GDG
GAVIN & DOHERTY
GEOSOLUTIONS

Illaunbaun Wind Farm - Environmental Impact Assessment Report

Appendix A09-01: Peat and Spoil Management Plan (PSMP)

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EXECUTIVE SUMMARY

Gavin and Doherty Geosolutions Limited (GDG) was commissioned by JC Mont Fort (the Developer) to undertake a Peat and Spoil Management Plan (PSMP) for the proposed Illaunbaun Wind Farm. Following planning guidelines compiled by the Department of the Environment, Heritage and Local Government (DoEHLG), where peat is present on a proposed wind farm development, a peat management plan is required. The proposed Illaunbaun Wind Farm consists of 6 turbines, one 110kV substation and associated grid connection, construction compound, access tracks, peat repositories, and associated additional infrastructure.

This report provides details on the approximate predicted volumes of peat to be excavated during construction, the characteristics and types of peat to be excavated, construction methodologies to reduce the volumes of peat to be excavated, and the guidelines for how and where this excavated peat will be placed, reused and managed. This peat management plan will be further developed and implemented after the Proposed Development receives consent. Further details and specific plans will be determined during the detailed design phase and once further confirmatory Proposed Development investigations have been undertaken. These details will then be included in a detailed Peat and Spoil Management Plan as part of the detailed Construction Environment Management Plan (CEMP). The responsibility for implementing the PSMP will lie with the Developer but may be delegated to one or more Contractors during construction. The peat depth encountered by intrusive investigations across the Proposed Development varies from negligible to a maximum of 6m, with a median of 0.45m recorded. Much of the Proposed Development contains thin blanket peat (<1m) with occasional rock outcrops. Of the proposed turbines, only T03 is located in an area of >1m of peat depth. T02, T05 and T04 are located within commercial forestry, with peat present at T02 and T05 and no peat recorded at T04. In total, 82.3% of recorded peat depths were under 1m, and 96.19% were under 2m.

The existing access tracks will need to be upgraded, and new access roads will need to be constructed. The preliminary outline of road construction types, construction methodologies, and methods for constructing turbine bases, hardstandings, and other infrastructure have been defined. Of the proposed access tracks, 880m are existing tracks to be upgraded, 3,350m are new founded construction, and 360m are new floated construction.

Preliminary volumes for the peat generated during construction are presented in this document, along with guidelines for handling and storing excavated peat and recommendations for good construction practices. It is calculated that the total peat excavation volume will be 60,040m^3, while the total spoil excavation volume will be 125,500m^3. It is assessed that the total capacity for placement and reinstatement of peat is 63,510m^3, and 130,550m^3 for spoil, leading to an overall balance of 3,470 m^3 of additional contingency capacity for peat, and 5,050m^3 for spoil.

The peat management assessment findings indicate that all the peat material excavated can be placed safely within the Proposed Development during construction.

1 Introduction

Gavin and Doherty Geosolutions (GDG) were commissioned in August 2023 by JC Mont-Fort to undertake a Peat and Spoil Management Plan (PSMP) for the proposed Illaunbaun Wind Farm. The wind farm will hereafter be referred to as 'the Proposed Development', while the area within the red line boundary will be referred to as 'the Site'. The Proposed Development layout is presented in Appendix A.

1.1 STATEMENT OF AUTHORITY

GDG has been involved in many wind farm developments in both Ireland and the UK at various stages of development, i.e. preliminary feasibility, planning, peat stability assessment, design and construction. In addition to this, the GDG team, made up of engineering geologists, geomorphologists, geotechnical engineers and environmental scientists, has developed expertise in landslide hazard mapping, including leading a recent national landslide hazard mapping pilot study which included extensive landslide runout and hazard mapping and calculation in Irish blanket peat.

GDG brings together state-of-the-art research and direct industry experience and offers a bespoke engineering service, delivering the most progressive, reliable, and efficient designs across a wide variety of projects and technical areas, including providing forensic engineering and expert witness services to the Insurance and Legal sectors. GDG's clients include large civil engineering contractors, renewable energy developers, semi-state bodies and engineering and environmental consulting firms.

The members of the GDG team involved in this assessment include:

- **Tim O'Shea – Project Director**. Tim holds an honours degree in Civil and Environmental Engineering from University College Cork and is a Chartered member of Engineers Ireland.He is an Associate Director at GDG with over 20 years post graduate experience in Civil Engineering. Tim is experienced in the consenting, design and construction of wind energy projects. He has been involved in the consenting of numerous wind energy projects in Ireland since his graduation in 2003. Tim has also led the design of several wind farms in Ireland and the UK, many with significant peat challenges.
- **Chris Engleman**. Chris is a Professional Geologist with a Master's degree in Geological Sciences from the University of Leeds. He is chartered with the Institute of Geologists Ireland (IGI) and the European Federation of Geologists. He has five years of industry experience within the onshore renewables sector and the field of geological mapping with a particular focus on Quaternary geology, predominantly working on projects for peat stability and management, ground investigation (GI), rock and soil logging, GIS mapping and geotechnical design. Chris has worked on many renewable energy projects, particularly wind and solar, for over two years. Chris carried out peat probing, walkovers, and supervised investigation works at the Proposed Development in 2023 and 2024.

- **Brian McCarthy**. Brian is a Civil Engineer with three years of post-graduate experience. Brian holds a Master's degree in Civil, Structural and Environmental Engineering from University College Cork and is a member of the Institution of Engineers of Ireland. Brian has worked on various renewable energy and infrastructural projects in Ireland and the UK and has carried out peat probing on several projects throughout Ireland. Brian led peat probing investigation works at the Proposed Development in 2023.
- **Daniel Murphy.** Daniel is a Graduate Engineer with a Masters' degree in Civil Structural and Environmental Engineering from University College Cork and has been working with GDG since graduating in 2022. Daniel has carried out Proposed Development inspections, visual assessments of slopes, peat probing and water sampling on a number of projects throughout Ireland. Daniel carried out peat probing at the Proposed Development in 2023.
- **Johan Van Niekerk.** Johan is a senior design engineer. He holds a Bachelor's degree in Civil Engineering and an Honours degree in Geotechnical Engineering, both from the University of Pretoria. Johan has over 7 years of experience in civil design and construction and has been with GDG since 2023. Expertise includes 3D modelling, numerical analysis, GI and earthworks design. Johan was among the wider team involved in peat probing for the project in 2023.
- **Sowmya Reddy G**. Sowmya is a design engineer. She holds a Master's degree in Applied Environmental Sciences from University College Cork and has been with GDG since 2023. Her experience includes working on renewable energy projects, particularly in the wind and solar sectors, with expertise in GI, including Proposed Development inspections and peat probing, rock and soil logging, GIS mapping, and geotechnical design for projects in both Ireland and the UK.

1.2 GUIDANCE DOCUMENTS

This PSMP has been prepared with consideration of industry best practices relating to wind farm construction and peatlands, including:

- Wind Energy Development Guidelines. Department of Housing, Planning and Local Government (2006);
- Draft Revised Wind Energy Development Guidelines. Department of Housing, Planning and Local Government (2019);
- Good practice during wind farm construction. A joint publication by Scottish Renewables, Scottish Natural Heritage, Scottish Environment Protection Agency, Forestry Commission Scotland (2015);
- Scottish Government, Guidance on Developments on Peatland – Proposed Development Surveys (2017);
- Guidance on the Assessment of Peat Volumes, Reuse of Excavated Peat and theMinimisation of Waste, Scottish Renewables and SEPA (2012); and
- Floating Roads on Peat, Scottish Natural Heritage (2011).

Many of the publications listed above have been developed by the Scottish Regulators and are considered best practice in Ireland and are, therefore appropriate for reference within this PSMP.

This PSMP and compliance with it shall not relieve the developer of its obligations to undertake detailed GI or geotechnical design before design and construction or any obligations relating to other aspects of the environment.

1.3 PROPOSED DEVELOPMENT

The Proposed Development is located in County Clare, within an area characterised by coniferous forestry and open peatland. The proposed development boundary encompasses ~150 hectares; the surrounding landscape comprises a mix of agricultural land, low-density residential development and commercial forestry.

