RECEIVED: 19/12/2025

MWP

Chapter 03 Description of the Proposed Development

Ballynisky Wind Farm

Ballynisky Green Energy Ltd.

December 2025

Contents

RECEIVED: 19/12/2025

RECEIVED: 19/12/2025

Tables

Figures

Appendices

RECEIVED: 19/12/2025

Project No.	Doc. No.	Rev.	Date	Prepared By	Checked By	Approved By	Acceptance Code / Status
22569	6006	A	Sept. 2025	SR/KC	LL	AOC	Final
22569	6006	B	Dec 2025	SR/KC	LL	AOC	Final

MWP, Engineering and Environmental Consultants
Address: Reen Point, Blennerville, Tralee, Co. Kerry, V92 X2TK, Ireland

www.mwp.ie

QUALITY I.S. EN ISO 9001:2015 NSAI Certified
HEALTH & SAFETY I.S. ISO 45001:2018 NSAI Certified
ENVIRONMENT I.S. EN ISO 14001:2015 NSAI Certified
BUILDING INFORMATION MODELLING ISO 19650-2:2018 NSAI Certified
ENGINEERS IRELAND CPD ACCREDITED EMPLOYER

Disclaimer: *This Report, and the information contained in this Report, is Private and Confidential and is intended solely for the use of the individual or entity to which it is addressed (the "Recipient"). The Report is provided strictly on the basis of the terms and conditions contained within the Appointment between MWP and the Recipient. If you are not the Recipient you must not disclose, distribute, copy, print or rely on this Report (unless in accordance with a submission to the planning authority). MWP have prepared this Report for the Recipient using all the reasonable skill and care to be expected of an Engineering and Environmental Consultancy and MWP do not accept any responsibility or liability whatsoever for the use of this Report by any party for any purpose other than that for which the Report has been prepared and provided to the Recipient.*

RECEIVED: 19/12/2025

3. Description of the Proposed Development

3.1 Introduction

This chapter of the **Environmental Impact Assessment Report (EIAR)** describes the site location, the components of the proposed development and details the activities and operations required to construct, operate and decommission the wind farm and its connection to the National Grid. The purpose of this chapter is to provide an appropriate level of detail to provide the basis for Environmental Impact Assessment (EIA). The description includes all phases of the proposed development including the construction, commissioning, operation and decommissioning of the wind turbines and associated infrastructure.

Details of the design of the proposed development are also provided in this Chapter, supported by excerpts from engineering drawings prepared by MWP accompanying the planning application. It should be noted that these drawings having been reduced in scale within the **EIAR** for more convenient examination. The larger drawings to a correct scale are cross-referenced and submitted as part of the planning application.

The **EIAR** has been prepared for a wind turbine specification comprising a tower with a hub height of 90 metres (m) and a rotor diameter of 136m, resulting in a tip height of 158m (refer to **Table 3-1**).

3.2 Summary

The proposed development is a wind farm and associated grid connection within the townlands of Ballynisky, Graigoor, Ballyegny More, Kilbradran, Ballysteen, Dunmoylan, Carrons and Lisbane, to the west of Coolcappa, Co. Limerick. The site is approximately 9km north of Newcastle West and 6km northwest of Rathkeale.

For the purposes of this planning application and **EIAR**, the proposed development is referred to as "Ballynisky Wind Farm".

The development comprises six (6) wind turbines with a total overall height of 158m, an on-site 38kV electrical substation and two grid connection options. Option A is an underground electrical connection to an existing 38kV substation at the nearby Carrons Wind Farm which is connected to the National Grid. Option B is to loop into the existing 38kV overhead line that transects the site. The line would be cut, and an unground line ran to the proposed 38kV substation on site and back out to connect to the existing line continuing towards the Rathkeale 110kV substation.

Should it become operational, this wind farm will be capable of providing approximately 27 megawatts (MW) of renewable electricity to the National Grid.

The application is being submitted by Ballynisky Green Energy Ltd. (the Applicant). The Applicant is seeking a 10-year permission to construct the development, which, when commissioned, would have an operational life of no less than 35 years from the date of commissioning.

The components of the proposed development are summarised in **Table 3-1**.

Table 3-1: Summary of Proposed Development

RECEIVED: 19/12/2025

Proposed Development for which planning permission is being sought	• Six (6) wind turbines with a tip height of 158m, a rotor diameter of 136m and all associated foundations and hardstanding areas. • A 38kV on-site substation compound containing a substation building, associated electrical equipment and transformers with separate client side and ESB entrances. The building will contain a control room, switchgear room, ESB room and store room. • Underground electrical and communications cabling between the wind turbines and on-site substation. • Grid Connection Option A: 2.54km-long 38kV underground cable connection from the on-site substation to the existing Carrons substation to the west of the site. • Grid Connection Option B: Loop into the existing 38kV overhead line via the proposed 38kV substation. • A new temporary site entrance off the L1219 local road to the west of the permanent site entrance for the construction phase only. • Upgrade of an existing farm entrance and access track off the L1219 local road in the northwest of the site to serve as a permanent site entrance for the wind farm when operational. • Approximately 3.4km of new site access tracks with associated turning areas and drainage. This includes approximately 490m of temporary access tracks which will be reinstated following construction. • Upgrade of approximately 470m of existing site access tracks. • A 9m-long clear span bridge crossing of the Ahacronane River by an internal site access track to the northwest of turbine T1 and an associated 1.5m x 1.0m relief culvert. • A permanent meteorological mast with a height of 90m, a foundation and hardstand. • Two (2) material storage areas with a total capacity of approximately 39,300m^3. • A temporary construction compound with an area of approximately 1,375m^2. • All associated site development works, including drainage, diversion or undergrounding of low voltage powerlines, landscaping and revegetation.
Other Associated Project Components assessed in this EIAR but for which planning permission is <u>not</u> being sought within the current application	• Temporary works which may be required on sections of the public road network along the turbine delivery route such as hedge/tree cutting, relocation of powerlines/poles, lampposts, signage and road widening where required.

RECEIVED: 19/12/2025

3.3 Site Description

3.3.1 Site Location

The proposed development site is located in the townlands of Ballynisky, Graigoor, Ballyegny More, Kilbradran, Ballysteen, Dunmoylan, Carrons and Lisbane, to the west of Coolcappa, Co. Limerick. It lies approximately 9km north of Newcastle West and 6km northwest of Rathkeale (**Figure 3-1**). The site and surrounding area are in a rural setting with landcover comprising mainly agricultural land, farmsteads and one-off residential houses.

Features of note in the surrounding area include Carrons Wind Farm to the west and Creeves Quarry to the north.

Access to the site will be via the L1219 local road to the northwest of the site. The R521 between Foynes and Newcastle West is located to the west of the site. The R521 links the N21 National Primary Road to the southeast and the N69 to the north. The R521 can also be accessed at Ardagh from the R523 south of Rathkeale.

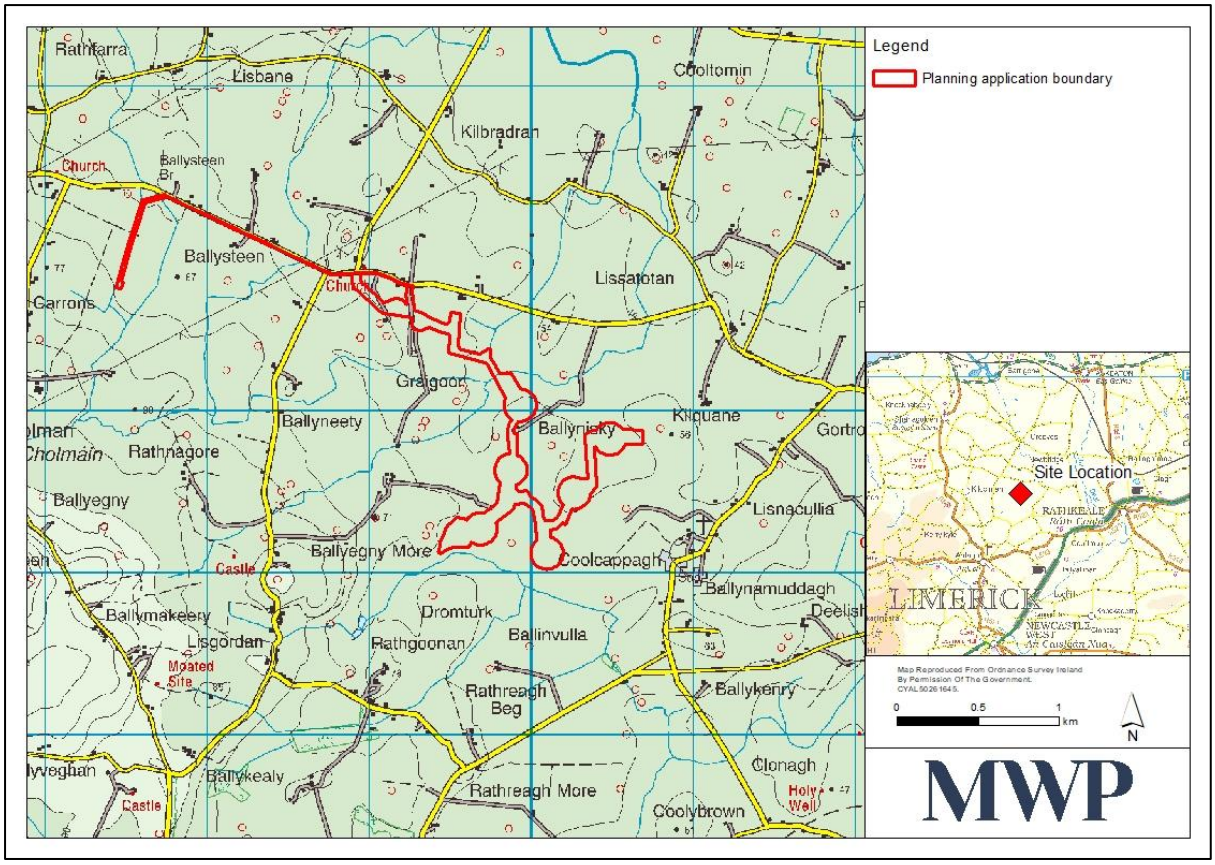

Figure 3-1: Proposed Development Location

3.3.2 Environmental Setting

The total proposed development area (planning application area) is approximately 43.02 hectares (ha) (as indicated by the proposed development in **Figure 3-1**). The proposed development is located within a flat, rural landscape dominated by agricultural land. Settlement consists of one-off housing and farmsteads. Most of the closest surrounding properties are clustered within the neighbouring village of Coolcappa, approximately 1km east of the site.

RECEIVED: 19/12/2025

The proposed development is predominantly comprised of agricultural fields bordered by hedgerows, treelines and man-made field drainage channels. It is relatively flat with topography ranging from 46 to 56 metres Above Ordnance Datum (mAOD)

There are no residential dwellings within 632m of a turbine (4 x the turbine tip height of 158m).

From ecological surveys undertaken at the site, the habitats are comprised of improved agricultural grassland and wet grassland. There is a small area of scrub and mixed broadleaved woodland to the west of the site.

There are no Natura 2000 sites located within the proposed development however, there are three (3) within the likely zone of impact, identified using the Source-Pathway-Receptor (SPR) approach. These are the River Shannon and River Fergus Estuaries Special Protection Area (SPA), the Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA, and the Lower River Shannon Special Area of Conservation (SAC). There are two (2) Natural Heritage Areas (NHAs) within 15km of the proposed development, namely, Carrigkerry Bogs NHA and Moyreen Bog NHA and eleven (11) proposed NHAs (pNHA). Refer to **Chapter 06 Biodiversity** of the **EIAR** for further details.

According to the EPA online mapper[1], the CORINE (2018) landcover at the proposed development is classed as 'Pastures'. Soil at the proposed development is categorised as predominantly Carboniferous limestone till with areas of undifferentiated alluvium. Bedrock geology at the southern side of the proposed development consists of undifferentiated Visean limestones, while bedrock at the northern side is 'dark muddy limestone and shaly mudstone' of the Rathkeale Formation. Refer to **Chapter 09 Land and Soils** of the **EIAR** for further details.

