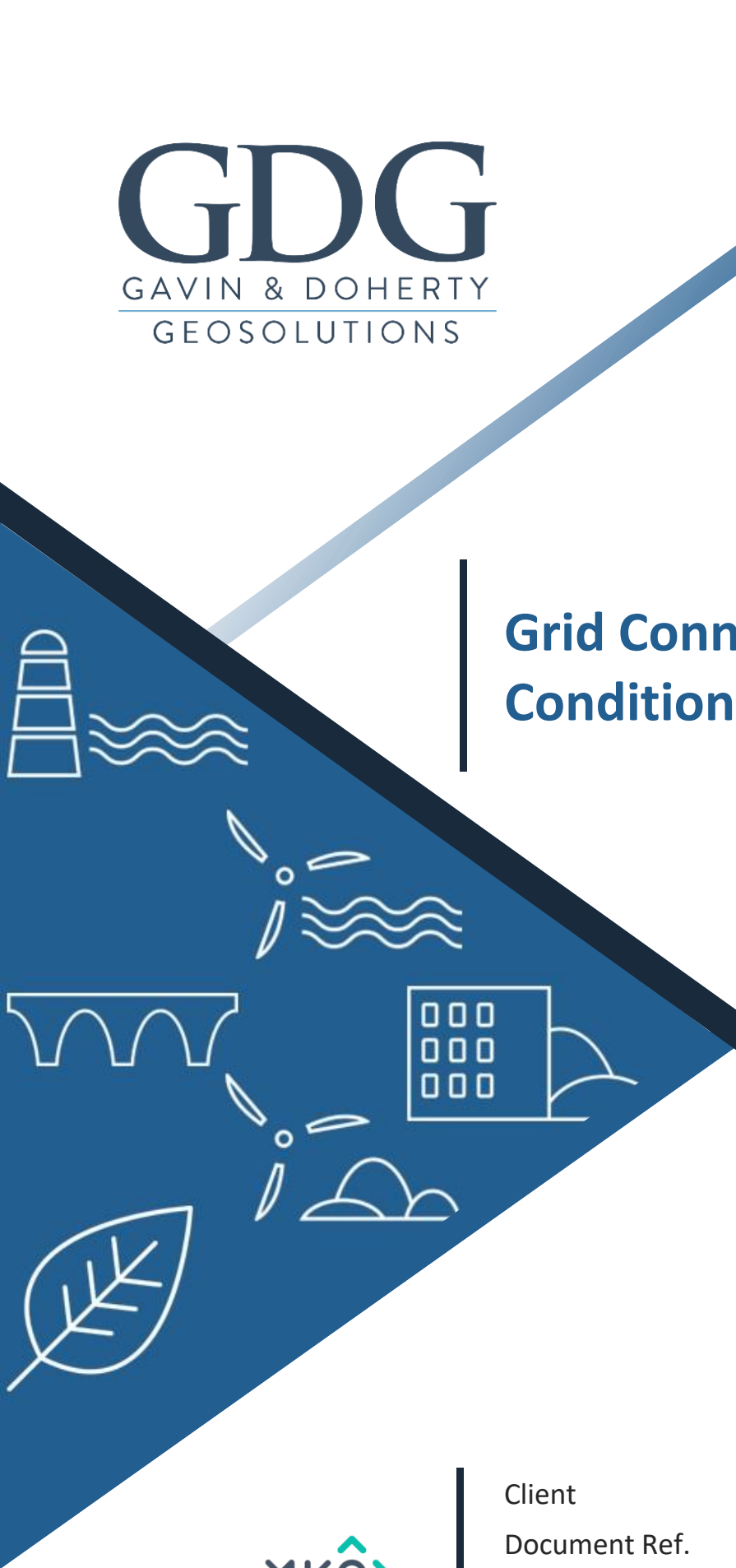
APPENDIX 8-3

GRID CONNECTION GROUNDS CONDITIONS ASSESSMENT

GDG
GAVIN & DOHERTY
GEOSOLUTIONS

Grid Connection Ground Conditions Assessment



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01	28/08/2025	Final Revision	KZ	CE	TOS	TOS
02	11/09/2025	Change to the Site Boundary	KZ	CE	TOS	TOS

DISCLAIMER

REVISION SUMMARY

Rev	Date	Section(s)	Detail of Change
00	27/06/2025	All	Draft issue
01	28/08/2025	2, 4	Draft report comments
02	11/09/2025	All	Figures update

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1 INTRODUCTION

Gavin and Doherty Geosolutions Limited (GDG) was commissioned by MKO in April 2024 to undertake a Grid Connection Ground Conditions Assessment for the proposed Cooloo Wind Farm. Following planning guidelines compiled by the Department of the Environment, Heritage and Local Government (DoEHLG), a desk study has been conducted to cover the Proposed Grid Connection.

The objective of this report is to:

- Provide an overview of ground conditions along the Proposed Grid Connection
- Summarise the available ground investigation data
- Outline any key geotechnical risks.

1.1 PROJECT DESCRIPTION

The Proposed Project will comprise the construction of 9 no. wind turbines with an overall blade tip height of 180 metres and all associated works, and a 110kV onsite substation and associated works, including underground 110kV cabling to connect to the national grid at Cloon 110kV substation. The Proposed Grid Connection refers to the 110kV onsite substation, battery energy storage system (BESS) compound and 110kV underground cabling connecting to the existing Cloon 110kV substation, and all ancillary works and apparatus. The Proposed Grid Connection is described in detail in Chapter 4 of this EIAR.

The intention is to connect the onsite 110kV substation to the existing 110kV Cloon substation, located in the townland of Cloonascragh, County Galway. This connection will be made via a 110kV underground cable route, the final alignment of which will be confirmed by EirGrid and may be subject to revision at their discretion. The cable route will span approximately 20.9 km, primarily following existing public roadways, with approximately 2.6 km situated within the Proposed Wind Farm site.

The underground cable will begin at the onsite 110kV substation, initially running southwards for about 1.2 km along an internal site access road. It will then veer west for a further 1.4 km to reach the R332 regional road. From there, the cable will continue southeast beneath the R332 for approximately 2.2 km.

Subsequently, the route follows the N63 national road westward for around 4.2 km before turning northwest beneath the L6234 for roughly 2.4 km. It will then proceed straight ahead for another 860 metres along the L2128. The cable will next travel west for 1.1 km on the L2115, followed by a short 105 m stretch north along the L2114, then immediately turn west onto the L2125.

Continuing for approximately 2.9 km along the L2125, the route will then head north onto the R347 regional road. It will follow the R347 for about 2.5 km until it reaches the Grange River. At this point, the cable will cross beneath the river using Horizontal Directional Drilling (HDD) technology and rejoin the R347 on the northern bank.

Beyond the Grange River, the cable will continue along the R347 for an additional 1.4 km before turning onto the L6141 for a distance of 335 m. Finally, the route will take a left turn and travel the last 150 m to connect into the existing 110kV Cloon Substation. The Proposed Grid Connection, along with the EIAR site boundary is shown in Figure 1-1.

