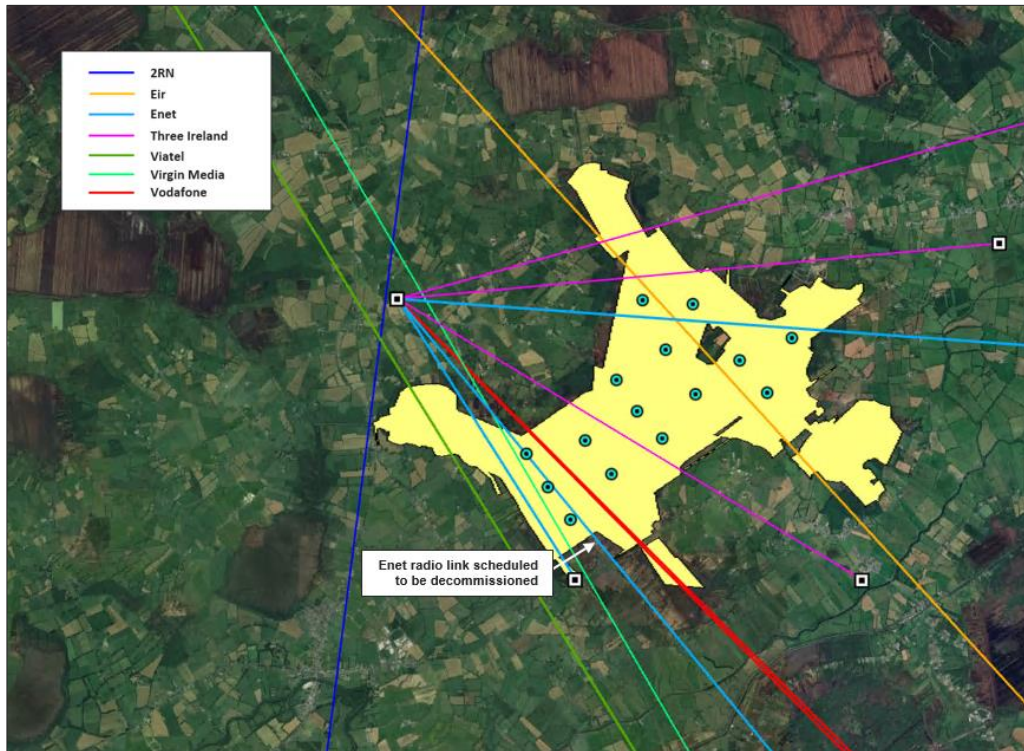




Figure 19. Plan View of radio links that cross over/through the proposed wind farm development.

 <i>Total Broadband Solutions</i>	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

APPENDIX A – Wind Farm Turbine Co-ordinates


	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Appendix A – Wind Farm Turbine Co-ordinates


The coordinates of the proposed turbine layout considered in this Telecommunications Impact Study are provided in the table below.

Turbine ID	Co-ordinates (WGS-84)	
	Lat	Long
T01	53.29647	-7.78701
T02	53.29256	-7.78279
T03	53.28875	-7.77833
T04	53.29409	-7.7703
T05	53.29828	-7.7603
T06	53.30148	-7.76525
T07	53.29803	-7.77546
T08	53.30517	-7.76931
T09	53.30876	-7.7596
T10	53.31463	-7.76413
T11	53.31416	-7.75419
T12	53.30349	-7.75372
T13	53.30749	-7.745
T14	53.30366	-7.73959
T15	53.31014	-7.73465

Table 19. Wind Farm Layout - Turbine Co-ordinates

 <i>Total Broadband Solutions</i>	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

APPENDIX B – Field Survey Findings

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Appendix B – Field Survey Findings

The telecom mast-sites surveyed for this Telecoms Impact Study are shown relative to the proposed wind farm site in Figure 20 below.