According to the EPA online mapping tool (https://gis.epa.ie/EPAMaps/), the proposed development is located in the sub basin catchment of the Ahacronane Surface Water Body (SWB) which is defined under the EU Water Framework Directive (WFD) as the Shannon Estuary South Catchment. The main hydrological feature within the study area is the Ahacronane River which flows from southwest to northeast across the area. The Lissatotan stream, which is a tributary of the Ahacronane River, rises in the north of the study area and flows north joining the Ahacronane c.2km further north of the proposed development. The Rathnagore Stream flows from west to east along a section of the southern portion of the proposed development and joins the Riddlestown Stream to the south-east. These surface water features have been assigned a water quality status by the EPA in terms of the requirements of the WFD. Onsite, there are field drains along many of the internal field boundaries in particular along the boundaries of individual land holdings. Refer to **Chapter 08 Water** of the **EIAR** for further details.

According to the GSI online mapping resource, the underlying aquifer is classified as 'Locally Important', i.e., bedrock which is moderately productive only in local zones. The aquifer vulnerability ranges from 'High' in the north, to 'Moderate' in the centre depending on the soil thickness, with an area of 'Extreme' to 'Rock at or Near Surface or Karst' vulnerability to the southwest.

3.4 Project Description

3.4.1 Design of Wind Farm Layout and Infrastructure

As described in **Section 3.2**, the proposed development will comprise six (6) turbines and associated infrastructure including grid connection on a site area of approximately 43.02 ha (refer to **Figure 3-2**).

The development or examination of alternative design approaches is an iterative process where there is a balance between achieving an optimised layout, with minimal excavation and avoiding any risk in terms of poor ground or negative influence on the existing drainage regime and feedback received from the public and statutory/non-

[1] https://gis.epa.ie/EPAMaps/

RECEIVED: 19/12/2025

statutory bodies consultation processes. Any constraints or restrictions as to the location of infrastructure such as planning policy, environmental buffers, soils, stability, topography and flood risk were also considered from the outset. Both the 2006 and the 2019 draft Wind Energy Guidelines were also consulted during the design process. This iterative process saw the initial positioning of turbines and access track infrastructure being modified as each of the assessments were completed. The turbines and substation have been re-positioned as necessary, access tracks have been carefully selected, and a drainage layout developed to complement the final design and take account of flood risk. Once turbine locations were finalised, the alignment and rotation of the hardstands were designed to optimise the balance between access criteria and the required volumes of excavated and imported materials.

The final chosen locations of the main infrastructural components of the development are as follows:

- **Turbine T1:** located in the north of the site in flat agricultural lands;
- **Turbine T2:** located in the west of the site within wet grassland/scrub;
- **Turbine T3:** located in the southwest of the site in flat agricultural lands;
- **Turbine T4:** located in the south of the site in flat agricultural lands;
- **Turbine T5:** located in the southeast of the site in flat agricultural lands;
- **Turbine T6:** located in the east of the site in flat agricultural lands bordered by scrub/woodland;
- **38kV Wind Farm Substation:** located in the northwest corner of the site close to the permanent site entrance and adjacent to the temporary construction compound;
- **Meteorological Mast**: a 90m-high mast to the east of the wind farm substation;
- **Site Entrances/Access:** two (2) access points/site entrances to the wind farm site from the public road network – a permanent entrance from the L1219 local road to the north and a temporary entrance from the L1219 further west for the construction phase only;
- **Temporary Construction Compound:** located in the northwest of the site adjacent to the substation compound;
- **Bridge**: a bridge crossing of the Ahacronane River by an internal site access track to the northwest of turbine T1; and
- **Excavated Material Deposition Areas**: 2 No. located southwest of turbine T3 (approximate storage volume 36,000m^3) and east of the temporary compound (3,300m^3) with a maximum height of 2m.

The proposed layout is shown in the following Drawings enclosed with the Planning Application and **Figure 3-2** overleaf:

- 22569-MWP-00-00-DR-C-5005 (Site Layout – Master Sheet);
- 22569-MWP-01-00-DR-C-5005 (Site Layout – Sheet 1);
- 22569-MWP-02-00-DR-C-5005 (Site Layout – Sheet 2);
- 22569-MWP-03-00-DR-C-5005 (Site Layout – Sheet 3);
- 22569-MWP-04-00-DR-C-5005 (Site Layout – Sheet 4);
- 22569-MWP-05-00-DR-C-5005 (Site Layout – Sheet 5);
- 22569-MWP-06-00-DR-C-5005 (Site Layout – Sheet 6);
- 22569-MWP-07-00-DR-C-5005 (Site Layout – Sheet 7);
- 22569-MWP-08-00-DR-C-5005 (Site Layout – Sheet 8);
- 22569-MWP-00-00-DR-C-5007 (Site Access/Entrance Layout); and
- 22569-MWP-00-00-DR-C-5406 (Substation Layout).

RECEIVED: 19/12/2025

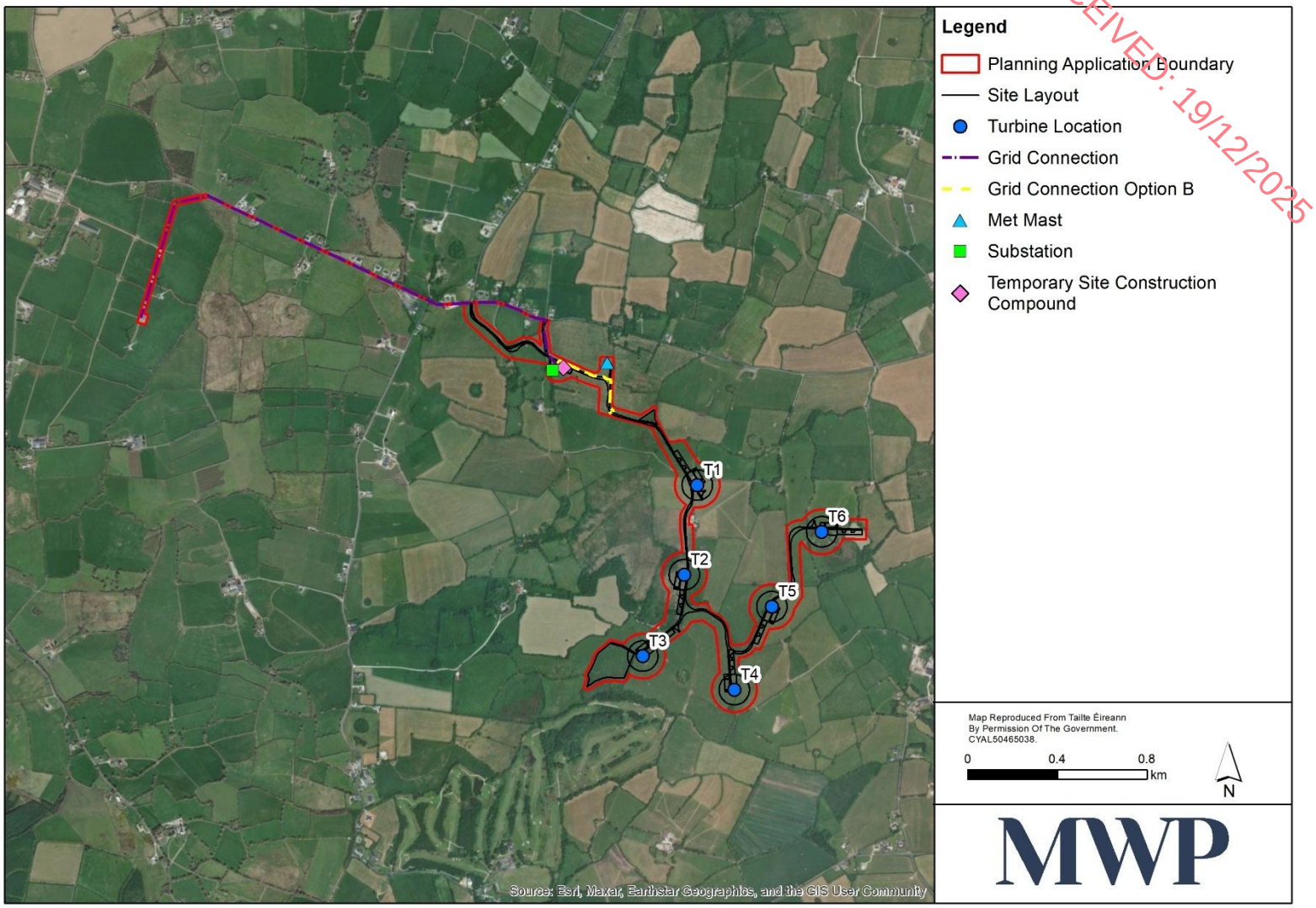

Figure 3-2: Proposed Development Layout

RECEIVED: 19/12/2025

3.4.2 Wind Turbines

Turbines will be of modern design and will comprise a steel tube tower fixed to a reinforced concrete foundation. The tower will support a nacelle and rotor hub. Three (3) aerofoil blades will be fixed to the rotor hub. Commercial wind turbine hubs and towers are made of steel, while the blades can be made of a matrix of glass-fibre reinforced polyester or wood-epoxy or a similar composite material.

For illustration and further details of specification, refer to **Drawing 22569-MWP-00-00-DR-C-5401** and **5402**.

It is proposed to install six (6) no. wind turbines each with a maximum tip height of 158 metres (m). The turbine co-ordinates are detailed in **Table 3-2**.

Table 3-2: Turbine Co-ordinates

Turbine No.	Grid Coordinates (ITM)	
	Easting (X)	Northing (Y)
T1	529899	643084
T2	529841	642685
T3	529655	642322
T4	530064	642172
T5	530232	642542
T6	530454	642876

3.4.2.1 Turbine Model

The turbine model will be of similar dimensions to a Vestas 136, with a rotor diameter of 136m, a tower (hub) height of 90m and a tip height of 158m.

The turbine will be certified under the International Electrotechnical Commission IEC 61400-1 safety standards or equivalent and will be designed to withstand the environmental conditions encountered on site.

3.4.2.2 Turbine Finish & Colour

Requirements for finish and colour are set out in the 2006 Wind Energy Development Guidelines as follows:

- Turbines shall be finished to a white, off-white or light grey colour to correspond with the colour scheme; and
- All surfaces will have a matt non-reflective finish.

The draft 2019 Wind Energy Guidelines have the same turbine finish and colour requirement.

It is proposed to install lighting on the turbines in a pattern that is acceptable to the Irish Aviation Authority (IAA) for aviation visibility purposes.

3.4.2.3 Turbine Foundations

Each turbine will be supported by a reinforced concrete base or foundation with a central upstand above the base which will be excavated to good ground bearing levels. The foundation will bear onto rock, or other such suitable bearing stratum determined during pre-construction site and geotechnical investigations. The foundation base will be approximately 28m in diameter and installed to an excavation depth of approximately 3m below ground level, depending on ground conditions. Piled foundations may be required subject to the findings of the geotechnical ground investigation which will be carried out prior to the construction phase. Once completed, a

RECEIVED: 19/12/2025

portion of the foundation (typically a 6m ø concrete plinth) will be raised above existing ground level by 0.05m to help prevent groundwater ingress to the turbine tower base.

Refer to **Planning Drawing No. 22569-00-00-DR-C-5401** for further details on foundations.

3.4.2.4 Crane Hardstands and Laydown Areas

Each wind turbine will have an associated main crane hardstand area, two (2) support crane hardstanding areas and a temporary laydown area adjacent to the foundation. Crane hardstands and temporary lay down areas are required to accommodate the delivery and temporary storage of the turbine components prior to their erection and to support the craneage operations during turbine erection. The crane hardstanding areas also support maintenance of the wind turbine during the operational life of the development.

The hardstand areas will be excavated and bear onto rock (or other suitable bearing stratum) with a foundation depth of 0.5 -1.5m depending on the local bedrock profile and the varying depth to competent soil. The main crane hardstand and component storage area is proposed to be approximately 1,725m^2 (69m long x 25m wide). The two (2) support crane hardstanding areas are proposed to be approximately 174m^2 each. The additional temporary storage area for turbine blade and tower components adjacent to the main crane hardstand is proposed to be approximately 1,617m^2 (77m long x 21m wide). The hardstanding and temporary laydown areas at each turbine will remain in place during the lifetime of the wind farm but will be reinstated with a layer of soil and revegetated following construction.