The Proposed Development lies approximately 2.9 km from the west coast of County Clare, approximately 4.2 km northeast of Milltown Malbay and 5.2 km southeast of Lahinch. It encompasses the townlands of Tooreen, Slievenalicka, Illaunbaun, Lackamore, and Drumbaun.

Topographically, the Proposed Development elevation ranges from 115 m above Ordnance Datum (mOD) in the east, rising to just over 200 mOD in the west and north, where two distinct hills are present. Lough Keagh, located in the southern portion of the Proposed Development, lies between 180 mOD and 185 mOD.

The Proposed Development Description is detailed in Chapter 5 of the Environmental Impact Assessment Report (EIAR), which includes the works subject to a proposed planning application for An Bord Pleanála about the Proposed Wind Farm Proposed Development.

The Proposed Development will comprise the elements listed below:

- Construction of 6 wind turbines with a maximum overall blade tip height of 150 m.
- Construction of associated turbine foundations, crane pad hardstand and assembly areas.
- Construction of one permanent 38 kV electrical on-site substation with one control building with welfare facilities, all associated electrical switchgear, security fencing, underground cabling, drainage infrastructure, and all ancillary works.
- All associated internal underground electrical and communications cabling connecting the wind turbines to the on-site Substation.
- Upgrade of existing tracks, roads and provision of new site access roads to facilitate construction & operation of the wind farm.
- Two borrow pits.
- Three peat repository areas for peat & spoil management.
- Construction of one temporary construction compound.
- Development of internal site drainage.
- Permanent & Temporary tree felling to accommodate the construction & operation.

- Signages and
- All associated site development works.

The Proposed Development has been designed with an operational life of 30-35 years, at the end of which it can be decommissioned. The Applicant is therefore seeking a ten-year permission and a 35 year operational life from the commissioning date. Please refer to Chapter 5 (Project Description) of the EIAR for a detailed description of the development.

This report is limited to the EIAR Proposed Development Boundary as defined in Chapter 1 of the EIAR and does not analyse the transport delivery route. The transport delivery route has not been included in this report as no peat stability risk is expected along the route. Works on the transport delivery route are not expected to be carried out in peat material and will not require excavating or placing significant amounts of material. The '*Proposed Development*' in this report refers to the core of the Proposed Development and grid connection route as defined in Chapter 5 of the EIAR.

1.4 SCOPE OF REPORT

This scope of the report is as follows:

- A summary of proposed construction activities;
- A review of peat conditions at the Proposed Development; and
- Road construction types.

- Methodologies for the construction of each type of access road and road constructiondetails:
  - Methodologies for the excavation of turbine bases, hardstands, substation and compounds;
  - Summary of the area proposed for peatland enhancement;
  - Summary of the borrow pit location and typical detail drawings;
  - Peat and spoil excavation and reinstatement volumes;
  - Summary of peat and spoil repository areas and typical detail drawings;
  - Guidelines for handling and storing excavated peat and spoil; and
  - Recommendations for good construction practice.

1.5 SUMMARY OF CONSTRUCTION ACTIVITIES

For the construction phase, the activities that are considered likely to generate peat are as follows:

- The construction of new excavated roads. Floating road construction does not require peat excavation.
- The upgrade and widening of existing founded access roads.
- Excavations for cable trenches.
- Excavations for turbine bases, hardstands, construction compounds, and substations.

1.6 GENERAL PRINCIPLES OF PEAT AND SPOIL MANAGEMENT

The general purpose of the PSMP is to outline the methodologies of peat excavation and reinstatement, outline the safety steps required for the safe placement and management of peat material, and minimise disruption to the peatland environment. The methods outlined in the report aim to:

- Reduce the exposure of bare or excavated peat material;
- Reduce the potential for release of sediment into watercourses or groundwater;
- Ensure that the Proposed Development does not adversely impact the landscape and environment; and
- Ensure good management practices are followed throughout the construction, operation, and decommissioning phases.

Consideration needs to be given to the risks created by peat excavation, placement, and reinstatement, both temporary and permanent. These risks will be managed and mitigated through the methodologies outlined in this PSMP document and the associated Peat Stability Risk Assessment Report (PSRA, EIAR Technical Appendix A08-02).

Placement or any reinstatement of excavated peat material will be carried out in a fashion which ties in with the existing natural topography and facilitates the reduction of the visual impact of the

Proposed Development. This can be done by landscaping the placed peat with shallow slopes, promoting natural vegetation growth, and including controlled drainage.

All reinstatement works will be carried out considering potential peat instability, having completed a diligent design and considering the findings of the associated PSRA (EIAR Technical Appendix A08-02). Works will be carried out under the supervision of an appropriately experienced geotechnical engineer and the Project Ecologist.

2 Peat Conditions and Stability

2.1 PROPOSED DEVELOPMENT CONDITIONS

An assessment of the ground conditions encountered during the GI and reviewing the available existing mapping suggests that the Proposed Development consists of a generally hilly topography, with bedrock ridges, forestry and upland blanket peat surrounding a small lake (Lough Keagh).

According to the available GSI mapping (Figure 2-1), Turbines T1, T2, T4 and T5 are located on bedrock outcrop or subcrop, and T3 and T6 are located on blanket peat. GDG observations suggest that T1, T3 and T5 are also located on thin peat, with T4 located on superficial quaternary sediments. T2 and T5 are located on land planted for forestry.

Figure 2-1: GSI Quaternary Sediments map, showing areas of cut-over peat and glacial tilldominating the area.

2.2 PEAT CLASSIFICATION

The Scottish Government provides guidance as to the definition of peat in their Peat SurveyGuidance document:

“The Joint Nature Conservation Committee (JNCC) Report 445, Towards an Assessment of the State ofUK Peatlands, definitions are used:

- Peaty (or organo-mineral) soil: a soil with a surface organic layer less than 0.5m deep;
- Peat: a soil with a surface organic layer greater than 0.5m deep which has an organic matter content of more than 60%;
- Deep peat: a peat soil with a surface organic layer greater than 1.0m deep.”

Peat is generally broken into two distinct layers, as described below:

- Acrotelm: This upper layer comprises poorly decomposed plant material and living vegetation. It is relatively dry with some tensile strength, providing limited structural properties. For peat classification in this report, the Acrotelm layer will include 'peaty soil’.
- Catotelm: This lower layer is formed by highly decomposed humified peat decaying at a rate of several orders of magnitude slower than the acrotelm. As this catotelm layer grows, the slow peat formation represents an important sink for atmospheric CO^2. The amorphous structure of this layer is particularly vulnerable to excavation and disturbance as it tends to disintegrate completely upon excavation. For the classification of peat in this report, the Catotelm layer will include ‘peat’ and ‘deep peat’ soils.

It is noted that data obtained through peat probing cannot be utilised in classifying the peat material, given that peat probing does not fully distinguish between the different types of peat material and between peat and other soft ground. It is considered that the sampling records from the intrusive investigation provide the most accurate representation of peat depths across the Proposed Development. The trial pitting was carried out in September 2024 by Irish Drilling Ltd.(IDL).

The factual report for the GI is included in Appendix A of the Ground Investigation Report (Appendix A09-03), referred to as "Appendix A09-03", hereafter. This allows peat conditions to be described in a small number of locations (Section 2.4). However, the peat probing data generally compares well with the other intrusive data, therefore, all data types, peat probe, trial pit and hand shear vane locations, have been used in the peat depth assessment.