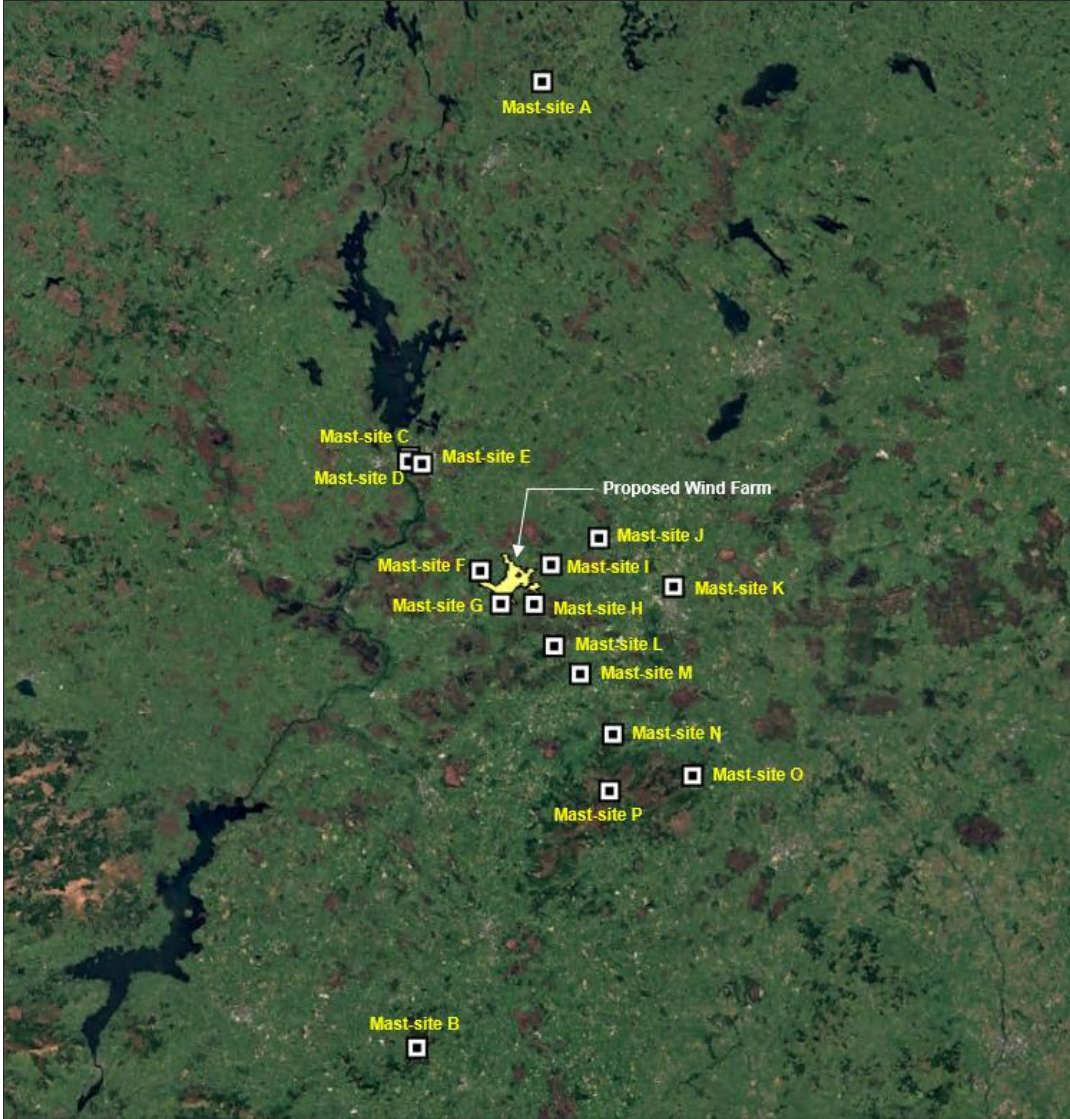



Figure 20. Telecom Mast-Sites shown relative to proposed Wind Farm

The findings from the field surveys of each of the mast-sites are presented below.