For illustration and further details of dimensions, refer to **Drawing 22569-MWP-00-00-DR-C-5402**.

3.4.3 Electrical Network

3.4.3.1 Distribution Network

Each individual turbine will generate electricity at a nominal voltage and will have its own internal transformer to step-up to an on-site distribution network voltage. The transformer and associated switchgear will be located within the turbine tower. A network of underground cabling servicing each turbine with electrical power and signal transmission will be installed along internal tracks to collect the electricity from each turbine and connect them to the on-site substation. Cabling will be installed in PVC ducting laid in trenches adjacent to the track edge (as illustrated on **Drawings 22569-MWP-00-00-DR-C-5006** to **22569-MWP-06-00-DR-C-5006**). Access to the cable ducting is provided by intermittent chambers and pull pits at defined locations adjacent to the track infrastructure.

Existing overhead low voltage powerlines are present onsite. In the vicinity of the proposed substation, T1 and the met mast, the overhead lines may need to be diverted or undergrounded if required by the distribution network operator (ESB Networks). Any diversion or undergrounding works undertaken will be completed following agreement with ESB Networks and in accordance with their specifications and requirements and in line with the cabling to be installed as part of the proposed development.

3.4.3.2 Wind Farm Substation

The proposed 38kV wind farm substation will occupy an area of approximately 1,228m² and will comprise an outdoor electrical yard and a single storey building.

The substation building will be approximately 160m² in area and contain a control room, communications room, ESB room, switchgear room and storeroom. It will be approximately 6.2m in height, with pitched roofs and an external blockwork and plastered finish.

The substation will be unmanned. Maintenance personnel will visit the substation occasionally to undertake operations and maintenance. Maintenance vehicles accessing the site will park within the compound area.

RECEIVED: 19/12/2025

The substation building and associated compound will be contained within a 2.6m high powder coated steel palisade fence.

Access to the substation will be directly from the L1219 local public road via the proposed permanent entrance and access track, as shown on **Figure 3-2** and **Drawings 22569-MWP-00-00-DR-C-5005** and **22569-MWP-00-00-DR-C-5406.**

An example of a typical substation compound similar in scale and design to that proposed is shown in **Figure 3-3.**

Figure 3-3: Example of a Substation Compound

3.4.3.3 Grid Connection

There are two proposed routes and associated connection point options for connecting the proposed Wind Farm to the National Grid considered in the EIAR as shown in **Figure 3-2** and described in the following subsections. The chosen grid connection option to the National Grid will be determined by ESB/Eirgrid to consist of either Option A or Option B.

3.4.3.3.1 *Grid Connection Option A*

In order to connect the wind turbines to the National Grid, approximately 2.54km of 38kV underground electrical cable will be installed along the L1219 local road to the north extending west and through private lands to connect the wind farm substation to an off-site substation at Carrons Wind Farm.

Laying of underground cabling will require trenching in accordance with standard ESB Networks requirements, to a typical depth of ca. 1.2m and a width of 0.60m, insertion of ducting, backfilling of trenches and subsequent pulling of cable (typically 400mm^2 XLPE insulated cable). Trenching and surface finishing will be completed in accordance with the Guidelines for Managing Openings in Public Roads as discussed with Limerick City and County Council. A typical cable trench detail is provided in **Drawing 22569-MWP-00-00-DR-C-5415**.

Cable trenching in the public road will be carried out in the road edge. This will be done under the terms of road opening licences from Limerick City and County Council. Road closure applications may also be required. All works

will be planned and undertaken in full consultation with Limerick City and County Council, in particular the Roads Department and the Roads Engineer for the area.

RECEIVED: 19/12/2025

3.4.3.3.2 *Grid Connection Option B*

This Connection Route and Connection Point consists of an underground electrical cable through private lands along the proposed access track in the townland of Graigoor and extending northeast to the proposed 38 kV substation.

The proposed connection route will loop into an existing 38kV overhead line that transects the site before continuing to the 110kV substation in Rathkeale. To enable the loop-in connection to the proposed 38 kV substation, the existing electricity line will be terminated at two poles to the south of the proposed Meteorological Mast. The line will then be routed underground to the substation and back out to reconnect with the overhead line.

As outlined above, laying of underground cabling will require trenching in accordance with standard ESB Networks requirements, to a typical depth of ca. 1.2m and a width of 0.60m, insertion of ducting, backfilling of trenches and subsequent pulling of cable (typically 400mm2 XLPE insulated cable).

The aforementioned works are also encompassed within the proposed red line boundary.

3.4.4 Meteorological Mast

A permanent meteorological mast will be erected within the site to monitor the local wind regime while the wind farm is in operation. It will be 90m high (in line with the hub height of the proposed turbines) and located to the east of the wind farm substation.

The mast will have a foundation of approximately 36m^2 and hardstanding area of 572m² (22m wide x 26m long). It will be equipped with tower-mounted meteorological instruments and telecommunication equipment and will be enclosed by a powder-coated steel palisade fence, 2.4m in height.

For further details refer to **Drawing 22569-MWP-00-00-DR-C-5403.**

A photo of a typical wind farm meteorological mast is shown in **Figure 3-4.**

RECEIVED: 19/12/2025

Figure 3-4: Example of a Meteorological Mast on a Wind Farm

3.4.5 Tracks and Access

3.4.5.1 Access from Public Roads

Access to the site will be via the Local Road network. A temporary site entrance will be established for the construction phase and a permanent site entrance will be established to provide access to the wind farm during operation. The temporary entrance will be located to the northwest of the site on the L1219 close to its junction with the L1220 and will only be used for the duration of the construction works (12-16 months). The permanent site entrance, which utilises an existing farm track, will be located further east on the L1219 local road for access during the operational life of the wind farm. This will be used for the operational phase only. The site entrance locations are illustrated on Figure 3-5.

RECEIVED: 19/12/2025

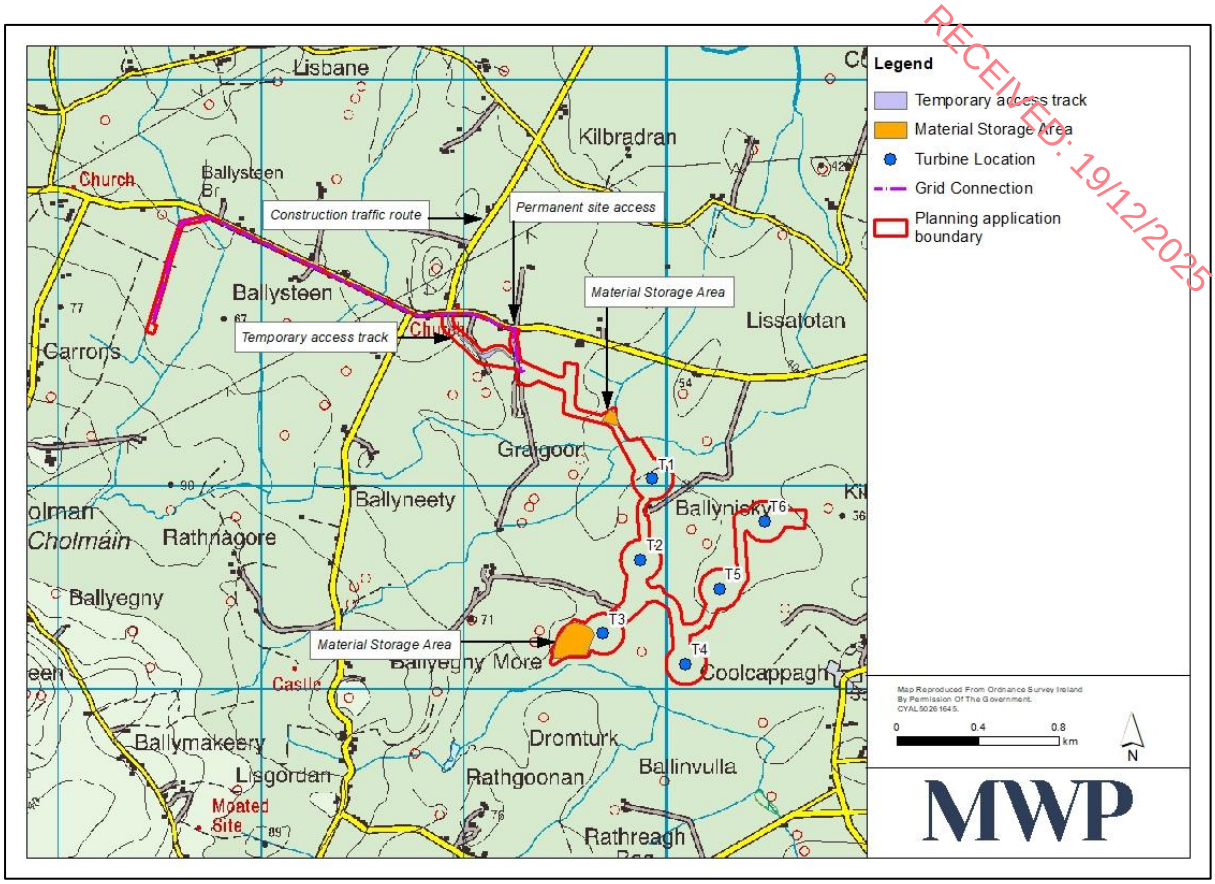

Figure 3-5: Temporary and Permanent Site Access Locations

3.4.5.2 Turbine Delivery Route

The wind turbines proposed will have an overall tip height of 158 metres. The components (nacelle, tower, blades) are expected to be delivered to Foynes Port by sea and transported to the site along the national, regional and local road network where they will enter via the temporary site entrance. Refer to **Drawing 22569-MWP-00-00-DR-C-5008** and **Figure 3-6.** A turbine delivery assessment report has been prepared and is attached as **Appendix 3A**. A Bridge inspection report along the TDR were undertaken for the Sroolane North Bridge, attached as **Appendix 3B** and the Ahacronane Culvert, attached as **Appendix 3C**.

The components for each turbine are expected to be delivered by road in approximately 90 no. deliveries total. Due to their abnormal size, blades and towers will be delivered at night to avoid disruption to daytime traffic. The turbine blades will be the longest components to be transported from port to site at approximately 68m in length and the base tower sections will be the heaviest at 85 tonnes. The blades may be transported on a blade adapter vehicle which will allow the blade to be raised to an angle of 60 degrees to the horizontal. This will allow the blades to negotiate bends and junctions along the delivery route without requiring excessive clearing or temporary road widening works. A permit for moving abnormal loads will be sought from An Garda Síochána for the delivery of oversized wind turbine components.

The delivery route extends south eastwards from Foynes along the N69 and turning onto the local road network, as follows:

- Starting at Foynes Port use the port access road to reach the N69 junction;
- Turn left and head southwards on the N69 for 1.8km;

RECEIVED: 19/12/2025

- Turn right onto the L1222 and travel southeast for 5.1km to Creeves Cross; and
- At Creeves Cross, turn right and head south along the L1220 for 2.5km to the temporary site entrance located opposite the T-junction with the L1219.