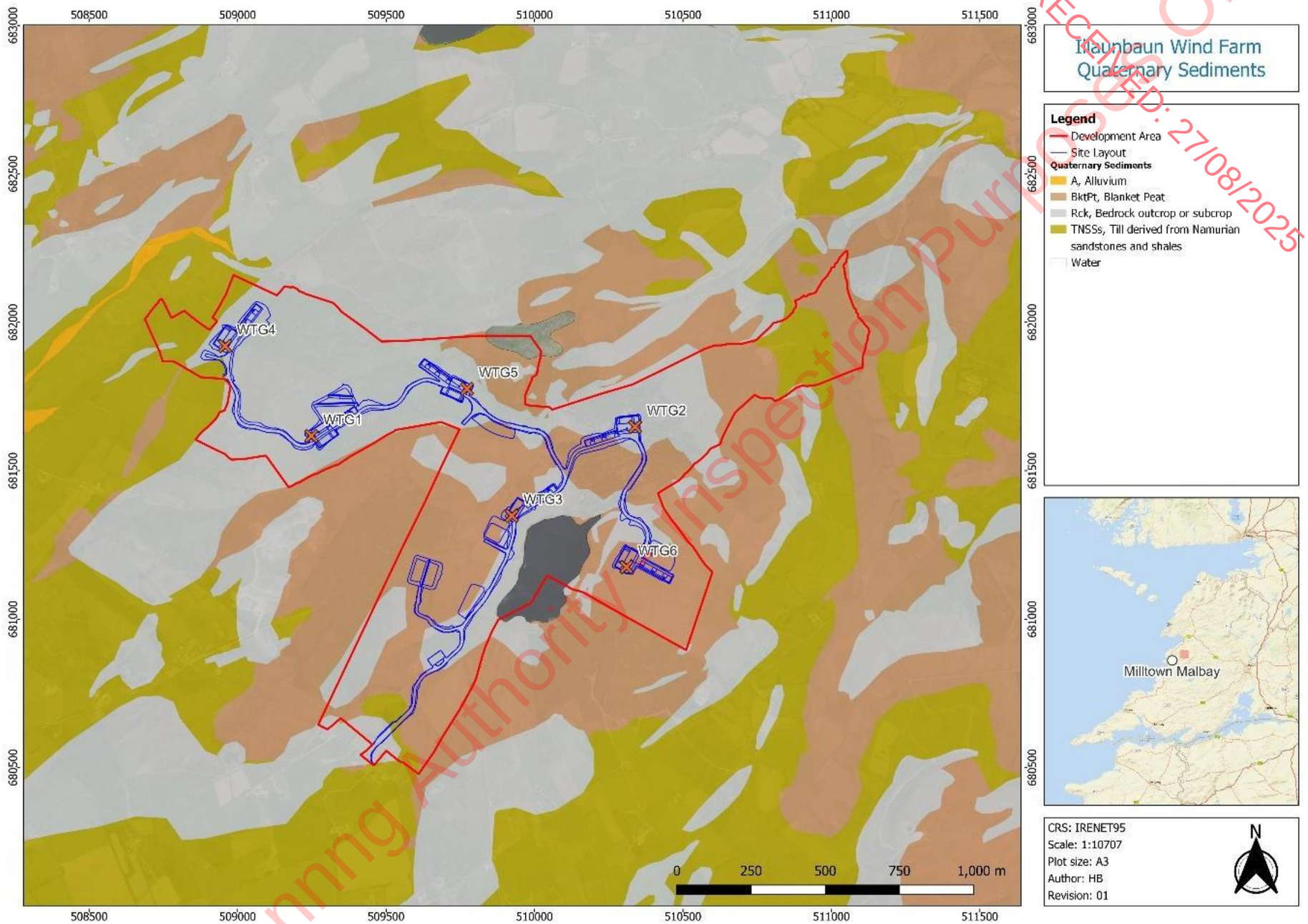


Figure 2-1: GSI Quaternary Sediments map, showing areas of cut-over peat and glacial till dominating the area

2.3 GROUND INVESTIGATION AND ENCOUNTERED PEAT DEPTH

GDG conducted a site reconnaissance as part of the assessment, comprising five walk-over inspections (April 2022, July 2023, September 2023, October 2023, and March 2024) to record geomorphological features, peat depths, and peat strength. An additional GI was carried out by Irish Drilling Ltd in September- December 2024 (Appendix A09-03). Site conditions range between open blanket peat, afforested blanket peat, cut over/cutaway peat (localised areas of historic turbary peat extraction close to T6), and exposed bedrock. An indication of the site conditions is shown in Figure 2-2 to Figure 2-5. Access was restricted in certain areas, particularly around T4, which limited both the number of peat probes taken and the GI activities in this region. As a result, only trial pitting was possible at T4.

Figure 2-2: View of Lough Keagh from PRA3, looking west across the T6 hardstand. Open cut-over blanket peat

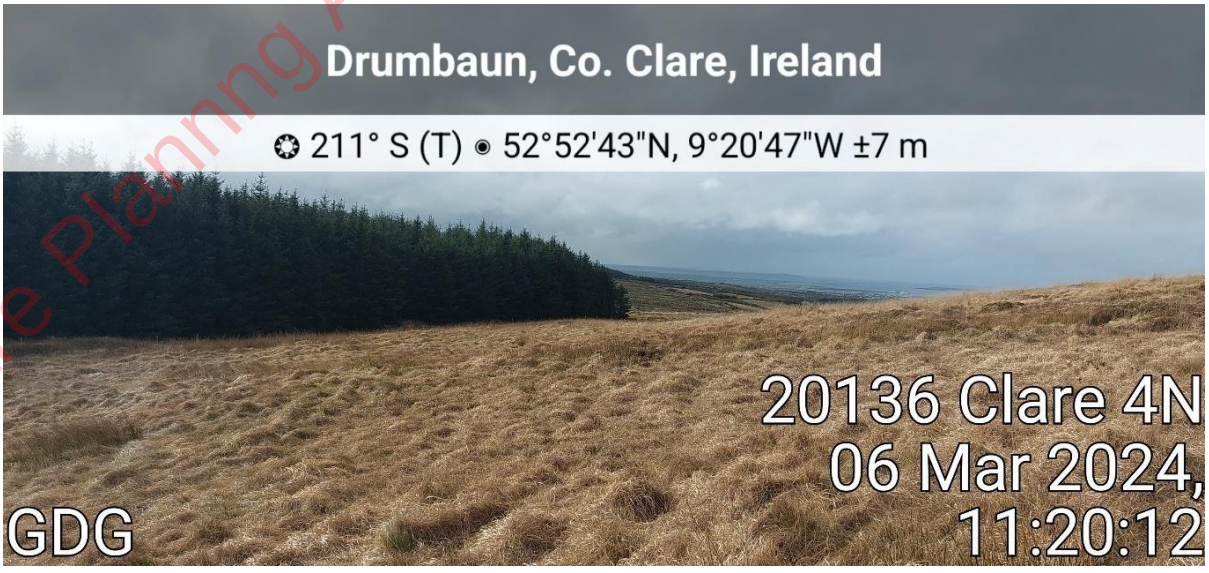


Figure 2-3: Location. Open blanket peat

Figure 2-4: Eroding peat hag at the T6 location

Figure 2-5: Afforested blanket peat close to T5

The following GI campaigns were carried out:

- GDG (April 2022): 7 peat probes
- GDG (July 2023): 85 peat probes and 4 hand shear vanes.
- GDG (September 2023): 33 peat probes.
- GDG (October 2023): 98 peat probes.
- GDG (March 2024): 62 peat probes
- Irish Drilling Ltd (September 2024): 84 peat probes, 19 hand shear vanes, 9 Russian gougecores, 4 rotary core boreholes and 17 trial pits

In summary, intrusive GI was carried out at a total of 422 locations. The investigation locations are outlined in Appendix J of the PSRA (EIAR Technical Appendix A08-02), and considered the followingcriteria:

- Spatial distribution of the proposed infrastructure;
- Distance between probe points to avoid interpolation of peat depths across large distances;

- Changes in slope angle, as peat depths are likely to be shallower on steeper slopes;
- Changes in vegetation, which can reflect changes in peat condition;
- Changes in hydrological conditions; and
- Changes in land use.

A raster map was created in GIS software, presenting the interpolated peat depth from the peat probe points using the Inverse Distance Weighted (IDW) method. The interpolated peat depth plan for the Proposed Development is shown in Appendix A.2. The trial pit logs can be seen inAppendix A09-03, A of EIAR Chapter 9: Lands, Soils, Geology and Hydrogeology.