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Mast-Site A (Cairn Hill)


Telecommunications Mast-Site A is located in the Cairn Hill, Co Longford and is approximately 54 km north of the proposed wind farm. A photo of the mast-structure at this location is shown in the figure below. The Telecom Operators who have radio links operating from this mast-site in the direction of the wind farm are listed in Table 20.



Figure 21. Mast A

Mast ID	Telecom operators with radio links in direction of proposed wind farm
Mast A	2RN

Table 20. Field Survey Summary – Mast-Site A

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Mast-Site B (Kilduff)


Telecommunications Mast-Site B is located at Kilduff, Co Tipperary and is approximately 50km south of the proposed wind farm site. A photo of the mast-structure at this location is shown in the figure below. The Telecom Operators who have radio links operating from this mast-site in the direction of the wind farm are listed in Table 21.



Figure 22. Mast B

Mast ID	Telecom operators with radio links in direction of proposed wind farm
Mast B	2RN

Table 21. Field Survey Summary – Mast-Site B

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Mast-Site C (Roslevin, Athlone)


Telecommunications Mast-Site C is located at Roslevin, Athlone, Co Westmeath and is approximately 15 km northwest of the proposed wind farm site. A photo of the mast-structure at this location is shown in the figure below. The Telecom Operators who have radio links operating from this mast-site in the direction of the wind farm are listed in Table 22.



Figure 23. Mast C

Mast ID	Telecom operators with radio links in direction of proposed wind farm
Mast C	Eir

Table 22. Field Survey Summary – Mast-site C

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Mast-Site D (Sheraton Hotel, Athlone)


Telecommunications Mast-Site D is located at the Sheraton Hotel, Athlone, Co Westmeath and is approximately 15 km northwest of the proposed wind farm. A photo of the mast-structure at this location is shown in the figure below. The Telecom Operators who have radio links operating from this mast-site in the direction of the wind farm are listed in Table 23.



Figure 24. Mast D

Mast ID	Telecom operators with radio links in direction of proposed wind farm
Mast D	Viatel (Ripplecom)

Table 23. Field Survey Summary – Mast-Site D

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Mast-Site E (Cartronroy, Athlone)


Telecommunications Mast-Site E is located at Cartronroy, Athlone, Co Westmeath. A photo of the mast at this location is shown in the figure below. The Telecom Operators who have radio links operating from this location in the direction of the wind farm are listed in Table 24.



Figure 25. Mast E

Mast ID	Telecom operators with radio links in direction of proposed wind farm
Mast E	Virgin Media

Table 24. Field Survey Summary – Mast-Site E

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Mast-Site F (Corr Hill)


Telecommunications Mast-Site F is located in the townland of Corr Hill, Co Offaly. A photo of the mast at this location is shown in the figure below. The Telecom Operators who have radio links operating from this location in the direction of the wind farm are listed in Table 25.



Figure 26. Mast F

Mast ID	Telecom operators with radio links in direction of proposed wind farm
Mast F	Enet, Three Ireland, Vodafone

Table 25. Field Survey Summary – Mast-Site F

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Mast-Site G (BCP Primo Coaches)

Telecommunications Mast-Site G is located in the grounds of BCP Primo Coaches, Rosfaraghan, Co Offaly.


A photo of the mast-structure at this location is shown in the figure below. The Telecom Operators who have radio links operating from this location in the direction of the wind farm are listed in Table 26.



Figure 27. Mast G

Mast ID	Telecom operators with radio links in direction of proposed wind farm
Mast G	Enet

Table 26. Field Survey Summary – Mast-Site G

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Mast-Site H (Lemanaghan)


Telecommunications Mast-Site H is located in the townland of Lemanaghan, Co Offaly. Access to this mast-site was not possible on the day of survey, however, the mast structure at this location can be seen in the aerial view shown below in Figure 28. The Telecom Operators who have radio links operating from this location in the direction of the wind farm are listed in Table 27.



