

UWF Grid Connection EIA Report (2019)

Volume C2: EIAR Main Report

Chapter 1: Introduction



October 2019

Contents

Executive Summary.....	Error! Bookmark not defined.
1	<u>INTRODUCTION.....</u>
1.1	Introduction to the Applicant..... 3
1.2	Introduction to the EIA Report..... 3
1.3	Application under Strategic Infrastructure 3
1.4	Previous Application for UWF Grid Connection..... 4
1.4.1	Changes to the development from the 2018 Application4
1.5	Structure of the Planning Application..... 5
1.6	Description of UWF Grid Connection..... 6
1.6.1	Purpose of UWF Grid Connection6
1.6.2	Location and overview description of UWF Grid Connection.....6
1.7	Cumulative Evaluation of UWF Grid Connection 8
1.7.1	Cumulative Locational Context of all the Elements9

List of Figures

<u>Figure No.</u>	<u>Figure Title</u>
Figure GC 1.1	Location of UWF Grid Connection on OSI Discovery Mapping (The Subject Development)
Figure CE 1.1	Location of UWF Grid Connection and the Other Elements of the Whole UWF Project on OSI Discovery Mapping
Figure CE 1.2	UWF Grid Connection and the Other Elements of the Whole UWF Project in the vicinity of Upperchurch Windfarm
Figure CE 1.3	UWF Grid Connection and the Other Elements of the Whole UWF Project in Knockmaroe, Knockcurraghbola Commons and Knockcurraghbola Crownlands (<i>close up – aerial mapping</i>)

Figures and mapping referenced in this chapter can be found in **Volume C3 EIAR Figures**.

List of Appendices

<u>Appendix No.</u>	<u>Appendix Title</u>
There are no appendices associated with this topic chapter.	

Glossary of Terms

<u>Term</u>	<u>Definition</u>
EIA Directive	European Union Directive 2011/92/EU (as amended by Directive 2014/52/EU)
Environmental Factors	The factors in the environment required to be identified, described and assessed during the EIA process. These are specified in Article 3 (1) of the EIA Directive as Population and Human Health; Biodiversity; Land; Soils; Water; Air; Climate; Material Assets; Cultural Heritage and Landscape.
Competent Authority	The body legally delegated to decide on the Planning Application
Competent Expert	Experts who are qualified and competent in their field of expertise
Consented Windfarm	Upperchurch Windfarm – 22 wind turbines, substation, windfarm roads and ancillary works, consented in August 2014 under Planning Reference: Tipperary County Council 13/51/0003, ABP PL 22.243040
Element	One of the 5 No. elements listed in ‘Whole UWF Project’ below.
Project Design Environmental Protection Measures	Measures for environmental protection, incorporated into the design of the project.
Sensitive Aspect	Any sensitive receptor in the local environment which could be impacted by the project.
Whole UWF Project	Whole project made up of 5 No. elements – Element 1: UWF Grid Connection; and the Other Elements - Element 2: UWF Related Works, Element 3: UWF Replacement Forestry, Element 4: Upperchurch Windfarm (UWF) and Element 5: UWF Other Activities.

List of Abbreviations

Abbreviation	Full Term
ABP	An Bord Pleanála
EDL	Ecopower Developments Limited
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EMP	Environmental Management Plan
GC	Grid Connection
kV	kilovolt
OA	Other Activities
OHL	Overhead Line
OSI	Ordnance Survey Ireland
RF	Replacement Forestry
RFI	Response to Further Information
RW	Related Works
UWF	Upperchurch Windfarm
UGC	Underground Cables

Executive Summary

The current subject application is for a grid connection for the already consented Upperchurch Windfarm.

The subject application for the UWF Grid Connection is being made directly to An Bord Pleanála under Section 182A (9) of the Planning and Development (Strategic Infrastructure) Act (2006). This is the 2nd Application for UWF Grid Connection. The previous application was refused by An Bord Pleanála on 17/12/2018 (ABP-301959-18). This 2nd Application takes account of the Reasons for Refusal and the ABP Inspector's Report on the Application.