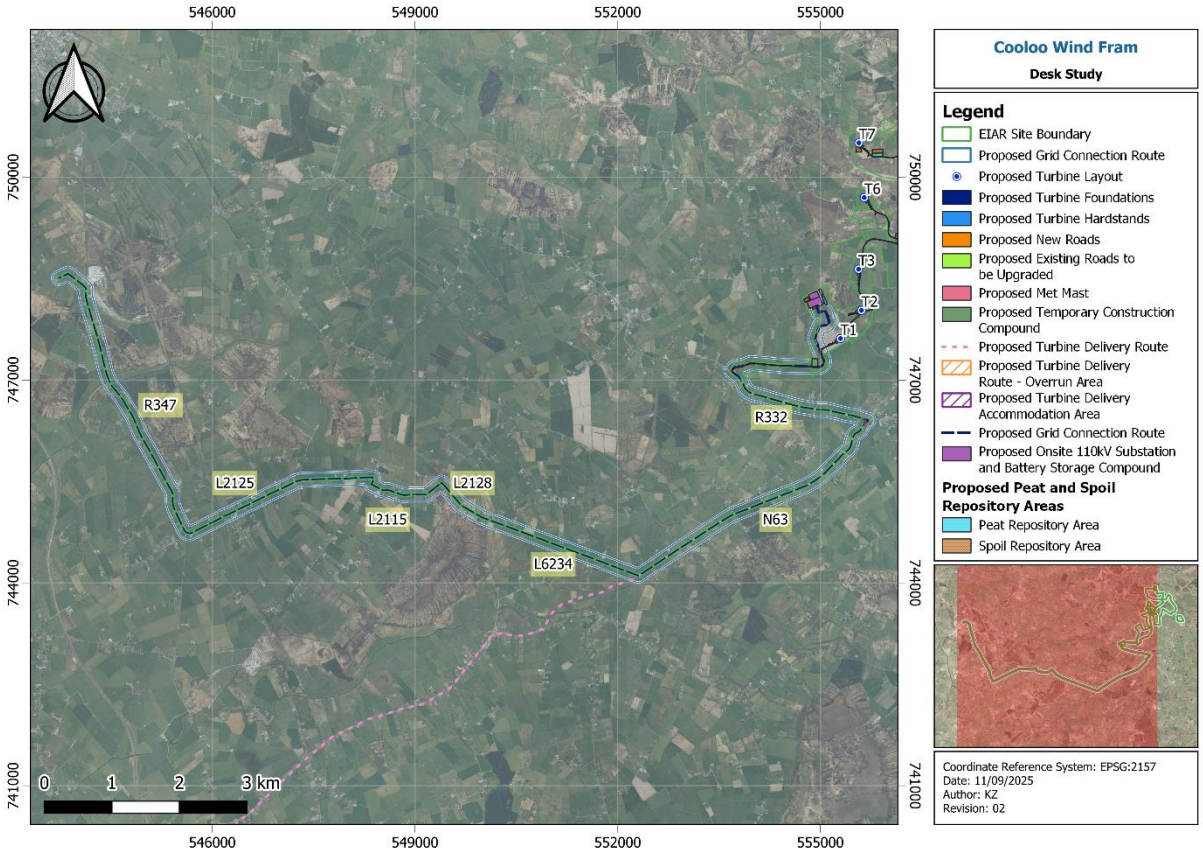

Figure 1-1: The Proposed Grid Connection overview.

2 DESK STUDY

2.1 SITE CONDITIONS

Publicly available geological information, site observations and ground investigation results have been reviewed to provide an understanding of the ground conditions along the Proposed Grid Connection route. The topography of the Proposed Grid Connection route is generally flat. The ground conditions predominantly consist of till derived from limestones that cover most (approximately 73%) of the Proposed Grid Connection route. There are undulating portions with prominent ridges of glacial material (drumlins – close to 1%) separating extensive, flat raised peat bogs, which have been subject to turbary peat harvesting and cover approximately 22% of the area. These are followed by patches of alluvium, gravels derived from limestones, kartsified bedrock outcrops or subcrops, and lacustrine sediments, that all combined do not exceed 3% of the coverage. The complete description of the study area's quaternary sediments can be found in Section 2.4.1. Available data from the GSI's bedrock geology map suggests that the Proposed Grid Connection route is underlain by undifferentiated Viséan Limestones and Limestones of the Burren Formation. The bedrock geology underlying the Proposed Grid Connection is described in further detail section 2.4.2.

2.2 HISTORICAL LAND USE

Historical maps of the site produced by Ireland's National Geospatial Data Hub (GeoHive) are compiled in the online Map Viewer. The historical 6 Inch First Edition maps of the Proposed Grid Connection route show the presence of roads, residential and industrial properties. The aerial maps from 1996 indicate changes to the Proposed Grid Connection route. At its western end, the Cloon 110kV Substation was built, and an increase in the number of residential and industrial properties was observed. This trend continues and is noted across various aerial maps. Along with the development of the area, there was an increase in the number of existing services and infrastructure. The historical land use is summarised in Table 2-1.

Table 2-1: Summary of historical land use along the Proposed Grid Connection.

Year	Land Characteristics
1842	Roads, residential properties, industrial properties.
1996	At the western end of the connection route, the Cloon substation was built and an increase of residential and industrial properties was observed across the Proposed Grid Connection.
1999 - 2003	Increase of residential and industrial properties across the Proposed Grid Connection.
2004 - 2006	Increase of residential and industrial properties across the Proposed Grid Connection.
2005 - 2012	Increase of residential and industrial properties across the Proposed Grid Connection.

Year	Land Characteristics
2013 - 2018	Increase of residential and industrial properties across the Proposed Grid Connection.
2018 - 2025	Increase of residential and industrial properties across the Proposed Grid Connection.

2.3 CURRENT LAND USE

A review of current land use along the Proposed Grid Connection has been carried out using Bing Satellite imagery and the CORINE Land Cover Map (Figure 2-1). The current land use is dominated by agricultural pastureland (approximately 86%) with peat bogs (approximately 11%) and transitional woodland shrubs with mineral extractions (approximately 2% and 1% respectively). The Bing Satellite aerial imagery indicates a high density of large field drains across much of the pastureland, indicating significant efforts to drain and reclaim the former peat bog land. Along the Proposed Grid Connection route, there are roads, residential properties and industrial buildings. Along with them, utility services and infrastructure such as drainage systems should be expected.

The Proposed Grid Connection route begins at the planned onsite 110kV substation, initially traversing an area characterised by peat bogs, before transitioning into agricultural pastureland that extends southwards, following the internal site access road and continuing past the R332 regional road, and becomes the dominant land cover type for approximately 6.5 km. It then proceeds in a southeastern direction, towards the N63 national road, which it follows for around 2 km. A short transitional woodland-shrub zone, approximately 500 m in extent occurs within the central portion of the corridor. Further southeast along the route, land cover returns to predominantly pastureland. Continuing along the N63, the route then veers northwest, running beneath the L6234 for approximately 2 km. As the route progresses, the landscape shifts to a combination of peat bogs and pastures for about 1.5 km, before returning to pastureland over a distance of roughly 5 km, along the road L2128. It reaches the R347 regional road, where again it passes through a mixed terrain of peat bogs and pastures over a distance of approximately 2.5 km. Further along the R347, the route passes in proximity to a mineral extraction site, before re-entering pastureland and ultimately arriving at the existing 110kV Cloon Substation.