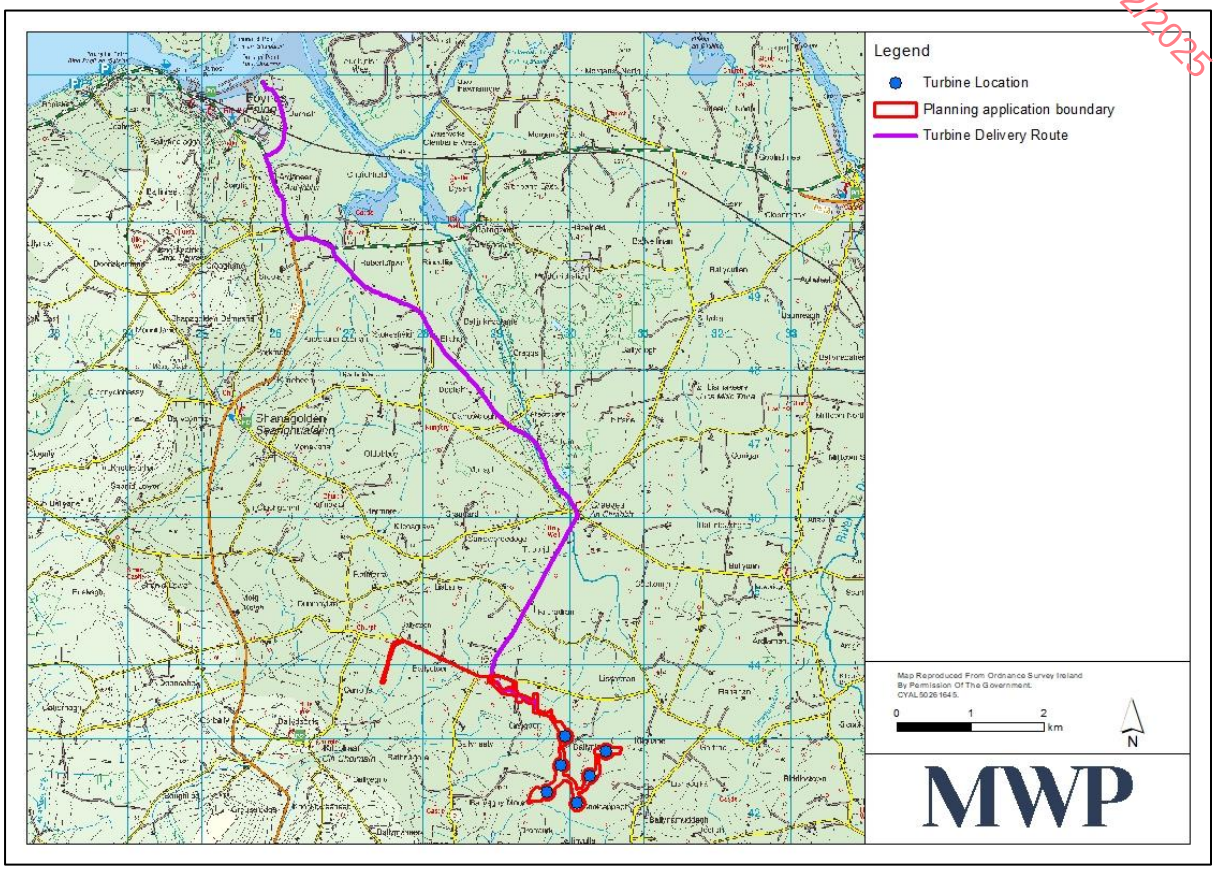

Figure 3-6: Turbine Delivery Route

3.4.5.3 Material Delivery Routes

Most of the material delivered to site will consist of aggregate for the construction of access tracks and crane hardstands and concrete for the construction of the turbine bases. The following quarries in Co. Limerick are the closest operational quarries to the proposed site and could supply these construction materials:

- Roadstone Joseph Hogans (Creeves) Quarry;
- Knockbowheen Quarry, Ardagh, Co. Limerick; and
- Michael O'Donovan Quarries, Knockbowheen, Co. Limerick.

These and additional quarries and the surrounding road network are shown in **Figure 3-7.**

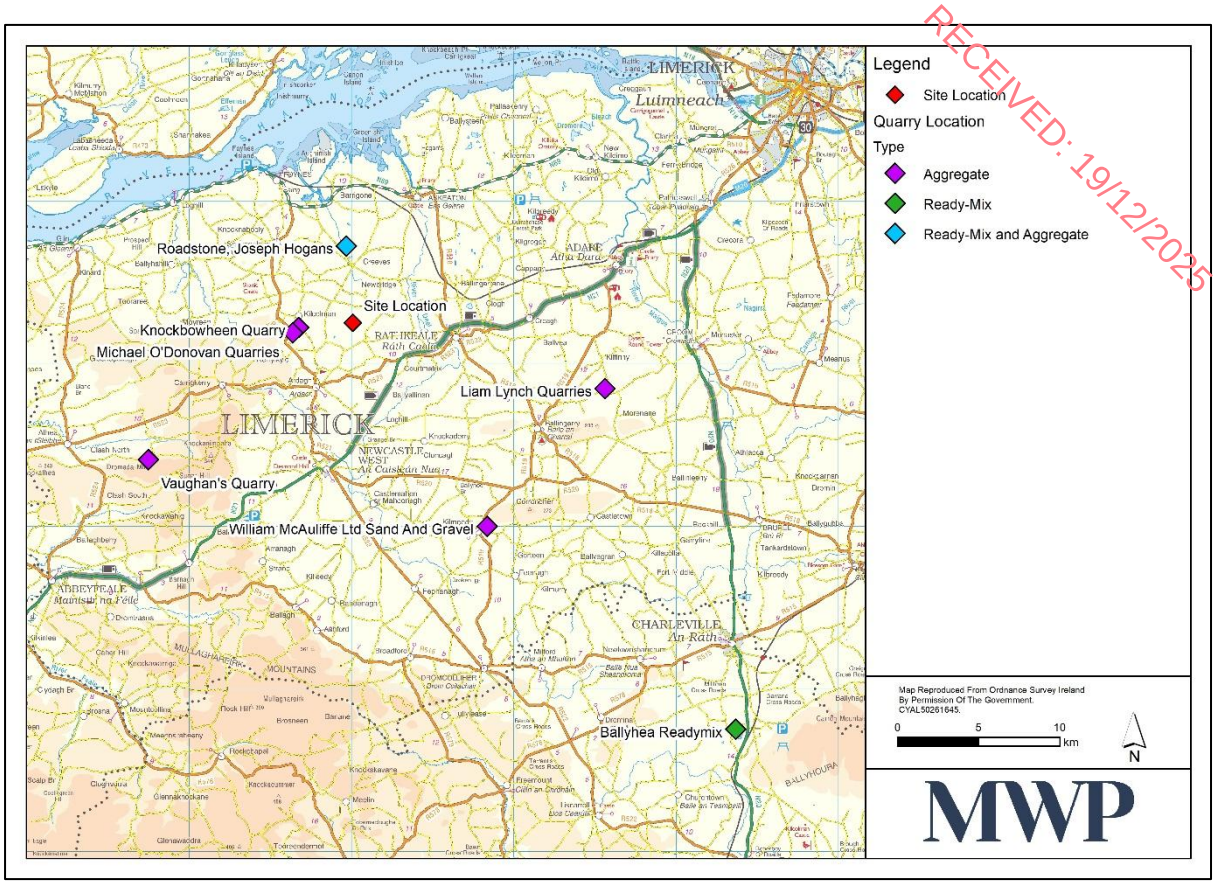

Figure 3-7: Quarry Locations & Surrounding Road Network

Where possible, similar stone to that of the site will be used, i.e. limestone. The use of local quarries, where possible, will also reduce any impact on traffic and the environment. A detailed assessment of the possible delivery route and junctions has been carried out. Further details are provided in **Chapter 14 Material Assets** of this **EIAR**.

3.4.5.4 Internal Tracks

Internal access tracks are required in order to interconnect elements of the site and provide access to wind turbines and wind farm infrastructure. The existing tracks within the site, currently used for agricultural access, will be upgraded where possible and new tracks will be constructed as required.

The proposed internal track network is shown in **Drawing No. 22569-MWP-00-00-DR-C-5005.** Overall, almost 4km of access track infrastructure will be required within the site, comprising approximately 3.4km of new track and 0.47km of upgraded and widened existing tracks. They will have a standard running width of ca. 5m with surface water collection drains on either side, as described in **Section 3.4.7**. It is anticipated that both upgraded and new tracks will be excavated to suitable bearing level, as dictated by local ground conditions. Where depth to bearing level is excessively deep or where the water table is close to the surface level, new tracks will be constructed as floating tracks. The construction methodology is described in more detail in **Section 3.5.**

The finished surface of the internal access tracks will be raised above surrounding ground level and cambered to allow surface water to runoff the track surface. The access track surface level will be raised within the Ahacronane river floodplain in order to reach the required bridge level and freeboard to flood level, while also to satisfy the vertical alignment requirements of the turbine component delivery vehicles. See **Section 3.4.6** below for further details.

RECEIVED: 19/12/2025

3.4.5.5 Consultation

Local roads, traffic and access were discussed during a pre-planning meeting with Limerick City and County Council on 10th November 2022 and further consultation was undertaken with the local roads engineer on 24th January 2023. A second meeting was held on the 17th of July 2024 with LCCC. The following feedback was received in relation to the proposed underground grid connection (Option A) along the L1219:

- Conditions outlined in the Guidelines for Managing Openings in Public Roads (Department of Transport, Tourism and Sport, 2017) will apply. Where possible, works to be confined to the verge area. If directional drilling is an option, it should be considered to minimise impact;
- At Road Opening Licence (ROL) stage you will need to have detailed information relating to works proposed., TTMP etc;
- Watermain running from the L1239 Junction east along the L1219; and
- No mapped storm networks in place along the route. However, this area is known to have old unmapped flagged stone culverts in place and any damage to these would require replacement with modern construction.

The above has been taken into consideration during the design of the proposed development.

Any local public road modifications or upgrades required for the proposed development will be discussed and agreed in advance with Limerick City and County Council.

3.4.6 Bridges/Watercourse Crossings

A clear span bridge crossing will be constructed where the internal site access track crosses the Ahacronane River between the temporary site construction compound and T1. It will comprise a 9m long deck consisting of precast concrete beams with an in-situ concrete slab poured on top. Edge protection for vehicles and pedestrians will also be provided. The deck will sit on in-situ concrete abutments pushed back from the riverbank. The deck soffit allows a 340mm freeboard above the 100-year return period flood level. Construction of the bridge will require the construction of a temporary crane hardstanding adjacent that will be reinstated after installation is completed. Cable ducting will be installed within the bridge structure.

An additional flood relief culvert will be constructed under the site access track to the south of the bridge within the Ahacronane River floodplain. The culvert will be located 24m south of the southern riverbank. The culvert will consist of a precast box culvert providing a clear 1.5m wide x 1.0m tall conduit. The base of the precast culvert will be set a minimum of 300mm below existing ground level and reinstated to existing level with spoil and topsoil. Cable trenching will be installed in a trench adjacent to the site access track above the top of the relief culvert.

The bridge and culvert layouts and details are shown on **Drawing No. 22569-MWP-00-00-DR-C-5413** and **5414**, and in **Appendix 3B & 3C.**

All river crossings will be agreed with the OPW and Section 50 consents obtained where required prior to construction.

3.4.7 Drainage & Management of Surface Water Run-off

During the construction phase of the proposed development, there is potential for sedimented surface water run-off from the construction works areas to enter and potentially contaminate downstream watercourses, without implementation of appropriate mitigation measures. Fundamental to any construction project, is the need to keep clean water (i.e. runoff from adjacent ground upslope of the permitted development footprint) clean and manage all other run-off and water from construction in an appropriate manner.

RECEIVED: 19/12/2025

A site-specific drainage system has been designed taking account of the following:

- Knowledge of the ground and hydrological conditions at the site;
- Previous construction experience of wind farm developments in similar environments;
- Previous experience of environmental constraints and issues from construction of wind farms in similar environmental conditions; and
- Technical guidance and best management practice manuals.

The system is designed to ensure that it will largely mimic the existing drainage regime across the site, will not deteriorate water quality and will safeguard catchment water quality status from wind farm-related sediment run-off.