Figure 28. Mast H

Mast ID	Telecom operators with radio links in direction of proposed wind farm
Mast H	Three Ireland

Table 27. Field Survey Summary – Mast-Site H

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Mast-Site I (Ballycumber)


Mast-Site I is located in the townland of Ballycumber, Co Offaly. A photo of the mast at this location is shown in the figure below. The Telecom Operators who have radio links operating from this location in the direction of the wind farm are listed in Table 28.



Figure 29. Mast I

Mast ID	Telecom operators with radio links in direction of proposed wind farm
Mast I	Three Ireland

Table 28. Field Survey Summary – Mast-Site I

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Mast-Site J (Clara)


Mast-Site J is located in the village of Clara, Co Offaly. A photo of the mast at this location is shown in the figure below. The Telecom Operators who have radio links operating from this location in the direction of the wind farm are listed in Table 29.



Figure 30. Mast J

Mast ID	Telecom operators with radio links in direction of proposed wind farm
Mast J	Three Ireland

Table 29. Field Survey Summary – Mast-Site J

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Mast-Site K (Ardan, Tullamore)


Mast-Site K is located in Ardan, just outside Tullamore, Co Offaly. A photo of the mast at this location is shown in the figure below. The Telecom Operators who have radio links operating from this location in the direction of the wind farm are listed in Table 30.



Figure 31. Mast K

Mast ID	Telecom operators with radio links in direction of proposed wind farm
Mast K	Enet

Table 30. Field Survey Summary – Mast-Site K

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Mast-Site L (Oughter)


Mast-Site L is located at Oughter Bog, Co Offaly. A photo of the mast at this location is shown in the figure below. The Telecom Operators who have radio links operating from this location in the direction of the wind farm are listed in Table 31.



Figure 32. Mast L

Mast ID	Telecom operators with radio links in direction of proposed wind farm
Mast L	Vodafone

Table 31. Field Survey Summary – Mast-Site L

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Mast-Site L (Lowerton More)


Telecommunications Mast-Site L is located in the townland of Lemanaghan, Co Offaly. Access to this mast-site was not possible on the day of survey, however, the mast structure at this location can be seen in the aerial view shown below in Figure 33. The Telecom Operators who have radio links operating from this location in the direction of the wind farm are listed in Table 32.



Figure 33. Mast L

Mast ID	Telecom operators with radio links in direction of proposed wind farm
Mast L	Vodafone

Table 32. Field Survey Summary – Mast-Site L

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Mast-Site N (Scoil Muire Naofa, Castlecuffe)


Mast-Site N is located in Scoil Muire Naofa, Castlecuffe, Co Laois. A photo of the mast-structure at this location is shown in the figure below. The Telecom Operators who have radio links operating from this location in the direction of the wind farm are listed in Table 33.



Figure 34. Mast N

Mast ID	Telecom operators with radio links in direction of proposed wind farm
Mast N	Enet

Table 33. Field Survey Summary – Mast-Site N

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Mast-Site O (Capard)


Mast-Site O is located at Capard, Co Laois. A photo of the mast at this location is shown in the figure below. The Telecom Operators who have radio links operating from this location in the direction of the wind farm are listed in Table 34.



Figure 35. Mast O

Mast ID	Telecom operators with radio links in direction of proposed wind farm
Mast O	Eir

Table 34. Field Survey Summary – Mast O

	Procedure: 001	Rev: 2.1
Title: Lemanaghan Wind Farm Telecommunications Impact Assessment	Approved: KH	Date: 30/05/25

Mast-Site P (Wolftrap)

Mast-Site P is located at Wolftrap, Co Laois. A photo of the mast at this location is shown in the figure below. The Telecom Operators who have radio links operating from this location in the direction of the wind farm are listed in Table 35.



Figure 36. Mast P

Mast ID	Telecom operators with radio links in direction of proposed wind farm
Mast P	Viatel, Virgin Media

Table 35. Field Survey Summary – Mast P