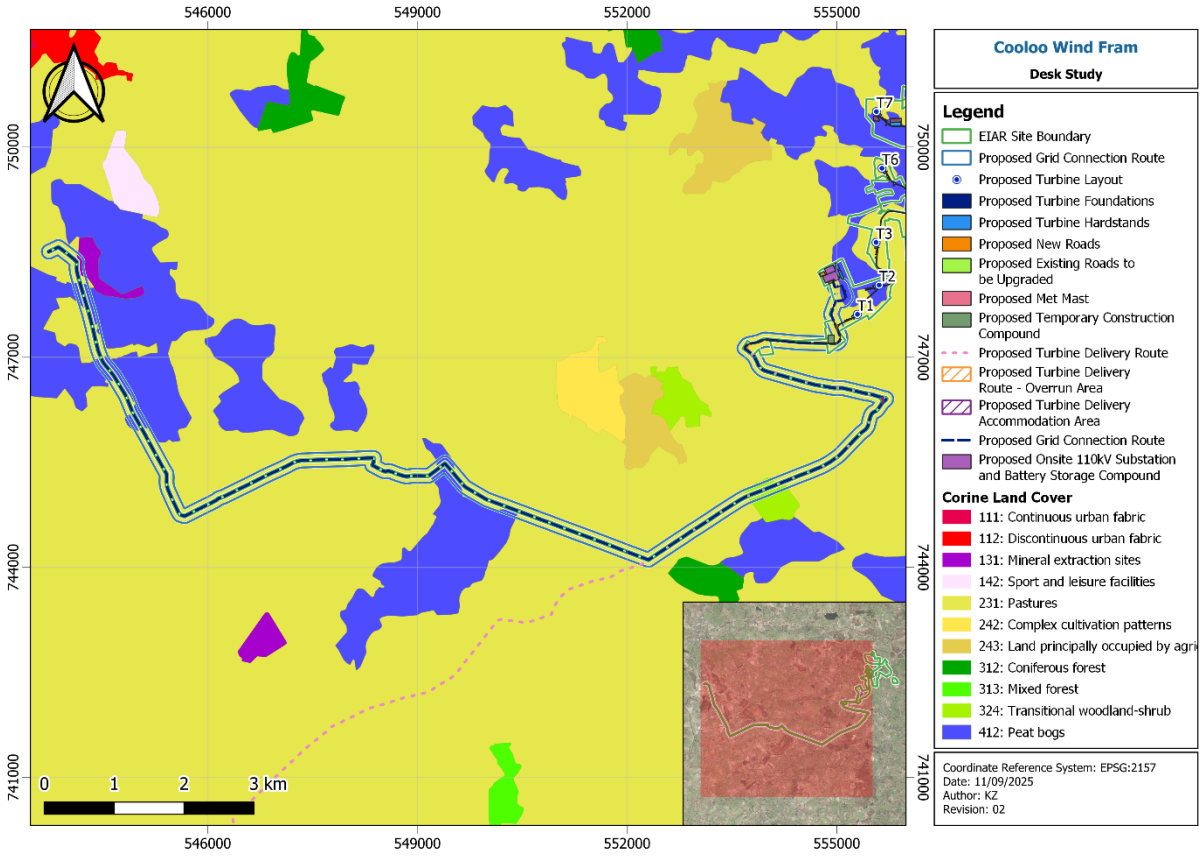

Figure 2-1: CORINE Land Cover Map.

2.4 GEOLOGY

2.4.1 QUATERNARY SEDIMENTS

The following sections describe the prevailing ground conditions along the route. The Proposed Grid Connection route is generally on public roads, therefore made ground (road pavements and granular fill) is expected be the dominant soil type encountered. Made ground associated with roads is not identified in the GSI mapping. The prevailing soils in the area are likely to be encountered under the made ground of the road construction i.e. at the base of the cable trench and at HDD locations.

The superficial geology across the Proposed Grid Connection route is varied but predominantly composed of tills derived from limestones and cut over raised peat (

Table 2-2). Based on the Geological Survey Ireland (GSI) mapping (Figure 2-2), the primary superficial deposits comprise till derived from limestone, covering approximately 73% of the overall route corridor. This is followed by areas of cut over raised peat, accounting for approximately 22%, with smaller contributions of alluvium (2%), and minor patches of gravels derived from limestones, eskers, lacustrine sediments, and karstified bedrock outcrop/subcrop, which collectively represent less than 3% of the total corridor. The full summary of superficial geology can be found in

Table 2-2.

At the northern extent of the Proposed Grid Connection route, around the location of the onsite 110kV substation, Quaternary sediments consist of cut over raised peat. Moving southward, the route transitions into till derived from limestone, which continues for approximately 2.2 km along the internal site access road towards the R332 regional road. Just before reaching the R332, a sequence of variable Quaternary deposits is encountered. These include: a 150 m stretch of alluvium, a brief transition to karstified bedrock outcrop or subcrop, a return to limestone-derived till over approximately 300 m, followed by another 50 m section of alluvium.

The route continues along the R332, where till derived from limestone remains the dominant deposit for a further 1.8 km. Upon joining the N63 national road, a short 120 m transitional zone of lacustrine sediments is present. This is followed by a 700 m stretch of eskers, composed of gravels of basic reaction, intermixed with alluvium and till. Next, a 130 m zone of karstified bedrock outcrop or subcrop appears, which is followed by an area of till that intersects the northern edge of a 600 m wide section of raised peat. Further along the N63, at approximately the 2.6 km mark, the peat gives way to a small patch of bedrock outcrop or subcrop, after which the route passes through: 800 m of till, 100 m of alluvium, and another 200 m of raised peat.

Continuing along the N63, till derived from limestones reappears and dominates the next 2.2 km, with a brief inset of alluvium encountered approximately 600 m after the previous peat section, just before the route turns northwest into the L6234. Along the L6234, the superficial geology remains relatively consistent for the first 1.5 km, before entering a 2 km transitional zone between raised peat and till. After turning onto the L2115, the route returns to till approximately 260 m into this section. When entering the L2125, a 1 km length of gravels is present, after which till once again becomes the preliminary superficial deposit up to the junction with the R347 regional road. On the R347, the longest continuous section of raised peat is encountered, extending for approximately 3 km. This gives way in the final 800 m of the route to a 400 m section of limestone-derived gravels, followed by a final 400 m stretch of till, marking the approach to the existing 110kV Cloon Substation.