This Application is technically comparable to the previous application, with the main exception that the 110kV UGC has changed from a generally cross country route in the previous application to a wholly road route in this Application, the Mountphilips Substation is also slightly larger and with a different layout than the previous application in 2018.

The UWF Grid Connection proposal comprises of the following elements

- Mountphilips Substation
- Mountphilips – Upperchurch 110kV Underground Cable (110kV UGC) and,
- Ancillary Works at Mountphilips Substation site.

The purpose of UWF Grid Connection is to export electricity, from Upperchurch Windfarm when it is constructed and operational, to the national grid. The 110kV UGC will connect the Consented UWF Substation at Upperchurch Windfarm to the now proposed substation at Mountphilips, and the new Mountphilips Substation will be connected to the existing, adjacent Killonan - Nenagh 110kV overhead line. The export of electricity from Upperchurch Windfarm will be via the new Mountphilips Substation.

The subject application is part of a whole project which also comprises the following other elements – UWF Related Works, UWF Replacement Forestry, Upperchurch Windfarm (UWF) and UWF Other Activities. These are collectively referred to as the Whole UWF Project in this EIA Report, and are included in the cumulative evaluations within this Report.

1 INTRODUCTION

1.1 Introduction to the Applicant

Ecopower Developments Limited (EDL) is part of the Ecopower group of specialist on-shore wind energy development, operation & maintenance and asset management companies, and has been involved in wind energy developments in Ireland since 1996.

1.2 Introduction to the EIA Report

This Environmental Impact Assessment Report (EIA Report or EIAR¹) has been prepared to accompany the subject application by Ecopower Developments Limited to An Bord Pleanála for the grid connection element of the already consented Upperchurch Windfarm. The subject application, Upperchurch Windfarm Grid Connection, is called the UWF Grid Connection throughout this report².

UWF Grid Connection comprises the following elements:

- A new 110kV electrical substation at Mountphilips townland (to be called Mountphilips Substation)
- A new 110kV underground electrical cable connecting the Mountphilips Substation to the consented Upperchurch Windfarm substation (to be called Mountphilips – Upperchurch 110kV UGC or 110kV UGC).

Relevant Volume C3 EIAR Figures:

Figure GC 1.1: Location of UWF Grid Connection on OSI Discovery Mapping (The Subject Development)

1.3 Application under Strategic Infrastructure

The subject application for the UWF Grid Connection is being made directly to An Bord Pleanála under Section 182A (9) of the Planning and Development (Strategic Infrastructure) Act (2006).

EDL commenced pre-application consultation for this Application with An Bord Pleanála (under Section 37B of the Planning and Development Act 2000 (as amended)) on 7th January, 2019. At the conclusion of the process, on the 12 June 2019, An Bord Pleanála determined that the UWF Grid Connection Application is strategic infrastructure and therefore should to be lodged directly with An Bord Pleanála.

Relevant Volume C4 EIAR Appendices:

¹ Environmental Impact Assessment Report prepared in accordance with Directive 2011/92/EU (as amended by 2014/52/EU).

² The already consented Upperchurch Windfarm is called the 'Upperchurch Windfarm', the abbreviation 'UWF' is used to describe the Other Elements of the Whole Upperchurch Windfarm Project, i.e. UWF Grid Connection etc.

Appendix 3.1: Consultation with An Bord Pleanála This appendix contains the full record of consultation between Ecopower and An Bord Pleanála between January 2019 and the Determination dated 12th June, 2019 (Page 25 of the pdf).

1.4 Previous Application for UWF Grid Connection

This is the 2nd Application for UWF Grid Connection (2019 Application). The previous application (2018 Application) was refused by An Bord Pleanála by Order dated 17/12/2018 (ABP-301959-18). This 2019 Application takes account of the Reasons for Refusal and the ABP Inspector's Report on the 2018 Application (dated 27th November 2018).