2.4 GROUND INVESTIGATION SUMMARY AND PEAT CONDITIONS

The GI indicates that the Proposed Development comprises a mixed upland environment characterised by patches of blanket peat interspersed with bedrock outcrops. The trial pit data (Appendix A09-03) indicates that the superficial deposits comprise peat underlain by silty, gravellyclay containing gravel and cobbles, extending to depths of up to 6m. The thickness of peat encountered during intrusive investigations ranges from 0m to a maximum of 4.80m, with the deepest peat recorded in TP111 at 3.30m below ground level (bgl). In the remaining trial pits, peat depths ranged between 0m and 2.5m bgl, with a median peat depth of 0.45m recorded across the Proposed Development.

Most areas of the Proposed Development have little or no peat, with thin blanket peat (typically

<1m thick) predominating. Peat depths at all turbine locations, except for T03, are less than 1m, andno peat was recorded at T04. Two isolated areas of deeper peat or soft material were identified. Thefirst is located approximately 40m north of T05, near the Proposed Development boundary, and is associated with a permanent hydrological feature identified on the OSI 6-inch mapping as Aillbrack Lough. This area to the north of T05 does not interact with proposed infrastructure. The second areais situated between T02 and T06 within a forestry region, where deeper peat of depth up to 4.68m interacts with the alignment of the proposed access road. The distribution of peat depths is illustrated in Figure **2**-**6**. Of the recorded measurements, 82.7% indicate peat depths of less than 1m, while 96.2% are less than 2m.

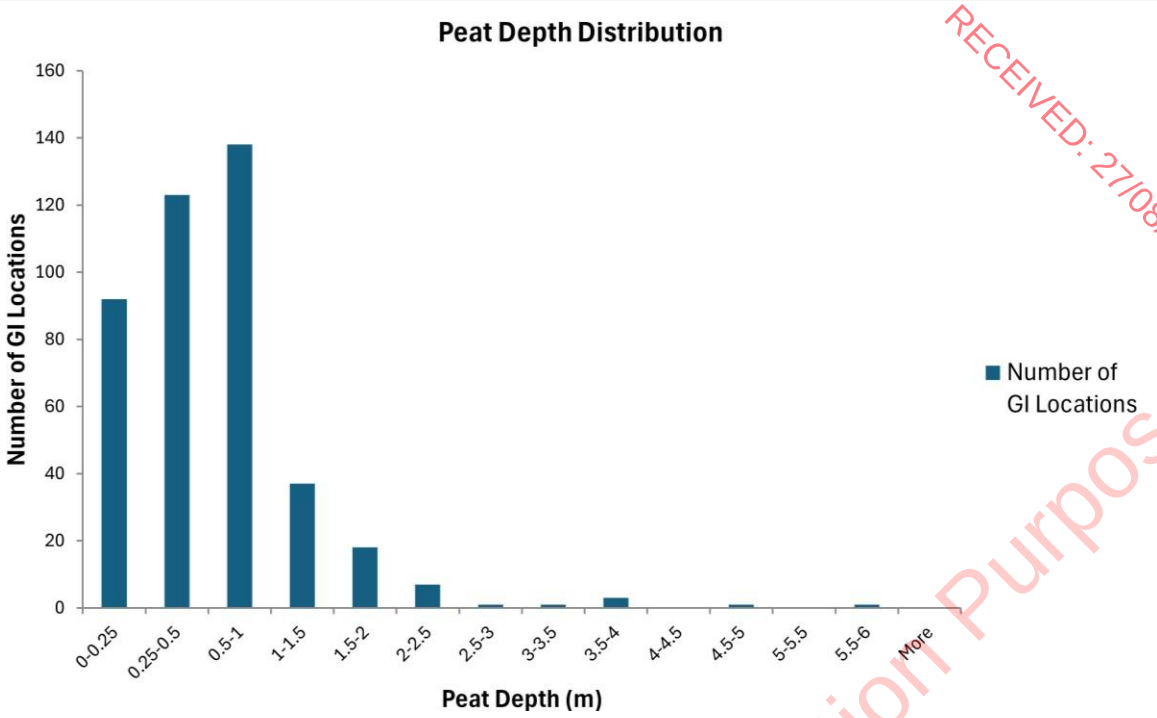


Figure 2-6: Histogram of peat depth results across the Proposed Development

The peat surface condition varies across the site. Some areas have been drained for forestry but remain unplanted, while others have forestry in place. Additionally, certain areas have undergone historic peat extraction, with heathland vegetation now covering the surface. A large variation in thelevel of decomposition and humification was observed throughout the peat body. This generally appeared to increase with depth. Most of the peat material identified is logged as fibrous and pseudo-fibrous, indicating that it is of a higher strength material and will be suitable for landscaping and reinstatement adjacent to proposed infrastructure locations. Hand shear vanes were carried outin 29 locations across the site, with strength results ranging from 4-50kPa.

2.4.1 CLASSIFICATION OF NON-PEAT SPOIL

As noted in Section 2.4, subsoils across the Proposed Development typically comprise granular and cohesive glacial material. Trial pits encountered stiff gravelly clays, gravelly sands, sandy gravels, andcohesive and silty deposits. The Geotechnical Interpretative Report (A08-03) discusses geotechnical soil parameters, including Standard Penetration Test (SPT) N values, bulk unit weight of soil and rockmaterials, undrained shear strength of cohesive soils, effective friction angle, and the drained and undrained Young's moduli of the soil materials encountered. The stiff, gravelly clays are interpreted as cohesive glacial tills, while the sands and gravels are interpreted as granular glacial tills.

Additionally, soft bluish-grey, slightly sandy, slightly gravelly, clayey silt and firm bluish-grey clay with occasional cobbles and boulders have been encountered. The silt and clay contain gravel, cobbles, and boulders composed of shale, sandstone, and mudstone, varying in angularity and shape. A proportion of the cohesive glacial till may be suitable for bulk fill and safety berms. However, the remainder of the cohesive till, silt, and clay materials are not deemed suitable for use as engineering fill and will, therefore, be classified as

spoil. The estimated volume of spoil material generated by construction at the Proposed Development is outlined in Section 7.

2.5 PEAT STABILITY RISK ASSESSMENT

The stability risk at infrastructure locations across the Proposed Development has been classed as negligible based on the findings of the PSRA (EIAR Technical Appendix A09-02). Areas of restricted

stockpiling and construction have been identified as part of the PSRA (EIAR Technical Appendix A09-02) and are presented in Appendix A.2.

The restriction areas consist of:

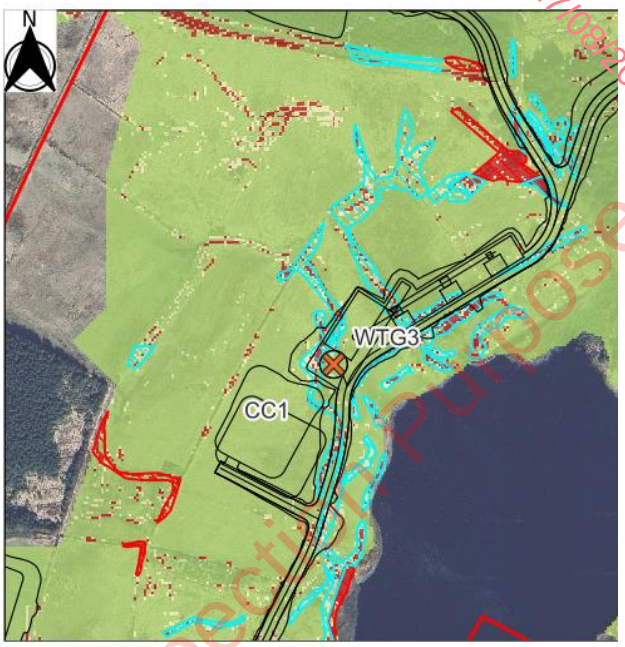
- Safety buffer areas – areas which **will be restricted for construction.** No development or construction activities will be carried out in these areas, including plant movements, peat oroverburden excavation or reinstatement or placement of peat or any overburden materials.
- Peat stockpile restriction areas are **not restricted for construction but shall not be used forthe stockpiling of peat/side casting or overburden materials**. The Proposed Development footprint may occur within these areas, but peat placement and reinstatement are not permitted within these buffers. Any material excavated from within the peat restriction areas must be removed immediately and safely reinstated in a designated area elsewhere.