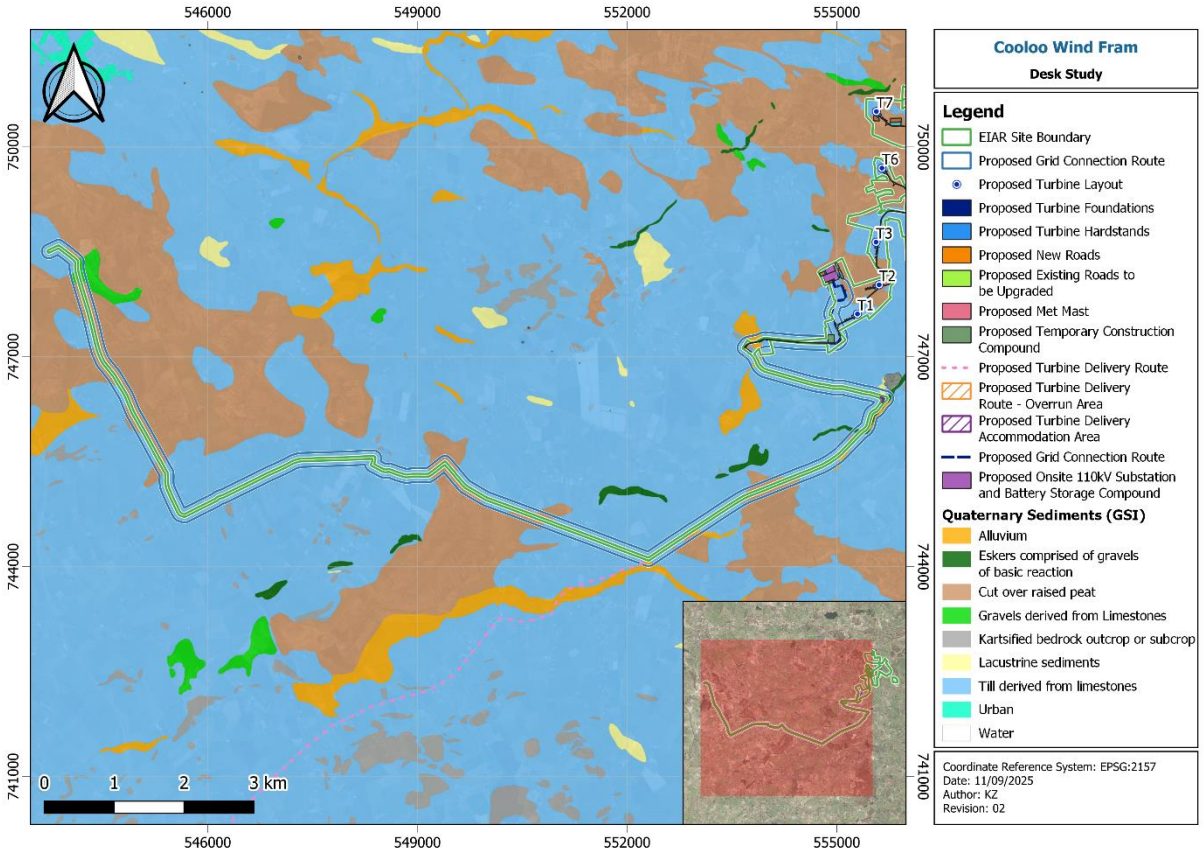

Figure 2-2: Quaternary sediments within the Site (GSI).

2.4.2 BEDROCK GEOLOGY

The geology of the Proposed Grid Connection has been reviewed using the Geological Survey Ireland (GSI) geological mapping (Figure 2-3). However, as GSI does not provide information on the mapping accuracy, the data should be considered indicative, unless proved by ground investigation.

The underlying bedrock is predominantly composed of undifferentiated Viséan Limestone and pale grey, clean skeletal limestone of Burren Formation as summarised in

Table 2-2. Starting in the north-eastern section of the Proposed Grid Connection, the bedrock consists of Viséan Limestone which extents southwards for approximately 7 km. This then transitions into Burren Formation Limestone around midpoint of the section running along N63 national road. The Burren Formation continues for a stretch of over 4 km, returning to Viséan Limestone again along the L2128 road which extends for more than 4 km into L2125 road section. Just before the route intersects with the R347 regional road, the underlying geology changes once to Burren Formation Limestone for a distance of approximately 1 km. This is followed by a final transition back Viséan Limestone which continues for the remaining 4 km of the route.

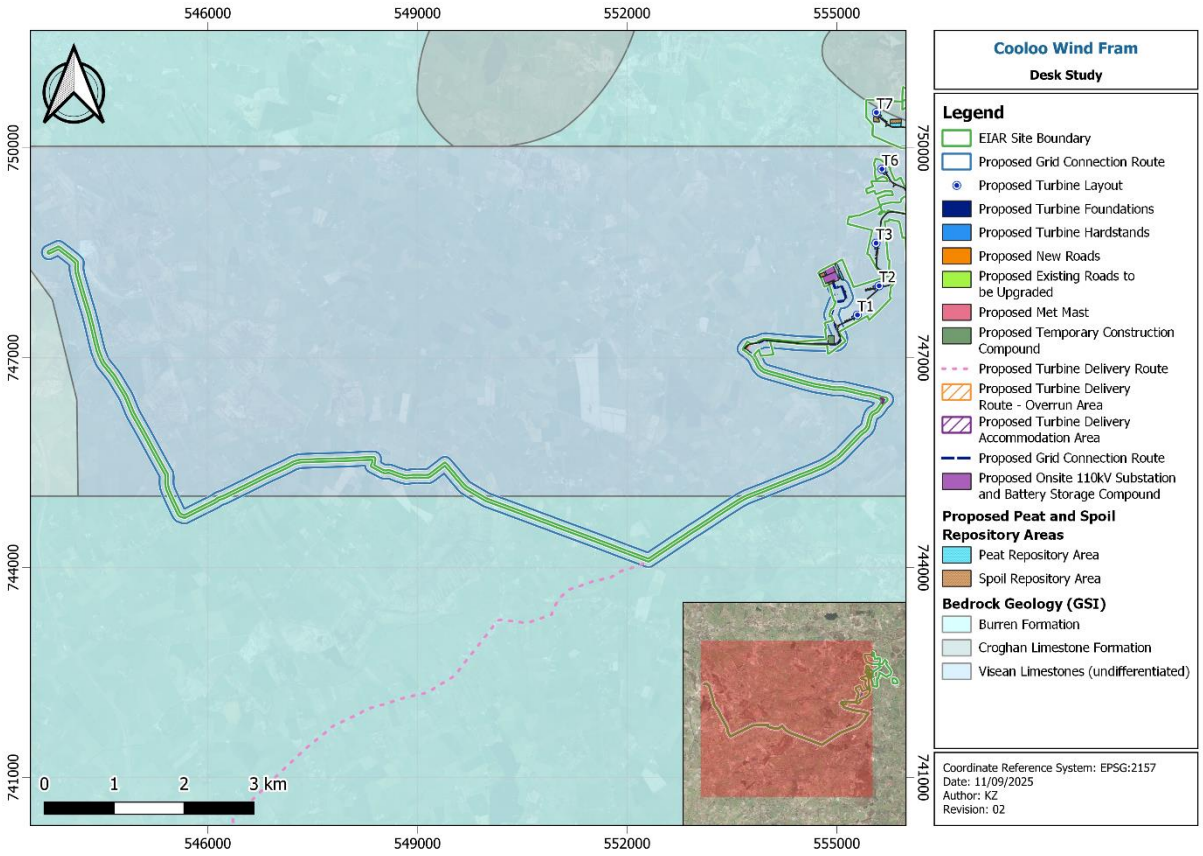

Figure 2-3: Bedrock Geology within the Site (GSI).

Table 2-2: Superficial and Solid Geology summary (descriptions as per Pracht et al., 2015 and GSI).