The Reasons for Refusal of the 2018 Application and the Inspector's Report are examined in **Chapter 4: Alternatives Considered** of this Main EIA Report. The Inspectors Report is available at <http://www.pleanala.ie/casenum/301959.htm>

The 2018 Application for a 'substation and associated works and an 110kV underground grid connection' was also deemed to be strategic infrastructure and therefore the application was made directly to An Bord Pleanála. Consultation Reference 22.VC0098.

1.4.1 Changes to the development from the 2018 Application

There are changes in this 2019 UWF Grid Connection Application from the 2018 Application. These comprise;

- In this 2019 Application, the route of the 110kV UGC from Mountphilips Substation Site entrance to the Consented UWF Substation site entrance is wholly under the public road (except for 700m under a private paved road at the Consented UWF Substation end) and is 30.5km in length. By comparison, the 2018 Application 110kV UGC route was through agricultural and forestry tracks and lands with some public road crossings and 27.5km in length.
- Mountphilips Substation Site is at the same location, but the footprint of the Substation Compound is increased by 15% (from 8930m² to 10290m²) and the footprint of the control building is increased from 205m² to 375m². This is to reflect new layout requirements in Eirgrid Specifications for a loop substation (such as Mountphilips Substation). **Note:** Details of the changes/no changes to the Mountphilips Substation Site as a result of the increased dimensions are listed in **Chapter 5: Description of the Development: Section 5.1.1.1: Changes in this 2019 Application from the 2018 Application.**

1.5 Structure of the Planning Application

This planning application comprises a suite of application particulars, which include this EIA Report and accompanying Figures and Appendices; Planning Documents; Planning Drawings; Appropriate Assessment Reporting and an Environmental Management Plan for the UWF Grid Connection project. Reference Documents for the Other Elements of the Whole UWF Project are also provided to facilitate the evaluation of cumulative impacts. The documents are presented in separate volumes.

Table 1.1 below, summarises the contents of these volumes so that it is clear, to the reader, where information can be found.

Table 1.1: Documents accompanying the planning application

Volume No.	Document Title	
Volume A	Planning Application Documents – Application Form; Site/Newspaper Notice; Letters of Consent; Schedule of Submitted Documents etc.	
Volume B	Planning Drawings	
Volume C	UWF Grid Connection EIA Report	Volume C1: EIAR Non-Technical Summary Volume C2: EIAR Main Report Volume C3: EIAR Figures Volume C4: EIAR Appendices
Volume D	UWF Grid Connection Environmental Management Plan	
Volume E	Appropriate Assessment Reporting and Appendices	
Volume F	Reference Documents for Other Elements of the Whole UWF Project	2018 UWF Related Works EIA Report 2018 UWF Related Works Environmental Management Plan 2018 UWF Replacement Forestry EIA Report 2013 EIS for Upperchurch Windfarm 2013 RFI for Upperchurch Windfarm 2014 ABP Inspector's Report for Upperchurch Windfarm 2014 Grant of Permission & Conditions for Upperchurch Windfarm
Volume C4: EIAR Appendices:		UWF Other Activities: Appendix 5.6 Description of UWF Other Activities

1.6 Description of UWF Grid Connection

The UWF Grid Connection proposal comprises of the following elements

- Mountphilips Substation
- Mountphilips – Upperchurch 110kV Underground Cable (110kV UGC) and,
- Ancillary Works at Mountphilips Substation site.

1.6.1 Purpose of UWF Grid Connection

Upperchurch Windfarm (UWF) is consented but not yet constructed - Planning Reference: Tipperary County Council 13/51/0003; ABP PL 22.243040. Upperchurch Windfarm was granted planning permission in August 2014. The windfarm comprises 22 No. wind turbines, an electrical substation and ancillary works. The windfarm substation (Consented UWF Substation) is located in Knockcurraghbola Commons, generally in the centre of the windfarm.

The purpose of UWF Grid Connection is to connect the Consented UWF Substation at Upperchurch Windfarm to the now proposed substation at Mountphilips. The Mountphilips substation will in turn, be connected to the existing, adjacent Killonan - Nenagh 110kV overhead line and thereby export electricity, from Upperchurch Windfarm when constructed and operational, to the national grid.