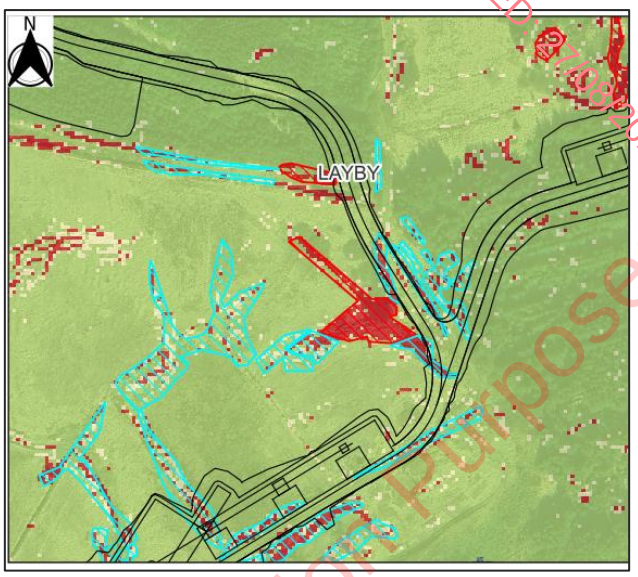
As outlined in the PSRA (EIAR Technical Appendix A09-02), the development of the safety buffer areas is a semi-automated approach which combines the developed polygon areas of the Scottish Executive (2017) Factor of Safety (FoS) results, areas of risk identified during the Proposed Development walkovers and potential risk areas identified from the examination of peat depths and Proposed Development topography. Safety Buffer Areas are outlined in Appendix A.2.

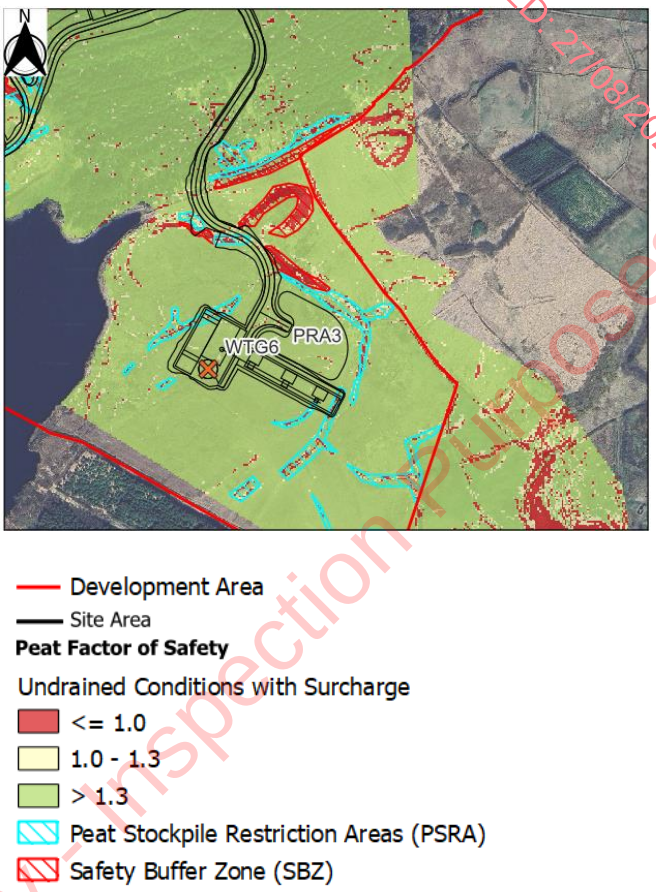
Peat stockpile restriction areas are locations where a stability risk occurs with the addition of a 1m surcharge only and is otherwise considered stable in its natural state. The risk at these locations can be examined by looking at the geometry of the local slope and the proposed construction methodology, and the hazards will be mitigated with restricted peat and spoil placement and limitedplant operations within the area.

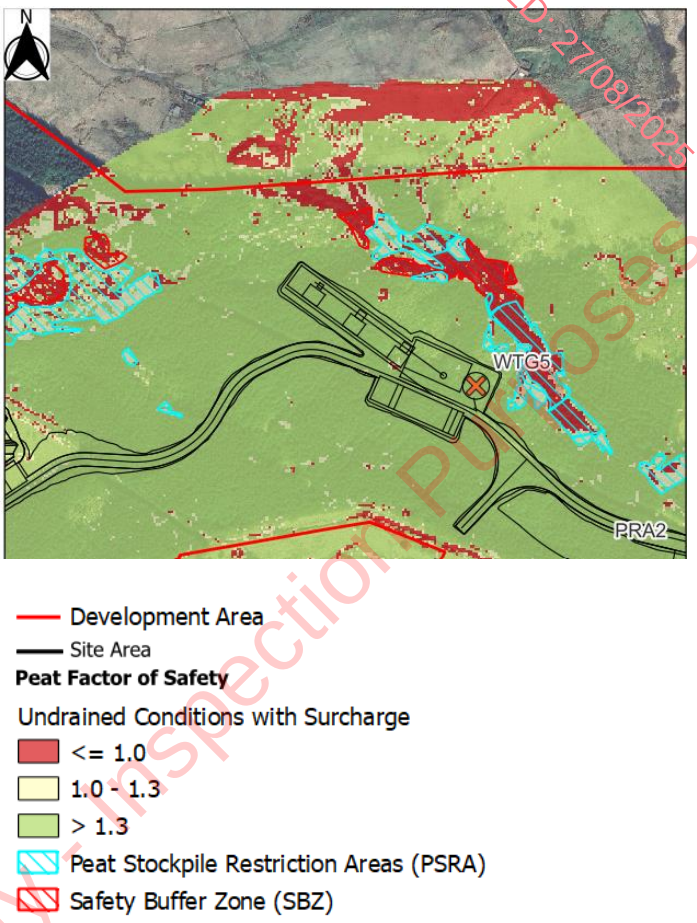
The stockpile restriction areas are outlined in Appendix A.2, and some of the locationswhere key infrastructure encounter safety buffer zones are outlined in Table 2-1.

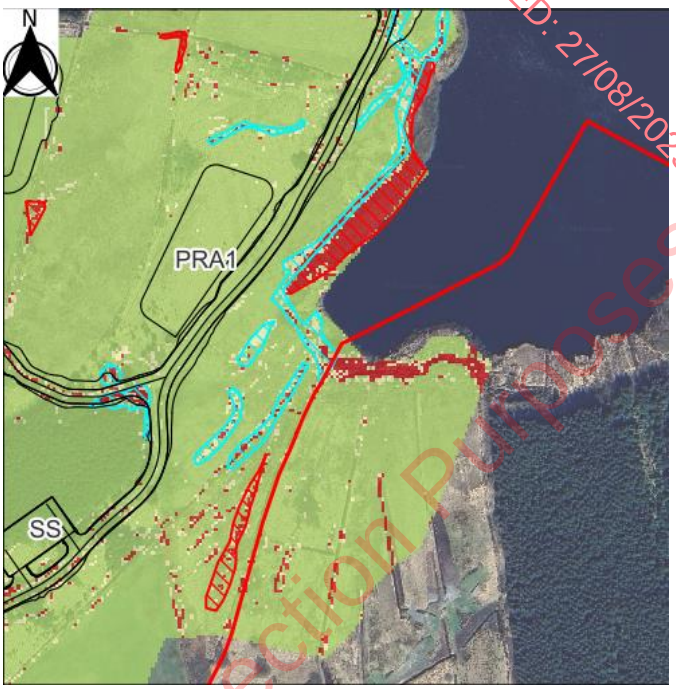
Table 2-1: Safety Buffer Zones and Peat Stockpile Restriction Zones at Key Locations