Soil or Rock Deposit	Brief Description
Quaternary Sediments	
Cut over raised peat	Peat formed in a raised peat bog environment, modified by human activity including peat harvesting and drainage.
Till derived from limestones	Typically, over-consolidated, poorly or unsorted diamicton, typically dominated by clay and silt, with high cobble and boulder content, sourced from limestone bedrock. Commonly emplaced as subglacial lodgement till, beneath ice-sheets.
Alluvium	Consists of clay, silt, sand and gravel. It is the unconsolidated detrital material deposited by a river, stream or other body of running water as a sorted or semi-sorted sediment in the bed of the stream or on its floodplain or delta, or as a cone or fan at the base of a mountain slope. Synonym: alluvial deposits. Normally soft to firm consolidated, compressible silty clay, but can contain layers of silt, sand, peat and basal gravel. A stronger, desiccated surface zone may be present.
Gravels derived from limestones	Identified along the Proposed Grid Connection in association with deposits mapped by the GSI as “hummocky sands and gravels” and associated with eskers located to the north, south and east of the Proposed Grid Connection. These may be formed by ice marginal or subglacial processes from limestone bedrock.
Eskers comprised of gravels	Eskers are ridges made of gravels and sands, deposited by glacial meltwater flowing through tunnels within and underneath glaciers, or through meltwater channels on top of glaciers. Over time, the channel or tunnel gets filled up with sediments. As the ice retreats, the sediments are left behind as a ridge in the landscape.
Bedrock Geology	
Viséan Limestones	Undifferentiated Viséan Limestones refer to Lower Carboniferous limestones where individual formations have not been specifically identified or mapped. These rocks are typically clean, medium to coarse-grained, well-bedded, and pale to medium grey in colour. They were deposited in a shallow marine environment and are laterally extensive and nearly horizontal, reflecting stable conditions during the Viséan period. Fossil content is generally high, with marine skeletal fragments common. This unit forms a regionally important karstified aquifer in Galway, characterised by conduit permeability and classic karst features such as pavements and underground drainage. The undifferentiated nature of these limestones is primarily due to limited exposure and the lack of detailed subdivision in earlier geological mapping.
Pale grey clean skeletal limestone (Burren Formation)	The pale grey, clean skeletal limestone of the Burren Formation is a Carboniferous rock, deposited during the Viséan period. It is rich the fragmented remains of marine organisms, giving it a distinctly fossiliferous texture. This limestone is typically well-bedded, forming medium to thick beds, light-coloured, and relatively pure, with minimal mud content. It forms part of the karstic Burren landscape, characterised by features like

Soil or Rock Deposit	Brief Description
	turloughs and caves, and reflects cyclic deposition driven by sea-level fluctuations.

2.5 HYDROGEOLOGY

The GSI online groundwater data viewer provides a subsoil permeability map (Figure 2-4). The central part of the EIAR study area, dominated by cut over raised peat, exhibits low permeability, while some areas with limestone-derived till show moderate permeability. Permeability data is unavailable (N/A) for the far southern end of the site. The surrounding area generally has low to moderate subsoil permeability. For the Proposed Grid Connection route, permeability data is missing in the eastern and central sections, but the central and western parts predominantly show low permeability, with moderate permeability in the southwestern and southeastern parts.

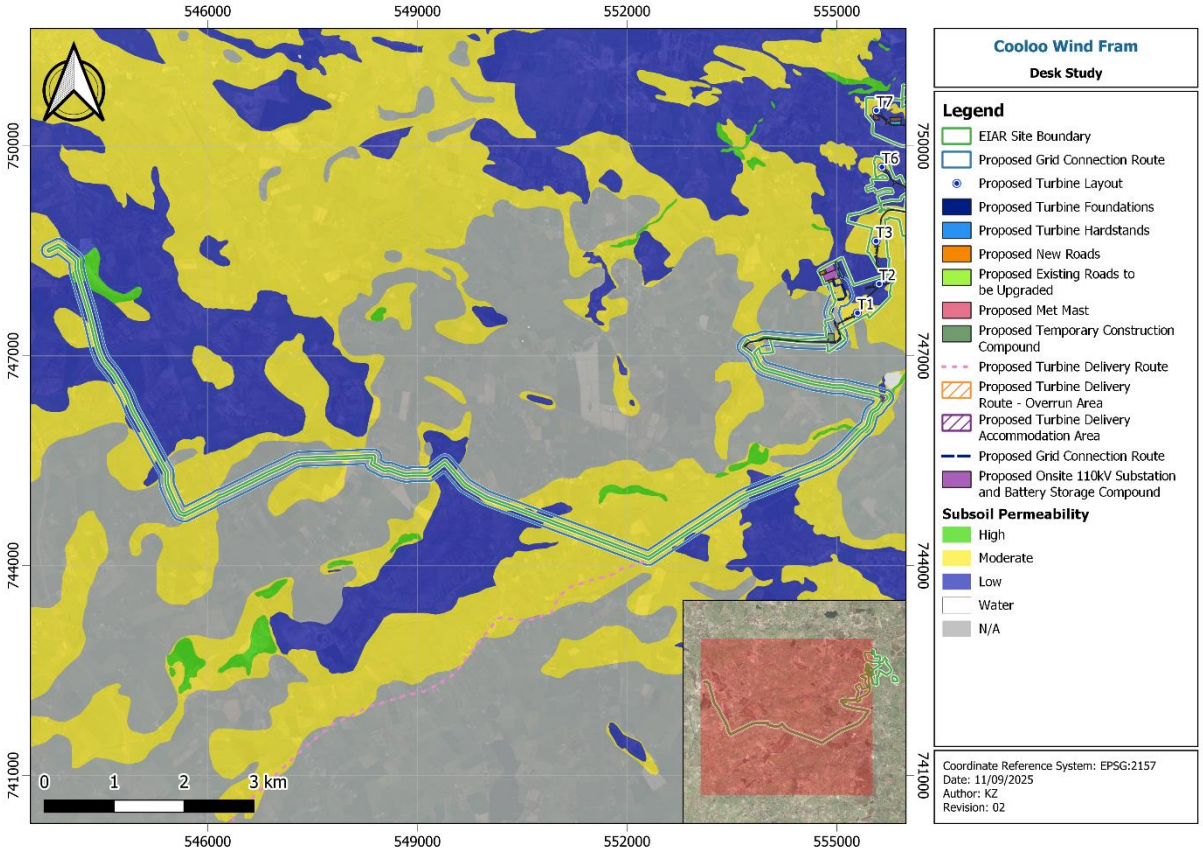

Figure 2-4: Subsoil permeability within the Site according to GSI.

The groundwater vulnerability map (Figure 2-5) provides assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties. It assesses how easily water and contaminants can infiltrate subsurface materials (soil and subsoil) to reach groundwater. Low and moderate category areas provide the greatest and intermediate protection to groundwater from pollution. These categories are likely to be characterised by low-leaching soils and/or the presence of low-permeability superficial deposits. The vulnerability varies between extreme and high in the eastern part of the

Proposed Grid Connection route, transitioning to low and moderate around midpoint of the section running along N63 national road, and continues for approximately 1 km, to return to moderate-high for another 3 km. Midway of L6324, the vulnerability categories varies between low, moderate, high, and extreme continues for 2 km before reaching area of the increased vulnerability. Right before turning into L2115, vulnerability reaches extreme-high category. High and extreme vulnerability continues for another 4.5 km, when it reaches R347 national road, to drop to low and moderate categories. Further along the R347, when the route passes next to a mineral extraction site, before where the vulnerability rises to high, ultimately arriving at the existing 110kV Cloon Substation.