1.6.2 Location and overview description of UWF Grid Connection

Mountphilips Substation: The new substation is proposed for a location adjacent to the existing Killonan - Nenagh 110kV overhead line in agricultural grassland in Mountphilips townland, 2km north of Newport, 4km south of Birdhill, 17km north east of Limerick City and 23km west of the Upperchurch Windfarm.

The new 110kV electrical substation will comprise a compound, measuring 10290m² in area, which will contain a control building; 110kV busbars; circuit breakers; line disconnects; current and voltage measuring equipment; cable chairs; surge arresters; lightening protection monopoles and other electrical apparatus. The compound will be surrounded by a secure palisade fence. The substation compound will be located c.130m east of the Killonan – Nenagh 110kV overhead line, at its closest point. The new substation will also comprise 2 No. End Masts which will be constructed under the Killonan – Nenagh 110kV overhead line, these End Masts will be connected to the overhead line and will also connect to the electrical equipment in the compound via underground cable.

Mountphilips - Upperchurch 110kV UGC: The 110kV UGC will connect Mountphilips Substation to the Consented UWF Substation at the consented Upperchurch Windfarm, through the installation of underground cables. The 110kV UGC is 30.5km in length, and is **mostly located along the Regional Road R503 (Limerick to Thurles Road)**. The route follows the Local Road network from the entrance off the public road for Mountphilips Substation at Coole, to a point on the eastern outskirts of Newport Town at Newport GAA Club, thus avoiding Newport Town. From that point, the route follows the R503 eastwards for 22.1km as far as the turn-off at Knockmaroe townland, onto Local Road L2264-50 (Borrisoleigh Road). Then along the local road network, and then along a private paved road to the Consented UWF Substation in Knockcurraghbola Commons.

This route west to east is through the townlands of Mountphilips, Coole, Freagh, Foildarrig, Oakhampton, Rockvale, Mackney (O'Brien), Mackney (Bourke), Ahane, Newross, Castlewaller, Carrowkeale, Tullow, Cooldrisla, Derryleigh, Kilnacappagh, Scraggeen, Derrygareen, Inchadrinagh, Knockancullenagh, Fanit, Lackamore, Tooreenbrien Upper, Tooreenbrien Lower, Reardnogy Beg, Reardnogy More, Shanballyedmond, Bournadomeeny, Coonmore, Foildarragh, Kilcommon, Loughbrack, Knocknabansha, Knockmaroe, Knockcurraghbola Crownlands and Knockcurraghbola Commons.

The 110kV UGC will be installed in trenches, which will be laid with ducts through which the electrical cables and communications cables will be pulled. The cable lengths will be pulled through and joined together in joint bay chambers at 38 No. Joint Bay locations. The ducts will be surrounded by concrete and the trench backfilled with aggregate. Outside the Mountphilips Substation site the top of the trench will be reinstated with road surfacing material according to Local Authority specifications. The only surface expression of the 110kV UGC will be the man-hole type covers over the Joint Bays and the over-ground identification marker posts and marker plates.

Ancillary Works at Mountphilips Substation site will support the construction of UWF Grid Connection and will include the construction and use of a Temporary Compound at Mountphilips; construction of a new Permanent Entrance at Coole townland (including the provision of sightlines at an existing farm entrance) and the construction of a Permanent Access Road from the new entrance to the proposed substation at Mountphilips townland; ancillary works will also include replacement of watercourse crossing structures; installation of drainage systems at Mountphilips Substation, around the Temporary Compound and along the new Access Road; fencing; provision of electricity supply to Mountphilips substation; excavation and reinstatement and disposal of spoil; hedgerow/tree removal at Mountphilips and hedgerow replanting and site reinstatement.