The following are the key elements of the proposed drainage system:

- Clean water from upgradient catchments, which would otherwise flow into the site infrastructure areas, will be collected in cut-off drains and diverted away from or piped unimpeded through site infrastructure. This reduces the risk of clean water mixing with dirty water runoff from the development and also reduces the volume of dirty water to be treated;
- Tracks will be cambered to ensure dirty water flows towards the dirty water drain installed adjacent;
- Dirty water drains will be installed around the perimeter of all designated material storage areas prior to the placement of any materials within the storage area;
- Runoff collected in dirty water drains will be routed through settlement ponds (locations outlined in **Drawing No. 22569-MWP-00-00-DR-C-5405**) prior to travelling through overland flow/percolation to existing agricultural field drains or to existing watercourses. All outfalls from settlement ponds will be located outside the 50m buffer from rivers or streams;
- Stone filter beds will be installed at the outfall of the settlement ponds;
- Two (2) rows of Terrastop silt fencing will be installed along the top banks of watercourses and existing agricultural field drains where infrastructure will cross or run adjacent to a watercourse or existing agricultural field drains. The silt fencing will slow overland flows and provide additional filtration of suspended solids prior to discharge entering watercourses. Silt fencing will be installed for the full length of any watercourse buffer where a track crosses a watercourse including the crossing of the Ahacronane River between the substation and turbine T1;
- Clean stone check dams will be placed at maximum 50m c/c intervals within trackside drains to limit erosion and provide attenuation volumes during times of high rainfall;
- Areas between structures within the substation compound will be constructed of permeable crushed stone. A footpath will be installed around the substation building. This footpath will be graded to direct surface water away from the building towards a land drain installed within the compound stone and discharging to a bioretention basin and overflowing overland to existing land drainage;
- All stormwater runoff from electrical infrastructure bunds within the substation compound where the risk of an oil leak or spill may be present, will be treated using a Class 1 full retention interceptor manufactured in accordance with IS EN 858 parts 1 and 2 and a BundGuard pump and sump system (or similar);
- All bunds will be fitted with alarmed sensors to detect oil. High water levels in the sump will activate the pump and the water level will begin to drop as the sump is emptied. When the oil layer is detected by

RECEIVED: 19/12/2025

the units sensors, the pump will stop and no water will discharge. When the next rainfall event occurs, this process is repeated with the oil layer always remaining in the bund; and

- To ensure effective drainage from the permanent internal track network and substation compound, the drainage measures installed for the construction phase will remain in place for the operational life of the wind farm. Maintenance of these will be carried out during the operational phase where necessary to ensure their continued effectiveness.

The proposed wind farm drainage design is illustrated on **Drawing No.'s 22569-MWP-00-00-DR-C-5006** to **22569-MWP-06-00-DR-C-5006** and **22569-MWP-00-00-DR-C-5405**. The proposed substation drainage layout is illustrated on **Drawing No. 22569-MWP-00-00-DR-C-5405**.

Figure 3-8 shows a well-constructed and maintained tiered settlement pond. The design was developed in conjunction with Inland Fisheries Ireland (IFI) personnel and local authority engineers. This example is located in an upland environment with significant ground surface slope and operates efficiently provided that it is well maintained. In contrast, the subject site is relatively flat, resulting in lower runoff velocity, lower risk of sediment outflows and more controllable conditions.

Figure 3-8: Typical Three-tiered Settlement Pond with Stone Filter

3.4.8 Temporary Site Compound

During construction works, there will be a temporary compound located in the northwest corner of the site adjacent to the proposed substation area. The temporary compound will be set up upon commencement of the construction phase. The compound will have a plan area of approximately 1,375m^2. It will be used as a secure

RECEIVED: 19/12/2025

storage area for construction materials, waste materials and also contain temporary site accommodation units to provide welfare facilities for site personnel. Facilities will include offices, meeting rooms, a canteen and a drying room.

The layout of the compound is shown on **Drawing No. 22569-MWP-00-00-DR-C-5411**, with the location outlined in **Figure 3-2**.

During the construction period, it is expected that a maximum of approximately 30-35 personnel will be on site. The maximum wastewater production is estimated to be the same as the maximum water consumption (i.e., approximately 1,500 to 1,750 litres per day). The temporary compound facilities will include an enclosed wastewater management system (holding tank) capable of handling the demand during the construction phase, which will be emptied as required by an approved and fully licensed contractor.

3.4.9 Imported Materials & Management of Excavated Material

In order to construct the wind farm, excavation of material/soils on-site and import of construction materials from off-site sources will be required.

As there will be no on-site borrow pit, all construction materials, which will include stone and quarry-run material for various uses at the site, will be imported from local quarries (see **Table 3-3**). Graded crushed limestone will be used as a running course on all internal access tracks to assist in reducing sediment run-off during rainfall events.

Some of the surplus excavated topsoil and subsoils will be re-used on-site in reinstatement, revegetation and landscaping works. Crane hardstanding areas, delivery vehicle turning heads and temporary tracks which are required for the construction phase will be revegetated by covering the crushed rock material with a geotextile layer and placing surplus topsoil generated through the construction of the onsite tracks on top of the geotextile layer. The topsoil will be reseeded where necessary.

The remaining surplus material will be stored in two (2) permanent storage areas onsite. One storage area will be located on lands southwest of T3 and the other will be to the east of the temporary compound. The area to the southwest of T3 has an approximate storage volume of 36,000m^3 and the other on the east of the temporary compound has an approximate storage volume of 3,300m^3. Material will be stored to a maximum height of 2m with a maximum batter ratio of 1V:3H. It is anticipated the areas will be covered by surplus topsoil and revegetated or planted (refer to **Drawing 22569-MWP-00-00-DR-C-5009** and the **Biodiversity Enhancement Management Plan (BEMP)** attached in **Appendix 6J** of **Volume III**). The shallow batter angle allows for the plants and vegetation to be maintained using agricultural vehicles. Dirty water drains will be installed around the perimeter of the material storage areas to convey runoff to settlement ponds prior to being discharged overland. Outfalls from settlement ponds will be located outside the 50m river and stream buffer.

Layouts and sections for the proposed material storage areas are provided in **Drawing 22569-MWP-00-00-DR-C-5412**.

Table 3-3 details the calculated quantities of materials to be imported to site and excavated on site during the course of construction. These volumes have been calculated based on the design. Note that where tracks are floated, excavation quantities will be less, therefore the below is worst case. Stone won from excavations during the construction of the Proposed Development is not included in the volumes.

RECEIVED: 19/12/2025

Table 3-3: Quantities of Construction Material

Item	Quantity (m³ unless specified)
Excavation	
Length of new internal tracks	3,400 m
Length of upgraded internal tracks	470 m
Excavation for turbine bases	14,778
Excavation for crane hardstands	7,830
Excavation for substation	700
Excavation for construction compound	705
Excavated stone for met mast	430
Excavation for cable route[2]	5,184
Volume of subsoil to be excavated	28,064
Volume of topsoil to be excavated	20,042
Total volume of excavated material	**48,106**
Re-Use & Storage On-Site	
Volume of subsoil to be re-used on-site	1,555
Volume of topsoil to be re-used on-site	11,694
Volume of subsoil/topsoil/rock to be stored on-site	34,857
Total volume retained on-site	**48,106**
Imported	
Imported stone for tracks	20,700
Imported stone for turbine bases	4,825
Imported stone for crane hardstands	11,745
Imported stone for met mast hardstand	750
Imported stone for construction compound	963
Imported stone for substation compound	1,400
Imported stone for cable route[2]	2,160
Total volume of imported stone required	**42,543**
Concrete for bases (6 @ 800 m³ each)	4,920
Concrete for substation & met mast foundations	90
Reinforced steel for turbine bases (6 @ 80 tonnes each)	480 t

[2] Excavation quantities for the cable route are based on Option A, which represents a conservative approach, as Option B is significantly shorter and limited to agricultural land.

RECEIVED: 19/12/2025

3.5 Construction Works

This section describes the works that will be required to construct the turbines, associated infrastructure and grid connection. Detailed method statements based on the below will be developed and implemented by the appointed Main Contractor in advance of construction works commencing. The construction phase of the development begins with site preparation works and is complete when the turbines are built and ready for commission, and when all wastes have been removed from the site.

3.5.1 Site Management

The proposed organisational structure for the Appointed Contractor's Project Team is provided in **Figure 3-9**. This structure will be defined by the Appointed Contractor and will include the names of the assigned personnel with the appropriate responsibility and reporting structure reflected.

While the Project Supervisor Construction Stage (PSCS) / Contractor will manage the obligations of the development during construction, the Developer and the Project Supervisor Design Phase (PSDP) will ensure same is undertaken correctly.

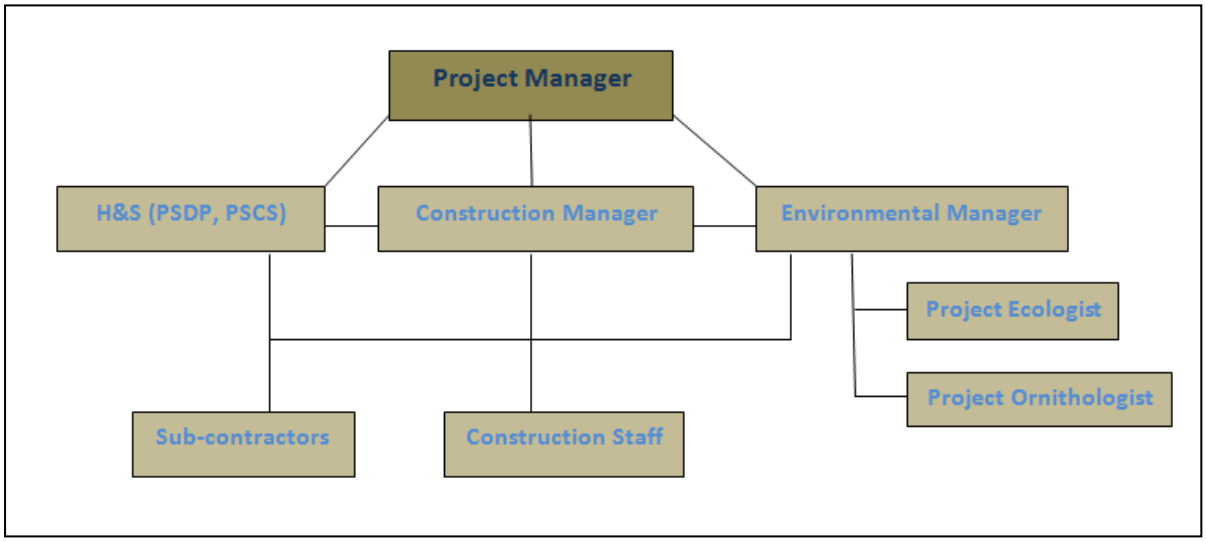

Figure 3-9: Contractors Organisational Structure

A Community Liaison Officer (CLO) will be available to liaise between the public and the contractor to communicate and, where required, coordinate activities. Further details are provided in the **Construction Environmental Management Plan (CEMP)** provided in **Appendix 3D** of **Volume III.**

3.5.2 Health and Safety

The proposed development will ensure that all relevant Health and Safety appointments will be made to ensure the highest possible safety standards are achieved. A Project Supervisor Design Phase (PSDP) has already been appointed in MWP, as planning and design consultant for the proposed development. This may change to an assigned Project Manager during construction. A Project Supervisor Construction Stage (PSCS) will be appointed well in advance of any construction works commencing onsite. The PSCS will typically be the Civil Contractor during civil construction works with the role passing to the Turbine Supply contractor when turbine deliveries commence. These appointments and the meetings that are required to go with them, are essential to not only

RECEIVED: 19/12/2025

ensure that all safety issues and interfaces are discussed and addressed but also to ensure issues of concern to local residents are addressed such as traffic management etc. as may be highlighted to the development via the Community Liaison Officer. The proposed development will assess the competencies and relevant experiences of the PSDP, PSCS, designers and contractors as part of the appointment processes ensuring that same are to the required standards.

3.5.3 Construction Programme

Subject to planning permission, it is envisaged that work would commence at the site in 2027, with a duration of 12 to 16 months. Accordingly, the proposed development is scheduled to be fully complete and operational in 2028/2029 depending on how works can be scheduled to coincide with each other and with environmental and other user constraints. A preliminary programme of works is outlined in **Table 3-4**.