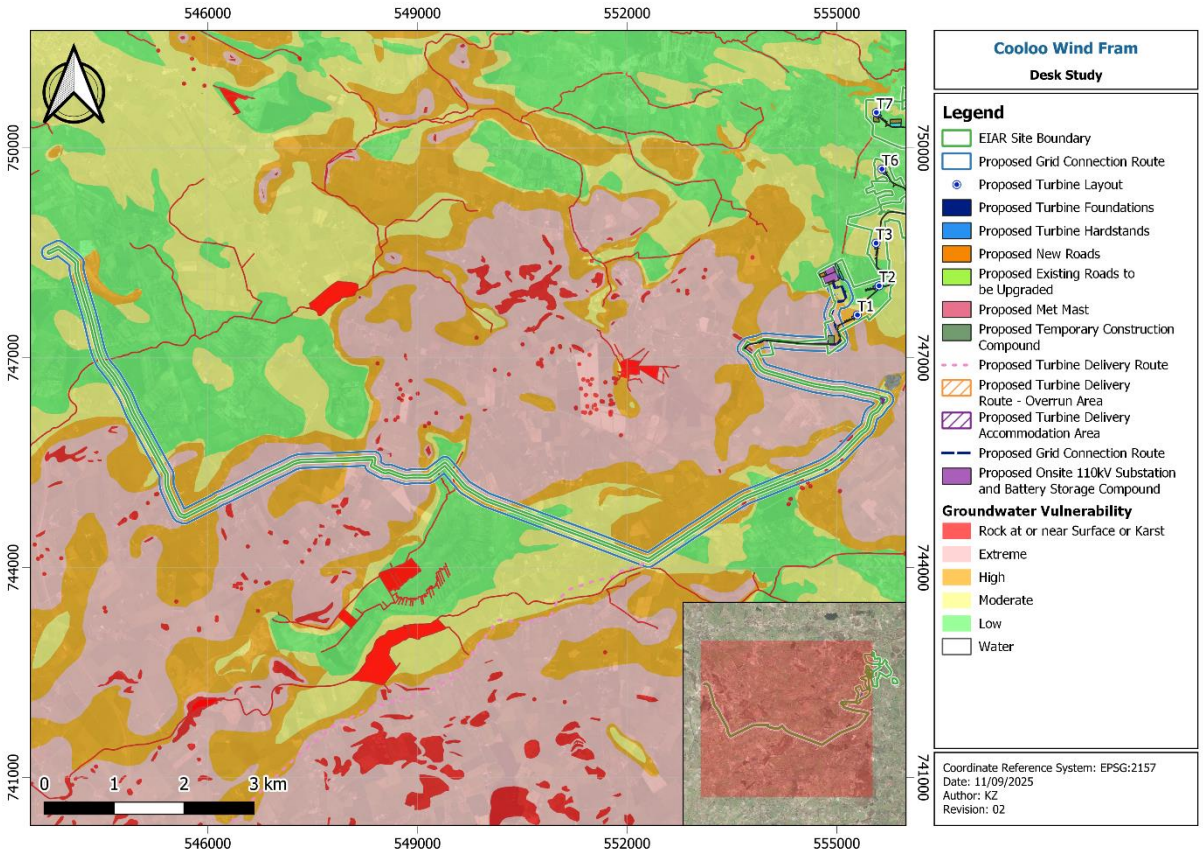

Figure 2-5: Groundwater vulnerability within the Site (GSI).

2.6 KARST FEATURES

Karst features are characterised by distinctive surface and subsurface features, resulting from the dissolution of rocks such as limestone or dolomite. Along the Proposed Grid Connection route, ten karst features have been identified, all of these around midpoint of the section running along N63 national road (Figure 2-6). These features were categorised as springs, that can cause substantial geotechnical, and environmental risks to the project. The Proposed Grid Connection route is surrounded by karst features classified as springs and enclosed depressions.

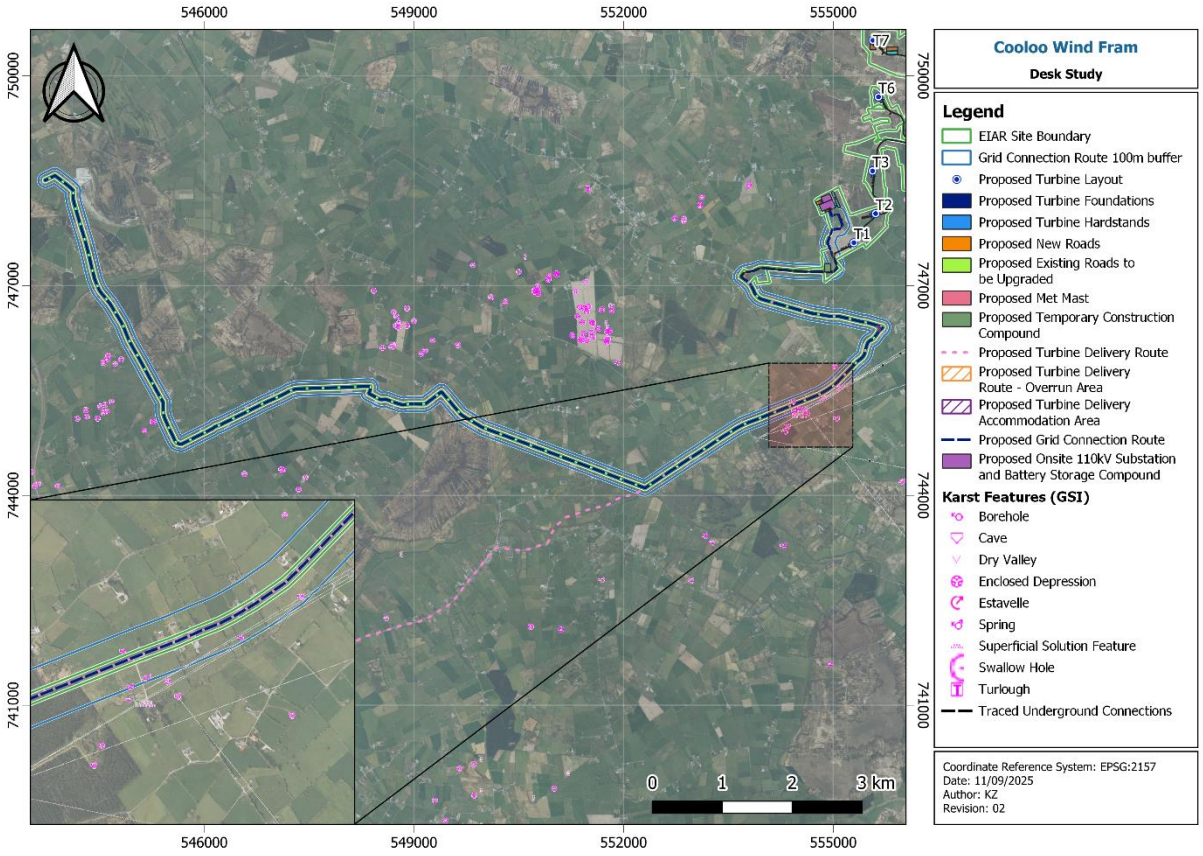

Figure 2-6: Karst features locations recorded nearby the Site (GSI).

2.7 GROUND INVESTIGATIONS

2.7.1 RECENT GROUND INVESTIGATIONS

As part of the Proposed Project, GDG and MKO conducted a preliminary ground investigation (GI) and site reconnaissance in the form of peat probes (PP), hand shear vanes (HSV), boreholes (BH) and, trial pits (TP) between 2021 and 2025. MKO recently supplied GDG with additional peat probes completed along the Proposed Grid Connection route, resulting in total 334 peat probes, 26 trial pits, 2 boreholes and 2 hand shear vane tests within the EIAR site boundary.

47 of these GI locations were surveyed along the Proposed Grid Connection route (Figure 2-7 and Figure 2-8). These included 1 borehole, 43 peat probes, and 3 trial pits.