Relevant Volume C3 EIAR Figures:

Figure GC 1.1: Location of the UWF Grid Connection on OSI Discovery Mapping (The Subject Development)

Relevant Volume B: Planning Drawings

DWG. No. 05654-200 Overall Site Layout Plan

1.7 Cumulative Evaluation of UWF Grid Connection

The subject application (UWF Grid Connection) is part of a whole project which comprises the following other elements – UWF Related Works, UWF Replacement Forestry, Upperchurch Windfarm (UWF) and UWF Other Activities. These are collectively referred to as the Whole Upperchurch Windfarm Project, called the ‘Whole UWF Project’ in this EIA Report (EIAR). The cumulative impact of the Whole UWF Project is evaluated in this EIAR.

The purpose of the UWF Grid Connection, UWF Related Works, UWF Replacement Forestry and UWF Other Activities elements is to facilitate the construction and operation of the already consented Upperchurch Windfarm (UWF). Upperchurch Windfarm when operational, will produce renewable electricity from the wind to supply the National Grid.

Table 1.2: Element 1 of the Whole UWF Project

Element No.	The Subject Development	Composition of the Subject Development	Planning Status and Competent Authority for the Subject Development
1	The Subject Development: UWF Grid Connection (GC)	Mountphilips Substation Mountphilips – Upperchurch 110kV UGC Ancillary Works at Mountphilips Substation site	Current planning application to An Bord Pleanála

Table 1.3: Element 2 to 5 of the Whole UWF Project

Element No.	Element of the whole UWF project	Composition of each Element	Planning Status and Competent Authority for each Element
2	UWF Related Works (RW)	Internal Windfarm Cabling Realigned Windfarm Roads Haul Route Works Telecom Relay Pole RW Ancillary Works	1st Party Appeal to An Bord Pleanála. Lodged on 6th February, 2019. ABP Ref. 303634-19. Tipperary County Council Ref. No. 18/600913.
3	UWF Replacement Forestry (RF)	Replacement Forestry at Foilnaman	Afforestation license granted by the Minister for Agriculture, Food and the Marine on 07/11/2018. Forest Owner Number FO138819C. Contract Number CN81893.
4	Upperchurch Windfarm (UWF)	Consented UWF Turbines Consented UWF Substation Consented UWF Roads UWF Ancillary Works	Already consented under Planning Reference: Tipperary Co.Co. 13/51/0003, ABP PL 22.243040
5	UWF Other Activities (OA)	Haul Route Activities Upperchurch Hen Harrier Scheme Monitoring Activities Overhead Line Activities	No planning permission required – no works or interventions into the natural environment.

An Environmental Impact Statement was prepared for Upperchurch Windfarm to accompany the 2013 planning application, with Further Information also submitted during 2013. An EIA Report was also prepared to accompany the planning/licence applications to the relevant Competent Authorities, for the UWF Related Works and UWF Replacement Forestry. These EIS/EIA Reports can be found in **Volume F: Reference Documents for Other Elements of the Whole UWF Project**.

Relevant Volume C3 EIAR Figures

The location of each element of the whole UWF project is illustrated on:

Figure CE 1.1: Location of the UWF Grid Connection and the Other Elements of the Whole UWF Project on OSI Discovery Mapping.

1.7.1 Cumulative Locational Context of all the Elements

The majority of the Whole UWF Project is located in County Tipperary with some minor activities along the Upperchurch Windfarm turbine component haul route and on the Killonan to Nenagh 110kV overhead line, in County Limerick (these activities are part of Element 5: UWF Other Activities).

The UWF Grid Connection is adjacent to and overlaps with Other Elements of the Whole UWF Project and in particular;

- It overlaps with Upperchurch Windfarm at the Consented UWF Substation;
- It is adjacent to the UWF Related Works and the Upperchurch Windfarm in Knocknabansha, Knockmaroe, Knockcurraghbola Commons and Knockcurraghbola Crownlands

Relevant Volume C3 EIAR Figures:

Figure CE 1.2: UWF Grid Connection and the Other Elements of the Whole UWF Project in the vicinity of Upperchurch Windfarm.

Figure CE 1.3: UWF Grid Connection and the Other Elements of the Whole UWF Project in Knockmaroe, Knockcurraghbola Commons and Knockcurraghbola Crownlands.