Table 3-4: Preliminary Construction Programme

Phase	Activity	Duration
Phase 1	Vegetation clearance (to be completed prior to set-up of construction site)	1 month
Phase 2	Site preparation, pre-construction activities, temporary compound, site entrances	2 months
Phase 3	Construction of internal tracks, watercourse crossings & drainage infrastructure	3 months
Phase 4	Crane hardstand construction	2 months (1.5 weeks per turbine)
Phase 5	Turbine foundation construction	4 months (3 weeks per turbine)
Phase 6	Trenching & ducting – on-site	2 months
Phase 7	38kV Substation construction	6 months
Phase 8	Met mast construction	1 month
Phase 9	Turbine delivery	3 months
Phase 10	Turbine erection	4 months
Phase 11	Trenching & ducting – off-site for cable route (Option A)	1 month
Phase 12	Wind farm commissioning	4 months
Total		**12 - 16 months**

Note: phases are likely to overlap and will not be completed in isolation resulting in an estimated total programme duration of 12 to 16 months.

The following general activities are included in the above sequences;

- Site/vegetation clearance where required in line with seasonal considerations;
- Construction of site entrances, internal access tracks, watercourse crossings and drainage network;
- Construction of hardstands and turbine foundations; and
- Turbine assembly.

RECEIVED: 19/12/2025

Construction works will be carried out in a phased manner in order to:

- Minimise disruption to the local community;
- Minimise environmental impact; and
- Create the safest working conditions possible.

This is preliminary and assumes there will be no extreme weather episodes. A number of these phases may however run concurrently or overlap. As the internal site access tracks are constructed up to each turbine, hardstand areas for the crane and turbine foundations will be prepared. Once the tracks are completed, the trenching and laying of underground cables adjacent to the tracks will begin.

3.5.4 Construction Timing & Personnel

Normal construction activities will be undertaken within the hours 07.00am – 7.00pm, Monday to Friday and 07.00am - 2.00pm on Saturdays. Due to the requirement for the concrete pours to be continuous, the working day may extend outside normal working hours in order to limit the traffic impact on other road users, particularly peak period school and work commuter traffic. Such activities are limited to the day of turbine foundation concrete pours, which are normally complete in a single day per turbine. Turbine and crane erections may also occasionally occur outside of these times in order to take advantage of low wind periods. Working hours will be confirmed at the outset of the proposed development and any changes in hours will be agreed with the Local Authority.

Works along public roads would be from 9.00a.m. to 5.00p.m. Monday to Friday and 9.00a.m. to 2.00p.m. on Saturdays.

A permit for moving abnormal loads will be sought from An Garda Síochána for the delivery of oversized wind turbine components (i.e. blades, nacelles and towers).

No work will take place on Sundays or bank holidays unless agreed in advance with the Local Authority.

During the construction phase, the number of on-site construction personnel will vary for each phase of the development. Overall, it is envisaged that the proposed development would generate employment for 30 – 35 persons during the construction phase to include site contractors, on-site vehicle and plant operators, engineers, materials delivery personnel, environmental personnel, health and safety personnel. A further 3-5 personnel will be required for the export cable route works.

3.5.5 Construction Methods

Details on the construction methods are fully set out in the CEMP provided in **Appendix 3D**. A summary is provided in **Table 3-5**.

Table 3-5: Proposed Construction Methods

Element	Construction Method
Wind Turbine Foundations and Hardstands	Wind turbine locations will be cleared, graded, and foundations will be either excavated or piled by rotary core technique. Blasting may be required at wind turbine locations where bedrock is present near the ground surface. Localised sheet steel piling may be required to facilitate soil excavation for formation of the hardstand and turbine base footprint. All excavated soil will be removed and deposited in the soil storage areas on site. An engineered concrete foundation will be installed in the excavated/piled structure location. Backfill will be provided, and grading will be performed in a manner to allow for immediate drainage away from each tower. Construction activities include tree

RECEIVED: 29/12/2025

Element	Construction Method
	removal, vegetation clearing, topsoil and/or soil stripping, excavation and or piling, grading, foundation construction, final grading and landscaping of temporary works areas.
Meteorological Mast	Removal of vegetation, topsoil and subsoil stripping, excavation, grading, foundation construction, final grading and landscaping of temporary works area.
Site Access	Sightline improvements at the two site access junctions will be required. Construction activities include vegetation clearing, topsoil and/subsoil stripping, aggregate placement and grading, and landscaping of temporary works areas.
Internal Tracks	Upgrading and widening of existing site access tracks and construction of new excavated tracks: Construction activities will include vegetation clearing, topsoil and/or subsoil stripping, excavation, placement of geogrid/ geotextile layer and aggregate, compaction, grading, berm placement and landscaping.
	Construction of new floated tracks: Construction activities will include removal of major protrusions or obstructions, placement of geogrid/geotextile layer, importation and placement of stone and aggregate, compaction, grading, berm placement and landscaping.
Internal Underground Electrical Cables	To the extent possible, underground electrical collector cables will be co-located with access tracks to minimise the area of construction disturbance. Construction activities include topsoil stripping, trenching, installing electrical cables, and revegetation of disturbed areas where cables are not under the tracks. Any diversion or undergrounding of existing overhead low voltage power lines required by the power distribution network operator will be completed following agreement with ESB Networks and in accordance with their specifications and requirements.
Substation Compound & Grid Connection	Construction includes removal, topsoil stripping, and excavation of soil overburden, grading, foundation construction, building construction, final grading and landscaping of temporary works area. For Grid Connection Option A, the underground cable link to the existing substation at Carrons Wind Farm will involve an excavated trench with ducting, approximately 2.54 km in length. The trench will follow the local road and pass through an agricultural field. Under Grid Connection Option B, the underground cable connection to the proposed substation will require a trench with ducting along the proposed access track within the development site. This route will be entirely within private lands and will not traverse the public road. In both cases, the works will involve trench excavation, ducting bed and surround to ducts with concrete and backfill of trenches with suitable material.
Temporary Construction Compound	Topsoil stripping, excavation of overburden and soil, grading, aggregate placement, compaction and landscaping.
Water Crossings	A new 9.0m clear span bridge crossing of the River Ahacronane will be constructed where the internal site track will cross the river between the onsite substation and T1. To provide additional flow volumes during extreme flooding events a 1.5m x 1.0m relief box culvert will also be constructed within the floodplain between the bridge and T1. Where internal site tracks will cross existing agricultural field drains, pipe culverts will be installed to maintain existing flow paths through the drain and under the track.
Temporary Turbine Delivery Route Works	Any construction activities which may be required include temporary widening by vegetation clearing, topsoil and/subsoil stripping, aggregate placement and grading, and landscaping of temporary works areas along with hedge or tree cutting, and temporary relocation of powerlines/poles, lampposts, signage.

RECEIVED: 19/12/2025

3.5.5.1 Site Preparation & Pre-Construction Activities

Before construction commences, a number of preparatory activities will be carried out. The project plan and schedule will determine the order of preparing the site. The following key works will be undertaken as part of the site preparation and pre-construction activities:

Pre-Construction Surveys

In addition to baseline surveys already undertaken for this EIAR, pre-construction surveys will be carried out as outlined in the specialist chapters and summarised in Table 3-6.

Table 3-6: Pre Construction Surveys

Pre-Construction Surveys
Pre-construction ornithology walkover survey
Pre-construction monitoring of bats and terrestrial mammals conducted to determine whether their use of the site has altered.
Pre-construction invasive species survey
Baseline water quality assessment
Pre-development archaeological testing (if required)

Enabling Works

Prior to construction commencing, on site demarcation of the construction site boundary will be undertaken to prevent equipment tracking outside the planning boundary.

To prepare the site for the construction of the internal tracks, turbines and hardstand areas, clearance of small areas of scrub and hedgerows is required. The temporary compound will also be set-up at this stage.

3.5.5.2 Construction of Tracks and Drainage

Construction of the drainage network can commence after site clearance, followed by the excavation and construction of the tracks.

Access track and drainage layout and construction details are illustrated in Drawing No.'s 22569-MWP-01-00-DR-C-5006 to 22569-MWP-06-00-DR-C-5006 and 22569-MWP-00-00-DR-C-5405.

3.5.5.3 Construction of Turbine Foundations

The construction methodology for the wind turbine foundations will depend on the strength and depth of the substrata specific to each turbine location. Foundations will need to be constructed on competent bearing strata by excavating through the soil, subsoil and rock if necessary.

Best practice excavation techniques will be used.

A typical method of construction for turbine foundation is also described below:

- Install temporary drainage around perimeter of excavation;
- Excavate soil to competent bearing strata as determined by the detailed design of the foundation;
- Move excavated material to spoil storage area;
- Upfill the excavation to the required level with imported, graded rock suitable for use under structures (if required);
- Install cable ducting under the foundation footprint;

RECEIVED: 19/12/2025

- Form a level working area with concrete blinding to build the foundation reinforcement and formwork;
- Install formwork and reinforcement;
- Pour concrete; and
- Once the concrete has set, the formwork has been removed and the earthing system is in place, backfill the foundation with suitable ballast material.

There will be no concrete batched on site. Rather, it will be transported to the site as is required. A dedicated bunded area will be created at the temporary construction compound to cater for concrete wash-outs. This will be for the wash-out of the chutes only — after the pour. Concrete trucks will then exit the site and return to the supply plant to wash out the mixer itself.

3.5.5.4 Turbine Assembly

The wind turbine components will be delivered from Foynes port to each turbine location following the route as outlined Section 3.4.5.2. Wind turbine components will be unloaded and stored at the turbine location in accordance with a lift and temporary storage plan developed by the lifting contractor and turbine manufacturer. The plan will ensure the minimal manoeuvring of the components during turbine erection and to avoid double handling of components on the hardstanding and temporary storage areas. The most appropriate turbine assembly sequence will be decided by the lifting contractor and the turbine manufacturer well in advance of turbine erection and lift plans generated for same circulated to the PSDP and Project Manager for consideration.

One large crane will be required for erecting the turbines, supported by smaller assist cranes. As with all other vehicles, refuelling of cranes will be carried out in accordance with site environmental procedures (refer to Section 3.5.6) to minimise the risk of spillage or pollution. Work on assembly will not start until a suitable weather window is available.

3.5.5.5 Cable Trenches

During or after the construction of the internal wind farm access tracks, trenches will be excavated beside the tracks to lay electrical ducting and cables. These cables will connect the turbines to the proposed onsite 38kV substation. The electricity generated by the turbines will be stepped up at the onsite substation to the grid connection voltage (38kV). The export cables will transmit this electricity to the final grid connection location.

Trenching along public roads for the cable route (grid connection Option A) will be excavated under a Road Opening Licence and in accordance with the requirements of Limerick City and County Council. Separation distances as per the Irish Water Code of Practice for Water Infrastructure will be achieved where applicable and the local authority, Irish Water and other service providers will be consulted.

The proposed export cable route (Option A) will require two (2) watercourse crossings (none required for Option B). One of the crossings will be along the public road and the other will be in private land at the western end of the export cable route. Directional drilling will be employed to construct the watercourse crossings for the export cable route (Option A). The directional drilling process involves deepening the cable trench at a defined slope as it approaches the watercourse down to a sufficient depth below the watercourse. The trench will then pass under the watercourse and begin to raise at a defined slope until it reverts to the standard trench depth (1.2m).

The directional drill will be carried out as follows:

- The directional drilling machine will set up at a launch and reception pit (an enlarged cable trench, i.e., a cable trench on either side of the crossing point at an appropriate distance back from the watercourse);
- The drill will then bore in an arc under the watercourse feature;
- The drilling head of the boring tool has a series of nozzles that feed a liquid bentonite mix along the bore direction, which provides both lubrication and seals the cut face of the bore;

RECEIVED: 19/12/2025

- Once the bore reaches the far side, the HDPE duct is then attached to the drill head and the duct is pulled back along the route of the bore to the original drilling point;
- Any bentonite mix is deposited within the bore shaft and spillage is collected at either end of the bore with a dedicated sump;
- Once the duct is in place under the watercourse, the normal process of trenching can continue from either side of the launch and reception pits; and
- The launch and reception pits will be backfilled in accordance with normal specification for backfilling excavated trenches and to the satisfaction of Limerick City and County Council.