Peat thickness along the Proposed Grid Connection route, beginning at the Substation Compound site, ranges from 0.0 to 0.27 m. Approximately 100 m to the south-west, where quaternary sediments were classified as cut-over raised peat, thicknesses vary between 1.0 and 1.98 m. Further along the route, no peat was identified until test no. PP137, where a small patch of peat measuring 0.18 m was recorded, located around 230 m from the R332 route.

Additional peat probes were carried out by MKO in July 2025 in cut-over raised peat areas, starting in the middle section of the Proposed Grid Connection route near the N63 section. Three probes (GC18–GC20) found no peat, while one probe (GC17) recorded a thickness of 0.2 m. In the central section of the L6324 route, two probes produced readings of 0.1 m at GC16 and 0.4 m at GC15. Two

further tests were carried out just before the route turns onto the L2115, with peat thicknesses of 0.1 m (GC13) and 0.0 m (GC14).

Similar results were observed around 250 m away, along the L2115 route, where probes recorded 0.0 m at GC11 and 0.1 m at GC12. The final series of peat probes was conducted along the R347 route, where thicknesses ranged from 0.0 to 1.6 m, starting with GC10 and finishing at GC1.

A full summary of the GI conducted within the Proposed Grid Connection boundary, and peat thicknesses from all peat probes is provided in Table 2-3.

Table 2-3: Ground Investigation Summary along the Proposed Grid Connection.

Exploratory Hole ID	Peat thickness (m)
BH1	0.0
PP50	0.0
PP52	0.0
PP77	0.0
PP135	0.0
PP136	0.0
PP137	0.2
PP138	0.0
PP139	0.0
PP140	0.0
PP141	0.0
PP142	0.0
PP143	0.0
PP150	0.0
PP151	0.0
PP204	0.0
PP206	0.3
PP208	0.0
PP218	0.0
PP225	2.0
PP233	0.0
PP234	1.0
PP249	0.0
PP250	0.0
TP05	0.0
TP09	0.0
TP14	0.0
GC1	0.1
GC2	1.6
GC3	0.4
GC4	0.0
GC5	0.5
GC6	0.0
GC7	0.2
GC8	0.5

Exploratory Hole ID	Peat thickness (m)
GC9	0.0
GC10	0.0
GC11	0.0
GC12	0.1
GC13	0.1
GC14	0.0
GC15	0.4
GC16	0.1
GC17	0.2
GC18	0.0
GC19	0.0
GC20	0.0

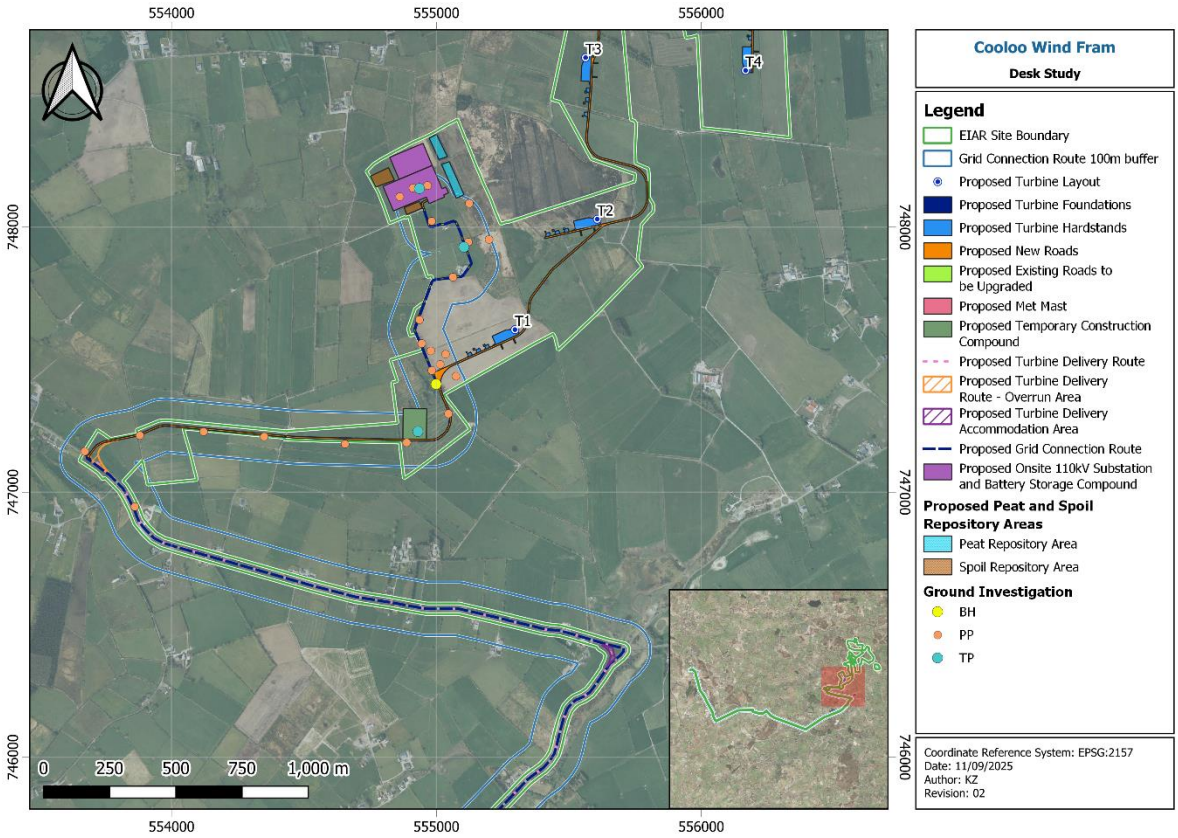

Figure 2-7: Ground investigation locations in the vicinity of the Site.