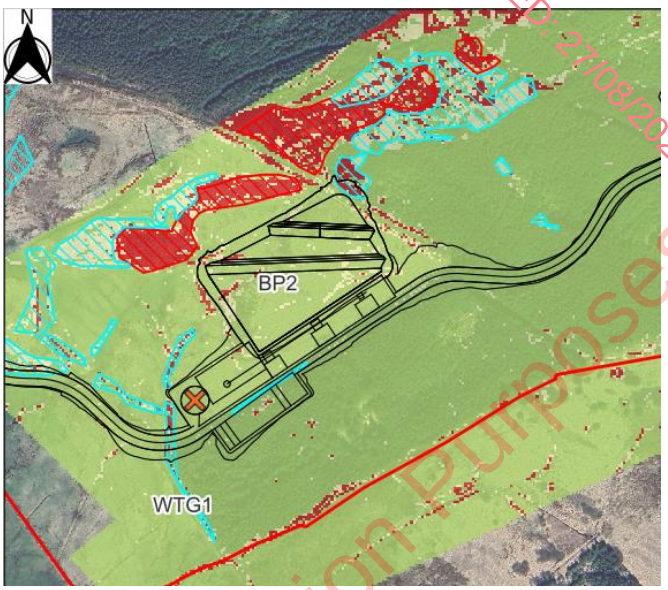
Risk and mitigation	Undrained surcharged FoS analysis
The area at the hardstand and foundation forT3 suggests a FoS of 1 ≤ FoS <1.3 with the application of a 10 kPa surcharge. Based on ground observations and a study of aerial imagery, it is determined that this region of low FoS is attributed to the presence of bedrock outcrops to both the east and west of T3, along with locally deep peat. A study of temporal aerial imagery indicates that no peat cutting was observed within the WTG footprint and hardstand area during the historic review of satellite The low FoS is attributed to the presence of bedrock outcrop rather than an active peat hazard at this location. Peat within the turbine and hardstand footprint will be excavated as necessary to achieve a suitable bearing stratum. Additionally, the ground will be levelled and stabilised locally prior to construction, with appropriate drainage measures implemented to maintain ground stability and prevent peat drying. Any identified safety buffer zones (SBZ) and peat stockpile areas (PSA) will be strictly observedduring construction, ensuring that no works are carried out within SBZ and no peat is stockpiled within PSR areas.	

Risk and mitigation	Undrained surcharged FoS analysis
A small section of the access road north of T3 falls within an area where the FoS is <1 in theundrained scenario with a 10 kPa surcharge. This is attributed to the presence of bedrock outcrops and locally deep peat adjacent to the access road rather than any indication of a peat hazard. While this area has been designated as a safety buffer zone, the peat is confined to a localised pocket with depths ranging from 1 m to 3 m. Given its limited extent, this peat will be excavated to establish a stable foundation for the access track, which will be a founded access track, ensuring a level road profile. Consequently, peat instability is not expected to be a significant hazard in this area. Any identified safety buffer zones (SBZ) and peat stockpile areas (PSA) will be strictly observed during construction, ensuring that no works are carried out within SBZ and no peat is stockpiled within PSR areas.	 Site Area **Peat Factor of Safety** Undrained Conditions with Surcharge <= 1.0 1.0 - 1.3 > 1.3 Peat Stockpile Restriction Areas (PSRA) Safety Buffer Zone (SBZ)

Risk and mitigation	Undrained surcharged FoS analysis
A small section of the access road, located north of PRA3, falls within an area where the FoS is calculated to be 1 ≤ FoS <1.3 in the undrained scenario with a 10 kPa surcharge. However, this is a result of interpolated peat depths over steep slopes near bedrock outcrops, likely overestimating the actual peat depth and producing a conservatively low FoS. The assessment does not indicate an actual peat landslide risk, as the calculated low FoS is an artefact of interpolation rather than reflective of site conditions. Given the presence of shallow bedrock, the slopes in this area do not present a stability concern. Any identified safety buffer zones (SBZ) and peat stockpile areas (PSA) will be strictly observed during construction, ensuring that no works are carried out within SBZ and no peat is stockpiled within PSR areas.	

Risk and mitigation	Undrained surcharged FoS analysis
A small section, northeast of T5, falls within an area where the FoS is calculated to be 1 ≤FoS <1.3 in the undrained scenario with a 10 kPa surcharge. This low FoS is attributed to the presence of locally deep peat north of T5and a combination of bedrock outcrops and locally deep peat to the east of T5. However,the assessment confirms that this does not indicate an active peat hazard, and there is no risk of peat instability affecting the proposed infrastructure. The 0.68-hectare area with FoS <1 has been designated as a safety buffer zone, meaning no construction will take place within this area. While the FoS interpretation reflects conservative assumptions based on locally deep peat and bedrock outcrops, this does not present a concern for the stability of T5 or the proposed development. Any identified safety buffer zones (SBZ) and peat stockpile areas (PSA) will be strictly observed during construction, ensuring that no works are carried out within SBZ and no peat is stockpiled within PSR areas.	

Risk and mitigation	Undrained surcharged FoS analysis
A small section to the east of PRA1 falls within an area where the FoS is calculated to be 1 ≤ FoS <1.3 in the undrained scenario with a 10 kPa surcharge. This low FoS is attributed to the presence of bedrock outcrops near the edge of the lake rather than deep peat. However, the assessment confirms that this does not indicate a peat hazard, and there is no risk of instability affecting the proposed infrastructure. A 0.21-hectare area to the northeast, located approximately 30 m from the access track, has been identified as a safety buffer zone where no construction will take place. While the FoS interpretation reflects a conservative assessment due to the presence of bedrock outcrops, this area does not present a stability concern in relation to the development. Any identified safety buffer zones (SBZ) and peat stockpile areas (PSA) will be strictly observed during construction, ensuring that no works are carried out within SBZ and no peat is stockpiled within PSR areas.	

Risk and mitigation	Undrained surcharged FoS analysis
A small section to the north of BP2 falls within an area where the FoS is calculated to be 1 ≤ FoS <1.3 in the undrained scenario with a 10 kPa surcharge. This low FoS is primarily attributed to the presence of bedrock outcrops, with only isolated areas of peat up to 1.0 m in depth. However, as this isa designated borrow pit, it will be excavated to source rock for the proposed development, effectively removing any localised peat and ensuring a stable formation. While the FoS interpretation reflects a conservative assessment due to the presence of bedrock outcrops, this area doesnot present a stability concern in relation to the development. Any identified safety buffer zones (SBZ) and peat stockpile areas (PSA) will be strictly observed during construction, ensuring that no works are carried out within SBZ and no peat is stockpiled within PSR areas.	 Development Area Site Area **Peat Factor of Safety** Undrained Conditions with Surcharge <= 1.0 1.0 - 1.3 > 1.3 Peat Stockpile Restriction Areas (PSRA) Safety Buffer Zone (SBZ)

It is to be noted that the interpretation of areas where the FoS is calculated to be 1 < FoS <1.3 in the undrained scenario with a 10 kPa surcharge is based on a conservative assessment, primarily

influenced by the presence of bedrock outcrops and isolated pockets of locally deep peat, typically ranging between 1.0 m and 2.0 m in depth. The only location where peat depths of 3–4 m were recorded is north of PRA3, which has been designated as a safety buffer zone, ensuring that no construction will take place within this area.

Across the proposed development footprint, there is no evidence to suggest the presence of an active geohazard. Any localised peat deposits within the footprints of the turbines, access tracks, and borrow pits will be excavated to achieve a suitable bearing stratum, with access tracks beingfounded and borrow pits fully excavated, thereby eliminating any potential stability concerns.

Furthermore, areas identified as safety buffer zones, located outside the development footprint, will be avoided for any construction-related activities, including storage and access works.

With these considerations, the ground conditions are not expected to impact the stability of the proposed development.

3 Handling And Placing Excavated Peat and Spoil

Inappropriate placement of excavated peat and overburden and uncontrolled loading of peat material are considered among the main causes of peat instability and landslide event triggers during the wind farm construction process. The management and control of these activities is key to de-risking peat instability at the Proposed Development.