An example of a directional drilling launch pit adjacent to a public road is shown in **Figure 3-10.**

Figure 3-10: Example of a Directional Drilling Launch Pit Adjacent to a Public Road

RECEIVED: 19/12/2025

3.5.5.6 Mechanical and Electrical Equipment

Mechanical machinery and electrical equipment typically used for construction projects will be required to construct the proposed wind farm and its ancillary infrastructure. The following is a non-exhaustive list of plant that is typically used for wind farm and heavy civil engineering work:

- 30-50T Excavators;
- 15-30T Excavators;
- Rubber Tired 15-20T Excavators;
- 3-10T Mini Diggers;
- Mobile Crane for construction;
- Rebar/shuttering/precast units/conc. pipes/box culverts etc 60t to 120t;
- Cranes (1 main, 2 assist) Erection 120t to 1000t.
- Telescopic Handler;
- Tractors and trailers;
- Road grader;
- Double contained fuel bowsers;
- 12T Rollers;
- Diesel powered generators;
- Water bowsers; and

3.5.5.7 Commissioning of the Wind Farm

Wind farm commissioning can take 2 to 4 months to complete from the erection of the final turbine to exporting of power. It involves commissioning engineers working through an entire schedule of SCADA (Supervisory Control and Data Acquisition) and electrical testing and control measures to ensure the wind farm will perform and export power to the National Grid as designed.

3.5.6 Environmental Management

3.5.6.1 Construction Environmental Management Plan

A **Construction Environmental Management Plan (CEMP)** has been prepared and is included in **Appendix 3D** of **Volume III**. The **CEMP** is a live document which will be provided to the Appointed Contractor(s), updated as required throughout the pre-construction and construction phases, and implemented on site. The **CEMP** will be a key construction contract document, which will ensure that all mitigation measures, which are considered necessary to protect the environment, prior to construction, during construction and during operation of the proposed development, are implemented. The **CEMP** will collate and manage the proposed and agreed mitigation measures, monitoring and follow-up arrangements and management of environmental impacts. The environmental commitments of the proposed development will be managed through the **CEMP** and will be secured in contract documentation and arrangements for construction and later development stages. The **CEMP** will mainly address the construction phase however, where monitoring is to continue into the operational phase these commitments will be communicated and transcribed into operational process documentation.

The primary objective of the **CEMP** is to provide a framework for actions, responsibilities and protocols associated with environmental management with which the Appointed Contractor(s) are required to adhere in order to construct the proposed development in accordance with regulatory requirements and to reduce and/or avoid any adverse environmental impacts.

This CEMP document will be updated as required to address, for example, any conditions stipulated in the planning permission. The version presented sets out the fundamental work practices, construction management procedures, management responsibilities, mitigation measures and monitoring proposals that are required to be

RECEIVED: 19/12/2025

adhered to. **Chapter 16 Schedule of Environmental Mitigation** documents all of the mitigation measures proposed in support of the application.

The **CEMP** includes the following minimum site management controls:

a) **Temporary Construction Compound**

- Drainage within the temporary site compound will be directed to an oil interceptor to prevent pollution if any spillages occur.
- No domestic wastewater discharges to the environment. Temporary toilet facilities will include an integrated wastewater holding tank which will be emptied routinely by a licence waste contractor.
- A bunded containment area will be provided within the compound for the storage of fuels, lubricants, oils etc.
- The compound will be in place for the duration of the construction phase and will be removed once commissioning is complete.
- A quarantine area for the storage of contaminated waste or invasive species will be provided within the temporary construction compound.

b) **Soil Stripping**

- The timing of the construction phase soil stripping and excavation works will take account of predicted weather, particularly rainfall.
- Soil stripping activities will be suspended during periods of prolonged rainfall events.
- The area of exposed ground will be kept to a minimum by maintaining where possible existing vegetation that would otherwise be subject to erosion in the vicinity of the wind farm infrastructure. The clearing of soil will be delayed until just before construction begins rather than stripping the entire site months in advance particularly during track construction.

c) **Excavation Works**

- Earth movement activities will be suspended during periods of prolonged rainfall events.
- The earthworks material will be placed and compacted in layers to prevent water ingress and degradation of the material.
- Drainage and associated pollution control measures will be implemented on site before the main body of construction activity commences.

d) **Dewatering**

- Where dewatering is required for construction activities, any pumped waters will be directed to the surface water management system.

e) **Storage and Stockpiles**

- Temporary stockpiles of excavated spoil, stored in the footprint of the excavation areas, will then be directed for use in backfilling, landscaping and restoration or placed in the deposition areas on site.
- Stockpiles of stripped topsoil will be in locations with minimum trafficking to prevent damage and dusting.

RECEIVED: 19/12/2025

- Reusable excavated sub-soils and aggregate will be stored in temporary stockpiles at suitable areas to prevent erosion or weathering and shall be shaped to ensure rainfall does not degrade the stored material.
- Where unsuitable material is encountered this will be removed to the material storage areas for permanent storage.
- Stockpiled materials will be located at least 50m away from drainage systems and silt retaining measures (silt fence/silt curtain or other suitable materials) to reduce risk of silt run-off shall be installed along the downgradient edges of stockpiled earth materials.

f) Refuelling of Construction Plant On-Site

- Refuelling will be carried out using 110% capacity double bunded mobile bowsers. The refuelling bowser will be operated by trained personnel. The bowser will have spill containment equipment which the operators will be fully trained in using.
- Plant nappies or absorbent mats will be placed under refuelling points during all refuelling to absorb drips.
- Mobile bowsers, tanks and drums will be stored in secure, impermeable storage areas, at least 50m away from drains and open water.
- To reduce the potential for oil leaks, only vehicles and machinery will be allowed onto the site that are mechanically sound. An up to date service record will be required from the main contractor.
- Should there be an oil leak or spill, the leak or spill will be contained immediately using oil spill kits, all oil, and any contaminated material will be stored in a quarantine area in the site compound pending removal and appropriate off-site disposal in a licensed facility.
- Immediate action will be facilitated by easy access to oil spill kits. An oil spill kit that includes absorbing pads and socks will be kept at the site compound and also in site vehicles and machinery.
- Correct action in the event of a leak or spill will be facilitated by training all vehicle/machinery operators in the use of the spill kits and the correct containment and cleaning up of oil spills or leaks. This training will be provided by the Environmental Manager at site induction.
- In the event of a major oil spill, a company who provide a rapid response emergency service for major fuel spills will be immediately called for assistance, their contact details will be kept in the site office and in the spill kits kept in site vehicles and machinery.

g) Materials Handling, Fuels and Oil Storage

- Storage of fuels/oil will be located at least 50m from watercourses.
- Fuel containers will be stored within a secondary containment system e.g. bund for static tanks or a drip tray for mobile stores.
- Collision with oil stores will be prevented by locating oils within a steel container in a designated area of the site compound away from vehicle movements.
- Leakages of fuel/ oil from stores will be prevented by storing these materials in bunded tanks which have a capacity of 110% of the total volume of the stored oil. Ancillary equipment such as hoses and pipes will be contained within the bunded storage container. Taps, nozzles or valves will be fitted with a lock system.

RECEIVED: 19/12/2025

- Long term storage of waste oils will not be allowed on site. These waste oils will be collected in leak-proof containers and removed from the site for disposal or re-cycling by an approved service provider.
- On-site washing of concrete truck barrels will not be allowed. The washing of the chutes at the rear of the trucks may be permitted. A designated chute wash down area, which will retain the washout water and treat it to reduce pH and sulphate prior to percolation to ground, will be located within the construction compound and there will be no other chute wash down activity on any other part of the site.

h) Track Maintenance

- The track surface can become contaminated with clay or other silty material during construction. Access track cleaning will therefore be undertaken regularly during wet weather to reduce the volume of sediment runoff to the treatment system. This is normally achieved by scraping the track surface with the front bucket of an excavator and disposing of the material at designated locations within the site.

i) Construction Vehicle Wash

- A Construction Vehicle Wash will be used to wash vehicles leaving the construction site. Water residue from the wheel wash will be fed through a settlement pond, interceptor and then discharged to a vegetated area of low ecological value. The vehicle wash area will be cleaned regularly so as to avoid the build-up of residue.

j) Drainage System Inspection & Maintenance

- The drainage and treatment system will be managed and monitored, particularly after extreme rainfall events during the construction phase. Controls will be regularly inspected and maintained to ensure that any failures are quickly identified and repaired so as to prevent water pollution. A programme of inspection and maintenance will be designed and dedicated construction personnel assigned to manage this programme. A checklist of the inspection and maintenance control measures will be developed and records kept of inspections and maintenance works.

3.5.7 Traffic Management

A **Traffic Management Plan (TMP)** for the construction phase has been prepared and is included in **Appendix 14A** of **Volume III**. This plan will be further updated and adopted by the appointed contractor prior to construction commencing. It will be necessary to engage with the Roads and Transportation section of Limerick City and County Council and with An Garda Síochána, and to establish traffic volumes and local road usage at the time.

The purpose of developing and implementing an agreed TMP for the construction phase works is to minimise the impact of the works on local residences and users of the public road networks. The site will have two entrances, one to the northwest and one to the northeast. The northwest entrance will be used as a temporary entrance for all construction activities. Widening of the track to allow for two-way traffic will be done at specific locations to allow vehicles to pass on another and enter and exit through this entrance. The north-eastern entrance will only be used for the operational phase. A passing bay will be provided. Should planning be granted, the final TMP will address the requirements of any relevant planning conditions, including any additional mitigation measures which may be conditioned by the planning authority. The TMP will be updated at the construction stage (or the update commenced during planning compliance stage) to ensure controls are in place for all users of the site and users of public roads potentially affected by the proposed development.

RECEIVED: 19/12/2025

3.5.8 Production of Wastes

3.5.8.1 Excavated Soils and Subsoil

It has been calculated that there will be approximately 48,106m³ of material excavated during the construction of the wind farm (refer to Table 3-3). All soils and sub soils generated from excavation works will be retained on site and reused in landscaping and localised earthworks where required. Excess spoil material will be stored on site in the two (2) designated deposition areas. Public road excavation can generate small quantities of tarmacadam which will require off-site disposal by a permitted waste contractor to an appropriately authorised facility.

3.5.8.2 Domestic Wastewater

Wastewater from welfare facilities on site will drain to integrated wastewater holding tanks associated with the toilet units. The stored effluent will then be collected on a regular basis from site by a permitted waste contractor and removed to a licenced/permitted waste facility for treatment and disposal.

During the construction time period, wastewater production is estimated to be 1,500 – 1,750 litres per day (based on an estimated workforce of 30 to 35 people generating on average 50L/person).

3.5.8.3 General Wastes

Construction phase waste may consist of hardcore, concrete, spare steel reinforcement, shuttering timber and unused oil, diesel and building materials. This waste will be stored in the construction compound and collected at the end of the construction phase and taken off site to be reused, recycled and disposed of in accordance with best practice procedures at an approved facility. Plastic waste will be taken for recycling by an approved contractor and removed to an approved recycling facility. Domestic type waste generated by contractors will be collected on site, stored in an enclosed skip at the construction compound and removed by an approved contractor to an appropriately authorised waste facility.

3.5.9 Use of Natural Resources

3.5.9.1 Construction Materials

Large amounts of aggregates, concrete, and steel will be used during construction. The majority of aggregate materials required for the construction of the tracks, hardstands and the substation compound will be sourced from local authorised quarries in the Limerick Area, specially the local quarries as outlined in Section 3.4.5.3.

Material to be delivered to site will mainly consist of higher grade materials not available to be won on this site; limestone surfacing material for access tracks and hardstands, and concrete for the construction of the 6 No. turbine bases, permanent met mast foundation and substation infrastructure. Sub base material for tracks will also have to be imported as there is no proposed borrow pit location within the development due to the flat nature of the site. Table 3-3 sets out the main quantities of materials required including imported stone, concrete and steel.

3.5.9.2 Water

Water needs for construction activities will be limited to concrete truck chute washing, wheel wash, dust suppression and sanitary facilities. This water requirement will be sourced from on-site rainwater collection systems and settlement ponds.

RECEIVED: 19/12/2025

It is estimated that up to approximately 1,500 to 1,750 litres per day of potable water will be required during peak construction for construction employees. It is proposed that this water requirement will be imported in bulk water tanks.