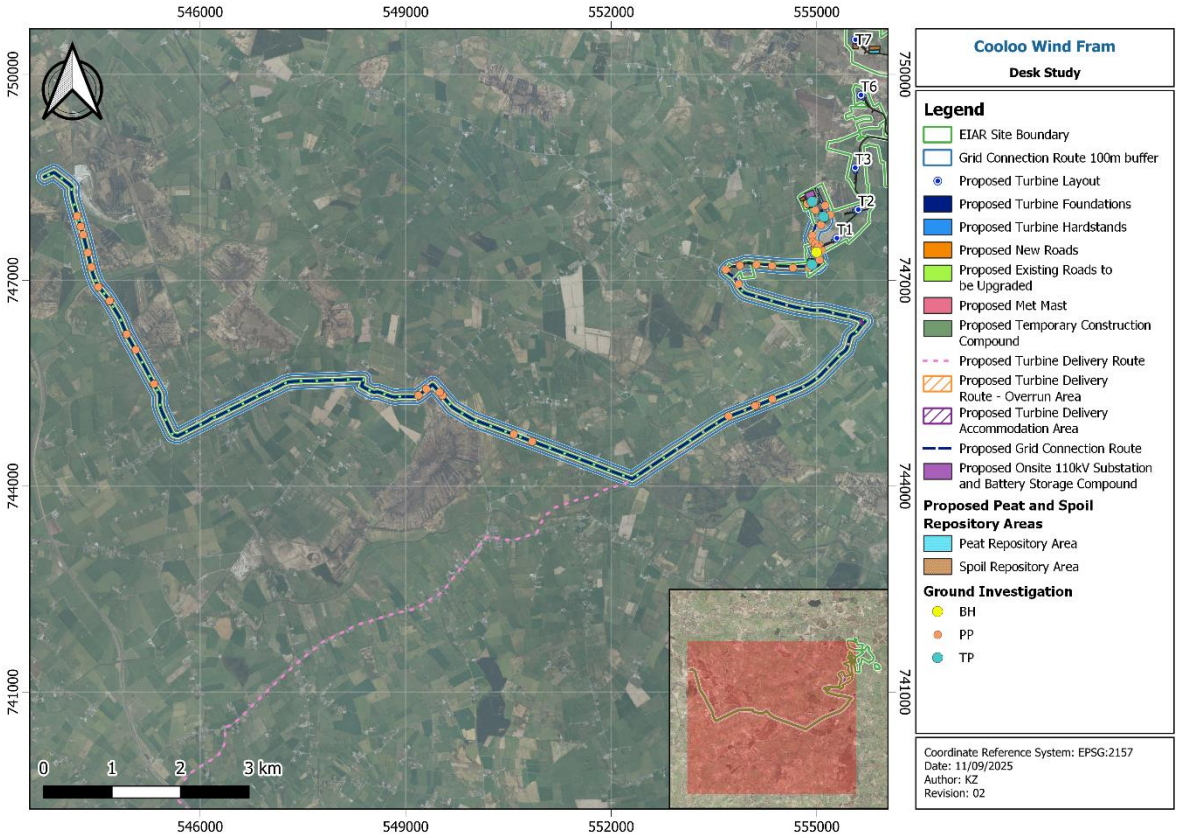

Figure 2-8: GI locations in the vicinity of the Site.

2.7.2 HISTORIC GI

One historic borehole was identified within the EIAR boundary located 2.5 km to the north of the Proposed Grid Connection route. Borehole GSI-17-003 (Figure 2-7) encountered rockhead at 5 mBGL. The overburden consists of broken limestone and mud, which may be interpreted as glacial till. Beneath this, dark grey argillaceous bioclastic limestone and calcareous mudstone were encountered. Argillaceous bioclastic limestone refers to rocks that is both rich in fossil fragments and contains a significant clay content that can affect its physical properties. These are followed by a thin layer of non-calcareous mudstone between 38.3 m and 38.5 m BGL. These strata have been classified as part of the Croghan Limestone Formation. Further down the sequence, dark grey argillaceous bioclastic limestone was recorded, alternating with calcareous mudstone at approximately 70 mBGL. The borehole was terminated at a depth of 122 m BGL, after encountering very fine-grained argillaceous limestone with calcareous mudstone, interpreted as part of the Ballymore Limestone Formation.

3 GEOTECHNICAL RISK REGISTER

Table 3-1: Risk register.

Ref.	Risk	Mitigation
1	Risk of unacceptable settlement and instability due to soft ground (peat)	Peat bogs are present along sections of the Proposed Grid Connection route; however, as the cable will be constructed within existing public roads, peat does not present a significant constraint in this case. The primary risk relates to potential localised undisturbed peatland and other soft ground conditions, which could affect ground stability, low bearing resistance, slope failures and different settlement and require suitable construction methods to ensure long-term cable performance. The design team shall develop their own testing criteria to satisfy and derisk the possibility of greater peat depth occurring along sections of the Proposed Grid Connection route.
2	Risk of unacceptable settlement and instability due to karst	Karst features can pose a risk to the development of the Proposed Grid Connection route due to their geological and hydrological characteristics. Karst landscapes feature springs, enclosed depressions, voids, caves, and turloughs formed by limestone weathering, leading to uneven subsurface conditions. These conditions can lead to ground instability and pose challenges for the installation of underground cables or supporting infrastructure. It is recommended to proceed with geotechnical and geophysical surveys at the detailed design phase of the project, to identify and map karst features along the Proposed Grid Connection route. The design should be then adapted to reflect local ground conditions, ensuring stability and to minimise risk of ground movement or subsidence.
3	Thermal resistivity of soils	In the areas where thermal resistivity is higher than expected, particularly areas with peat or dry sand, heat generated by cables may not dissipate efficiently. This can lead to reduced cable performance, accelerated ageing or even cable failure. To address a potential variability of thermal resistivity properties across different soil types (sand and gravel, till, and peat) encountered along the Proposed Grid Connection route, it is advised to conduct a thermal resistivity testing campaign. These tests include in-situ testing directly in soils, laboratory testing by collecting samples from each soil type, to allow moisture content testing and spatial coverage tests to check multiple locations across the Proposed Grid Connection route and to capture spatial variability, especially where transitions between soil types are expected.
4	Existing services	Existing utility services, such as electricity, gas, water, telecommunication cables, and infrastructure – roads, drainage systems – can pose a risk to the development. Construction works can lead to service interruptions and health and safety incidents. Detailed utility surveys are

Ref.	Risk	Mitigation
		required along with assessing records from service providers to map out existing services and identify unmapped or legacy infrastructure. Apply and maintain a safe buffer zone as per utility provider guidelines.
5	Argillaceous rocks	Presence of clay within the limestone can influence its engineering properties, making the material less competent and more prone to weathering and breakdown compared to clean, pure limestones. These rocks are not generally a geotechnical concern for cable installation itself, especially if the bedrock is deep and will not be directly encountered during trenching. However, if there is any intention to reuse excavated material from the trench, the argillaceous content can be problematic. Material with higher clay content may have poorer compaction properties, higher moisture retention, and a tendency to degrade. In addition, the presence of clay can increase the risk of instability or settlement if used inappropriately. It is worth noting that along the Proposed Grid Connection, the bedrock might be too deep to be of practical concern for the cable works, and there is currently no GI data to confirm the presence or depth of these rocks. Therefore, the risk remains negligible unless further ground investigation is undertaken.

4 CONCLUSION

This desk study has been prepared to outline existing ground conditions along the Proposed Grid Connection route for Cooloo Wind Farm in Co. Galway. This study identifies a complex landscape with diverse land use, geological, and hydrogeological characteristics that influence development feasibility. The route is primarily agricultural pastureland with hedgerows, interspersed with peat bogs in the western, central and south-eastern parts of the route, and features field drains. The Proposed Grid Connection route traverses areas with roads, residential properties, industrial buildings, and associated utilities, that require planning to avoid service disruptions.

The route is underlain by Viséan limestones, with pale grey skeletal limestone of Burren Formation, overlain by superficial deposits of limestone-derived till, cut over peat, gravels derived from limestones and alluvium. Subsoil permeability is predominantly low to moderate, with no data available in parts of the Proposed Grid Connection, while groundwater vulnerability varies from low to moderate in the central and northern sections of the Site to high and extreme in the south and along drains.

These findings highlight that the main risks identified for the Proposed Grid Connection route are peat bogs, karst features, thermal resistivity of soils, argillaceous rocks and existing services. Recent peat probe data demonstrates limited peat depths at all locations along the Proposed Grid Connection route, that do not exceed 2 m at maximum, suggesting that peat will not present a significant constraint to the works. Risks associated with karst features, soil conditions, and existing services have been considered within the Geotechnical Risk Register (GRR), and targeted mitigation measures have been proposed accordingly. These mitigations included ground stability assessments in relation to karst features, soil resistivity testing to inform cable installation, and detailed utility mapping.

In summary, the identified risks are manageable and suitable mitigation measures have been put forward within the GRR to ensure construction along the Proposed Grid Connection route can proceed safely and efficiently.

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