The following outlines guidelines for the careful handling and placement of peat at the Proposed Development:

- Care shall be taken during peat excavation to ensure it is segregated from other soil types. Therefore, particular care will be taken to review recorded peat depths.
- Peat shall be separated and placed by type, namely the acrotelmic and catotelmic layers.
- Acrotelm (interpreted as the upper 0.5m of peat) is generally required for landscapingand shall be stripped and temporarily placed for reuse as required. Acrotelm strippingshall be undertaken before the main excavations;
- Where possible, the acrotelm shall be placed with the vegetation part of the sod facing the right way up to encourage the growth of plants and vegetation;
- All catotelm peat (peat below about 0.5m depth) shall be transported immediately onexcavation to the designated peat repository areas;
- The careful handling and segregation of peat types will help to optimise the reuse of peat, aiding in the retention of structure and integrity of the excavated peat material.
- Depending on what vegetation is found on the Proposed Development, more fibrous material may be placed at steeper angles. Unconsolidated peat, generally comprising of catotelmic material, is often not suitable for general dressing, and any unconsolidated peat excavated must only be used for reinstatement where such reuse poses no risk of polluting watercourses and evidence can be provided that the required water table at the chosen location can be maintained. However, from a review of the GI logs, which identify predominantly fibrous and pseudo-fibrous material, it is considered that the material excavated will be generally suitable to facilitate:
- Placement in designated Peat Repository Areas;
- Placement in restricted thicknesses on track shoulders and around infrastructurelocations where topography permits; and
- Reinstatement of borrow pits.
- Construction sequence planning shall minimise the time that peat is placed before reuse; however, some temporary peat placement will be required for spoil management and separation of spoil horizons before it can be placed in its reinstatement location. The principles

on which the temporary placement of excavated peat will be based upon the general and particular placement and handling methodologies set out within this section. Temporary placement will be safe as it protects the structure and integrity of the excavated peat subject to prevailing local conditions. Temporary placement of peat must not be carried out in:

- any area outlined as a peat stockpile restriction or safety buffer area in Section 2.5;
- Areas possessing a slope angle of greater than 5°; and
- Areas within 50m of a watercourse.
- Reinstatement of peat and peat turves will be completed during the construction phase at the earliest practicable opportunity to avoid prolonged placement.
- Any temporary placement locations will be in suitably wet conditions or be irrigated to prevent the peat from desiccating, and precautions will be taken to ensure that turves are not allowed to dry out before reinstatement. The condition of the turves will be monitored throughout the duration of placement. Irrigation of peat turves will be agreed upon in advance with the Ecological Clerk of Works (ECoW). Should wetting of turves be required toprevent desiccation, mitigation will be adopted to prevent run-off or discharge to any adjacent watercourses.
- Sequencing of construction activities will be timed to allow peat placement in at least one peat repository area during all phases of construction. It may be necessary to utilise existingroads before the upgrade to allow the placement of peat in the initial phases of construction.
- Plant movements and haul distances related to earthworks activity and peat excavation willbe kept to a minimum.
- Peat and spoil repositories cannot substantially erode or become dry.
- Any material stockpiles or repository locations will be located at least 50m away from watercourses, including ditches/sheughs, to reduce the potential for sediment to be transferred into the wider hydrological system.
- Where possible, excavation will be timed to avoid very wet weather, periods of extremerainfall and/or extended periods of prolonged rainfall.
- Peat and spoil repository locations have been selected to limit rehandling as far asreasonably possible.
- Excavated peat will be placed as close as possible to the immediate area of excavation.
- The Contractor will consult the ECoW to agree on locations for material stockpiles and to avoid potential impacts on sensitive ecological receptors.
- The Contractor will consult with a Geotechnical Engineer and review and take into account the PSRA (EIAR Technical Appendix A09-02) to avoid the risk of peat instability in peat excavations, peat stockpiling and all material stockpiling in areas underlain by peat.

- Runoff from repositories shall be directed through the drainage system, including silt fences, settlement ponds and other drainage measures as appropriate. These details will be outlinedin the Contractor's Construction and Environmental Management Plan.

The following recommendations/best practice guidelines for the placement of peat and spoil concerning specific aspects of the Proposed Development will be considered and taken into account during construction.

3.1 ACCESS ROADS, HARDSTANDS AND OTHER INFRASTRUCTURE:

- Controlled quantities of peat and spoil shall be side-cast adjacent to access roads and other infrastructure only where it can be placed in a stable formation, i.e. where the topography and ground conditions allow.
- Side cast peat material shall consist of the acrotelm (upper layer) only and be landscaped and shaped to aid in reinstating the construction into the surrounding environment.
- Cohesive spoil may be used to construct safety berms alongside access roads to heights ofno greater than 1m and slopes not exceeding 1(V):2(H) unless a site-specific assessment during detailed design indicates a greater height and angle is safe.
- Peat shall only be cast to safe heights and slope angles, considering the topography and the ground conditions. This height shall be no more than 1m, and the slopes shall be not greaterthan 1 (V): 3 or 4 (H) unless a site-specific assessment during detailed design indicates a greater height and angle is safe.
- The effect of drainage or water runoff shall be considered when placing peat or spoil adjacent to access roads. Peat and spoil material shall not interfere with drainage, riskingthe blocking of drainage systems or runoff into drainage systems.

3.2 PEAT REPOSITORY AREAS:

- Peat repository areas (PRAs) have been identified at locations where the topography (slope angle <5°), peat depth, resulting stability assessment (FoS of >1.3 for 1m peat surcharge) and other environmental constraints (including 50m buffer from all watercourses) have allowed. These areas are designated for the permanent placement of up to 1m of peat material. Typical details of each PRA are included in Appendix B.
- A cell berm will be constructed similarly to the peat repository area details outlined in Appendix B. This cell berm will help to prevent the flow of saturated peat material. The stone berm will be constructed with a sufficiently coarse granular material or rock to enablethe drainage of the placed peat material and prevent any instabilities within the repository area.
- The stone cell berm will require a geotextile separator. The stone cell berm will be constructed using low-ground pressure machinery working from bog mats where necessary.The founding stratum for each stone buttress will be inspected and approved by a competent geotechnical engineer.

- The height of the cell berm constructed will be greater than the height of the placed peat &spoil to prevent any surface peat runoff. Berms up to 1.25m in height will be required, subject to detailed design.
- The cell berm is subject to the detail designer's specification; however, some peat excavation or installation of a shear key may be required to prevent instability of the stored material. The shear key will comprise an excavation below the existing ground level beneaththe cell berm to provide resistance against lateral forces.
- Where possible, the placed peat and spoil surface will be shaped to allow efficient runoff of surface water from the peat and spoil repository areas.
- Silting ponds will be required at the repository area's lower side/outfall location.
- Intermediate berms or buttresses of spoil material may be installed within the peat repository area to aid in the placement and stability of the peat material. These berms willbe shaped to align with the contours of the repository area.
- The Contractor shall make every reasonable effort to promote growth in the peat repository areas following the placement of peat and completion of construction stage activities. Upper acrotelm layers shall be placed on the surface the right way up to promote vegetation growth. This growth will aid in stabilising the placed peat material and help in preventing it from becoming saturated following heavy periods of rain.

4 Access Roads

Existing roads will be upgraded, and new access roads will be constructed at the Proposed Development. The following factors are considered in the preliminary proposals for road construction types:

- Constructability;
- Serviceability requirements for construction and wind turbine delivery and maintenancevehicles;
- Peat depth;
- Horizontal longitudinal and cross-fall gradient of the roads;
- Minimisation of excavation arisings; and
- The requirement to minimise disruption to peat hydrology.

The above key principles are used to determine the road type and will be finalised with regard to the prevailing ground conditions encountered during the confirmatory investigation stages.

Floating roads minimise the impact on the peat, particularly peat hydrology. As there is no excavation required, no peat arisings are generated. However, a founded-type access road is more suitable if the underlying peat has an insufficient bearing capacity or is due to topographic restrictions or stability concerns.

The preliminary road construction details proposed for the development are summarised below in Table 4-1. The details of the road construction types are included in Appendix C. The distribution of proposed road construction types is shown in Appendix A.4.

Table 4-1: Road construction types

Construction method	Appendix C Detail reference	Construction type
Construction of new roads	Sheet 2-3	Founded
	Sheet 1	Floating
Upgrade of existing access roads	Sheet 1-2	Upgraded

The design criteria for the suitability of floated access roads used for the Proposed Development align with the Scottish Executives Best Practice guidelines document. Some sections of the proposed access track are considered suitable for floated construction when the following criteria are met:

- Maximum slope in any direction is less than 5%,
- Peat depths are greater than 1m,
- The resulting drained and undrained slope stability assessment factor of safety results are greater than 1.3, without and with a 10kPa surcharge.