3.5.10 Emissions & Disturbances

The anticipated residues and emissions likely to be generated during the construction phase are summarised in **Table 3-7**. These environmental effects have been identified, assessed and proposals for management of the anticipated disturbances and/or emissions are presented throughout relevant chapters of this **EIAR**.

Table 3-7: Emissions & Disturbances - Construction

Aspect	Potential Emission/Disturbance	Assessment Provided
Air	The main emission to atmosphere during the construction stage of the proposed development is from fugitive dust associated with the following activities: - Groundworks associated with the construction of the proposed development infrastructure; - Transportation and unloading of crushed stone around the site; - Vehicular movement over potentially hard dusty surfaces such as freshly excavated and constructed access tracks and crane hardstanding areas; - Vehicular movement over material potentially carried off site and deposited on public roads. The movement of machinery, construction vehicles and the use of generators during the construction phase will also generate exhaust fumes containing predominantly carbon dioxide (CO_2), sulphur dioxide (SO_2), nitrogen oxides (NO_x), carbon monoxide (CO), and particulate matter (PM_{10}).	EIAR Vol II Chapter 10 Air and Climate
Noise	Traffic flows, excavation/blasting mechanical machinery and electrical equipment typically used for construction projects would generate noise emissions.	EIAR Vol II Chapter 11 Noise and Vibration
Water	Surface water runoff and discharges from construction working areas are likely during construction, although the quantity of surface runoff would not change overall as a result of the construction work. Occasional and low quantity discharges could arise from pumping in order to dewater foundation excavations. This would be discharged to the proposed site drainage system. Pollution sources could arise as a result of soil erosion or from oil/ fuel or chemical storage and use. Proposals for management of water quality and quantity from the proposed development are presented in **EIAR Volume III: Appendix 3D: CEMP**.	EIAR Vol II Chapter 8 Water
Traffic	The additional traffic, especially heavy goods vehicles associated with the construction phase, has the potential to cause disturbance to those using the local road networks.	EIAR Vol II Chapter 5 Population & Human Health, Chapter 14, Material Assets of the EIAR

RECEIVED: 19/12/2025

3.5.11 Cumulation with Existing Land-uses

The potential for cumulative or in-combination effects is considered throughout this EIAR where relevant. A cumulative impact arises from incremental changes caused by other past, present or reasonably foreseeable future actions together with the proposed development.

The proposal is situated in a highly modified, intensively managed, agricultural landscape. The main activities with which the proposed wind farm could potentially interact synergistically are considered to be agriculture, afforestation, roadworks and other wind farms/renewable developments. The potential for cumulative impacts is included in the relevant chapters.

3.5.12 Risk of Major Accidents & Disasters

As in all construction activities, there is a wide range of potential risk of accidents and hazards associated with wind farm construction. While many risks are similar in nature to those for other industries, wind farm construction works take place in exposed windy locations and involve transport of heavy equipment, heavy cranage and specialised electrical installation.

All work on site will be carried out in compliance with all relevant legislation and best practice guidance including:

- Safety, Health & Welfare at Work (Construction) Regulations 2013;
- Safety, Health & Welfare at Work Act 2005;
- Safety, Health & Welfare at Work (General Applications) Regulations 2007 to 2020; and
- Irish Wind Energy Association Best Practice Guidelines.

To ensure that the construction areas, site environs and public roads remain safe for all users, the CEMP outlines the safety procedures that will be implemented during the construction phase. The effective implementation of the CEMP will help to reduce the risks associated with the construction phase.

3.6 Operational Phase

3.6.1 Turbine Maintenance

During the operation of the wind farm, the turbine manufacturer, the Developer or a service company will carry out regular monitoring and maintenance of the turbines, met mast, access tracks, drainage and the substation. In addition, operation and monitoring activities will be carried out remotely using a SCADA system. Routine inspection and preventive maintenance visits will be necessary to ensure the smooth and efficient running of the wind farm. At the end of the estimated 35 year lifespan of the proposed development, the Developer will make the decision whether to repower or decommission the turbines and this will likely be subject to a new planning permission application.

3.6.2 Grid Maintenance

It is unlikely either grid connection options will require any significant maintenance during its operational life. Any interaction with the underground cable route connections would likely relate to upgrading or replacement or dealing with a localised integrity issue.

RECEIVED: 19/12/2025

3.6.3 Production of Wastes

3.6.3.1 Domestic Wastewater

Although primarily controlled remotely, during the operational phase, maintenance personnel will visit the substation building on a regular basis. The daily average wastewater production during the operational phase is estimated from the average number of personnel on site, which is expected to be 2, resulting in a possible wastewater production rate of 100 litres per day. The wastewater generated during the operational phase will be managed by a holding tank which is of twin-hull design and fitted with an alarm to indicate levels and when it is due for empty. The holding tank will be emptied by a permitted contractor only.

3.6.3.2 General Wastes

The power generation aspect of the development would not produce any waste emissions or pollutants. The general operation and maintenance has the potential to produce a minimal amount of waste. Wastes arising during the operational phase include but are not limited to lubricating oils, cooling oils, and packaging from spare parts. The containment and disposal of such oils will be carried out by an approved contractor. Such operations will be carried out in accordance with all relevant or applicable waste regulations. The remaining wastes will all be removed from site and reused, recycled or disposed of in an authorised facility in accordance with best practice.

3.6.4 Use of Natural Resources

Potable water for the operational and maintenance phase is estimated to be up to approximately 50 litres per day. This water will be supplied as bottled water.

3.6.5 Emissions & Disturbances

The anticipated residues and emissions likely to be generated during the operational lifetime are summarised in Table 3-8. These environmental effects have been identified, assessed and proposals for management of the anticipated disturbances and/or emissions are presented throughout relevant chapters of this EIAR.

Table 3-8: Emissions & Disturbances - Operation

Aspect	Potential Emission/Disturbance	Assessment Provided
Air	Due to the nature of the proposed development no significant point source or diffuse air emissions would be produced during its operation.	EIAR Vol II Chapter 10 Air & Climate
Noise	Potential noise disturbance from operational turbines and a proposed 38kV substation.	EIAR Vol II Chapter 11 Noise & Vibration
Water	No direct water emissions or pollution sources have been identified for the operational phase, however, management of runoff on site will continue.	EIAR Vol II Chapter 8 Water
Shadow Flicker	In certain conditions, the movement of wind turbine blades could give rise to shadow flicker disturbance at nearby residential receptors. However, modules will be installed in the wind turbines to prevent shadow flicker at receptors.	EIAR Vol II Chapter 5 Population & Human Health

RECEIVED: 19/12/2025

3.6.6 Cumulation with Existing Land-uses

The potential for cumulative or in-combination effects is considered throughout this EIAR where relevant. A cumulative impact arises from incremental changes caused by other past, present or reasonably foreseeable future actions together with the proposed development.

The proposal is situated in a highly modified, intensively managed, agricultural landscape. The main activities with which the proposed wind farm could potentially interact synergistically are considered to be agriculture, afforestation, roadworks and other wind farms/renewable developments. The potential for cumulative impacts is included in the relevant chapters.

3.6.7 Risk of Major Accidents & Disasters

3.6.7.1 Fire/ Fuels

The presence of electrical generating equipment and electrical cables along with the storage and use of various oils (diesel fuels, lubricating oils, hydraulic fluids) can create the potential for fire and/or ground contamination. This potential exists within the turbine tower, nacelle, substation, electrical transmission structures and operations maintenance buildings. Modern wind farm design will minimise the use of combustible materials. Lightning and surge protection will cover the nacelle and rotor blades, as well as electrical equipment, including cables. Each element of equipment has strict and exact operational protocols that provide for the elimination of risk. The protocols set out the flammability or chemical properties of each of the oils, lubricants and fuels that may be used within equipment on site. The proposed development will be operated to the specifications of the chosen turbines and in accordance with all electrical standard operating procedures.

3.6.7.2 Lightning Strikes

A lightning strike could cause a fire or could cause severe damage to blades which may lead to blade failure. To protect wind turbines from damage caused by a lightning strike and to provide grounding, each turbine will be equipped with an electrical grounding system.

3.6.7.3 Turbine Structural Failure

Turbine structural failure includes tower collapse, blade failure or separation. Risk may arise due to stress, wear and tear. Rigorous safety checks are conducted on the turbines during operation to ensure the risks posed to staff, landowners and general public are negligible. These checks are specified particular to the turbine model for the proposed development. The separation distances of turbines from public roads and residences are well beyond fall over distances that would present a risk of significant accidents.

3.6.7.4 Severe Weather

There is potential for the proposed development to be impacted by severe weather including increased wind storms. However, wind turbines are designed to withstand extreme weather conditions with brake mechanisms installed within the turbines so that they only operate under specific wind speeds and will shut-down during high wind speed events. Therefore, there is a very low risk to the proposed development from high wind speeds.

3.6.7.5 Flooding

A flood risk assessment was undertaken for the proposed development to determine whether the site is at risk from flooding events and is attached as **Appendix 8A** of **Volume III** and summarised in **Chapter 08 Water**. This assessment concluded that the Ahacronane River is prone to flooding between the substation location and Turbine 1. Hydraulic modelling has been undertaken to determine the impact of the proposed development on

RECEIVED: 19/12/2025

the surrounding floodplain and also to determine the flood levels of the river for the 100Yr and 1000Yr return period flood events. The modelling included a 20% allowance for the effects of climate change in line with the Mid-Range Future Scenario (MRFS) as recommended by the OPW.

The substation and all turbines have been located above the 1000Yr return period flood level for the river including allowance for a 300mm freeboard. The soffit level for the proposed clear span crossing of the Ahacronane River has been selected to allow a 340mm freeboard to the 100Yr flood level.

3.7 Decommissioning

At the end of the estimated 35 year lifespan, the Developer will make the decision whether to apply for permission to repower the wind farm, or to decommission the turbines. Any further proposals for development at the site during or after this time will potentially be subject to a new planning application and will be subject to environmental assessment. If planning permission is not sought after the end of life of the turbines, the site will be decommissioned and partially reinstated with all turbines and towers removed. Removal of infrastructure will be undertaken in line with landowner(s) and regulatory requirements and best practice applicable at the time. The information below outlines the likely decommissioning tasks based on current requirements and best practice.

Prior to the decommissioning work, the following will be provided to Limerick City and County Council for approval:

- A plan outlining measures to ensure the safety of the public workforce and the use of best available techniques at the time; and
- A comprehensive reinstatement proposal, including the implementation of a programme that details the removal of all structures and landscaping.

If the site is to be decommissioned, cranes of similar size to those used for construction will disassemble each turbine. The towers, blades and all components will then be removed and recycled as appropriate.

At present it is anticipated that underground cables connecting the turbines to the substation will be cut back and left underground. The cables will not be removed if an environmental assessment of the decommissioning operation demonstrates that this would do more harm than leaving them *in situ*. The assessment will be carried out closer to the time to take into account environmental changes over the operational life.

The new 38kV substation will remain in place as it will be under the ownership of ESB/EirGrid and will operate as an asset to the National Grid going forward.

Hardstand and turbine foundation areas will be left in situ and covered with soil to match the existing landscape. Access tracks will be left for use by the landowners.

Wastes generated during the decommissioning phase will be taken off site and disposed of at an authorised waste facility. Any materials suitable for recycling will be dealt with in an appropriate manner.

3.8 Transboundary Effects

Transboundary impacts relate to potential impacts on other Member States, i.e. outside of the Republic of Ireland. The location of the proposed development is entirely in County Limerick within the Republic of Ireland.

Considering the nature of the proposed development and the largely localised nature of any potential impacts, it is considered that the proposed development would not have potential to result in significant transboundary effects.

RECEIVED 19/12/2025

3.9 References

Department of the Environment, Heritage and Local Government (2006) *Wind Energy Development Guidelines.*

Department of Housing, Planning and Local Government (2019) *Wind Energy Development Guidelines Public Consultation – Draft.*

CIRIA/Murnane, E., Heap, A. and A. Swain (2006) *Control of water pollution from linear construction projects. A Technical Guidance.* CIRIA, UK.

National Roads Authority *Design Manual for Roads and Bridges:* Section TD 41-42/09.