The main restricting criteria for floating roads are the peat depth and slope angle, as many of the deep areas of peat are in short spans of access roadways, which can cause difficulties in creating adequate transition zones between founded and floated roads.

The majority of the new roads (3350m) will be a founded construction with 880m of floated road. A methodology and details are provided for upgrading the existing founded and floated access roads.

General construction methodologies are presented in the following sections. This methodology aims to minimise impacts on the stability of the peat. These proposed methodologies will be informed by detailed design following further GI. The methodology is not intended to cover all aspects of construction, such as drainage and environmental considerations. Inspection and monitoring plans for each method will be implemented during construction to monitor peat stability.

4.1 CONSTRUCTION METHODOLOGY FOR NEW ROADS

The general methodology to construct new founded roads (see road construction detail drawings in Appendix C) is presented below.

- Excavation of the new access road to competent strata (see Section 3 for guidance on correctly handling and storing the different peat layers). Maximum excavation side slopeswill be 1:1.5.

4.2 DRAINAGE SHALL BE INSTALLED TO DIVERT SURFACE AND GROUNDWATER FROM THE CONSTRUCTION AREAS.

- A layer of geogrid/geotextile may be required at the base of the excavation. To be confirmedat detailed design.
- Placement of granular fill in layers following the designer's specification.
- Access roads are to be finished with a granular running surface across the full width of theroad.

The general methodology to construct new floating roads (see road construction detail drawings presented in Appendix C) is presented below.

- A geotextile-geogrid composite layer is rolled out directly on the peat surface following the designer's specification.
- Placement of granular fill and reinforcing geogrids in layers following the designer's specification, with due regard to any settlement and deformation of peat anticipated at the access track.
    a) Cross-drains shall be installed within the road to divert surface and groundwaterfrom upslope to downslope.
    b) Stone delivered to the floating road construction area shall be end-tipped onto the constructed floating road to avoid excessive impact loading on the peat due to concentrated end-tipping. Direct tipping of stone onto the peat shall not be carriedout.
    c) Stone will be spread and placed from the constructed floating road onto the peatsurface using an excavator.

- Access roads are to be finished with a granular running surface across the full width of theroad.

No excavations (e.g., drainage or peat cuttings) shall be carried out within 5m of a completed floated road edge or at a distance determined following an inspection by the Contractor's Geotechnical Engineer.

The presence of excavations can destabilise the road. Where required, for example, for the installation of internal cabling offset from the footprint of the floated road, temporary excavations will be excavated in short lengths and backfilled as soon as practicable. These works will be designed and supervised by the Contractor's Geotechnical Engineer.

Spoil materials can be used for landscaping along the edge of access road sections to aid with the enhancement of the peatland areas and embed the access roads into the surrounding environment where slope and ground conditions allow, limiting their environmental impact. Consideration must be given to the placement of excavated materials in areas of potential instability or additional mitigation requirements, as highlighted in the PSRA (EIAR Technical Appendix A09-02). Where permissible, excavated materials will be placed to a maximum height of 1m and stockpile widths of a minimum of 2 to 3m unless site-specific designs allow larger volumes to be placed. Large stockpiles of materials shall not be placed on or adjacent to floated access roads to avoid bearing failure of the underlying peat.

Peat placement or landscaping will be carried out only in areas where it is topographically contained and does not create a propagated landslide risk – see PSRA (EIAR Technical Appendix A09-02).

For this development, particular buffer areas, including construction buffers, have been highlighted in the PSRA (EIAR Technical Appendix A09-02) and are presented in Appendix A.

4.3 CONSTRUCTION METHODOLOGY TO UPGRADE EXISTING ROADS

An indicative methodology to upgrade existing founded roads (see road construction detail drawings presented in Appendix C) is presented below.

- Excavation on one or both sides of the existing access road to competent strata. Excavationswill be benched into the existing road construction.
- Placement of granular fill and reinforcing geogrids in layers following the designer's

specification.

- Overlay of the existing access road with selected granular fill following the designer's specification. Where coarse granular fill has been used in the existing road make-up, a layerof geogrid will be placed on top.

Where there are cross slopes, any road-widening works required will be carried out on the upslope side of the existing access road, where possible. Particular design details will be required at the detailed design stage at the transitions between floating and founded roads to reduce differential settlements between the two construction types.

5 Excavation of Turbine Bases, Hardstandings, and Infrastructure Foundations

An assessment of the ground conditions encountered in the GI indicates that the Proposed Development's ground conditions are generally blanket peat with some areas of glacial till and bedrock outcrops. Peat depths at all turbine locations, except for T03, are less than 1m, and no peat was recorded at T04. Two isolated areas of deeper peat or soft material were identified. The first is located approximately 40m north of T05, near the Proposed Development boundary, and is associated with a permanent hydrological feature identified on the OSI 6-inch mapping as Aillbrack Lough. This area to the north of T05 does not interact with the proposed infrastructure. The second area is situated between T02 and T06 within a forestry region, where deeper peat of up to 4.68m interacts with the alignment of the proposed access road.

Where peat is present, the material encountered beneath it is generally a layer of soft to firm cohesive glacial till or sandy gravelly granular glacial till. Generally, for constructing any structure or platform foundation, such as a turbine base, hardstand or substation, removing all soft material is required to a depth where a suitable bearing material is encountered.

The non-peat excavated material must be properly managed and, as discussed in Section 2.1.1, will be assessed for reusability, and suitable granular material will be reused in other elements of the proposed wind farm design.

During turbine construction, peat and weaker soils will be excavated to a competent stratum for the foundation and a small working area surrounding the foundation footprint. Turbine bases of 22m in diameter are proposed, with detailed foundation design dictated by the local ground conditions and the requirements of the turbine supplier.

The design of the turbine foundations is subject to confirmatory GI and assessment.

Similarly, all turbine crane hardstands will be founded on a suitable bearing material requiring the excavation of all peat and weak soils, where present. The platform will be constructed in the excavated area using a granular fill. Following the placement of the platform, the excavated peat can be reused to batter the platform edges and landscape the platform back into the existing topography.

The mean peat depths collected from the GI at each foundation and hardstanding location are used to calculate the estimated peat volumes.

6 Borrow Pits

Excavation of two borrow pits (BP1 and BP2) are proposed as part of the Proposed Development, refer to Appendix A and Appendix D. GI consisting of two trial pits at BP1 (TP106 and TP108) and one trial pit at BP2 (TP107), has been used to assess the peat and overburden at each proposed borrow pit location. A limited amount of peat excavation will be required as part of the excavation of each proposed borrow pit, with an average peat depth of 0.5m recorded at BP1 and an average peat depth of 0.65m recorded at BP2. At this stage, it has been assumed that peat will be cut to a maximum 1V:3H slope at the perimeter of the borrow pit. Both borrow pits will also require the excavation of a limited amount of non-peat overburden. The overburden at each borrow pit location was interpreted as glacial till/weathered rock, with a thickness of 1.5m at BP1 and a thickness of 0.45m at BP2. At this stage, it has been assumed that non-peat overburden will be cut to a maximum 1V:2H slope at the perimeter. The overburden excavated from the borrow pits will be reinstated within the proposed borrow pits once extraction is completed.

Based on the available geological mapping, the bedrock at each borrow pit location comprises the Central Clare Group, comprising grey/dark grey cyclothemic sequences of mudstone, siltstone, and sandstone of fluvio-deltaic & basinal marine (turbiditic) origin. The basal mudstone is usually 7-18m thick and laminated. In general, the mudstones are overlain by laminated to massive grey siltstones followed by thick, laminated and cross-bedded sandstones.

The suitability and processing of the bedrock material will be subject to further GI and laboratory testing assessment at the detailed design stage to confirm the suitability and acceptability of the fill material for certain applications (e.g. Class 1, 6N, UGM-A, etc). Due to uncertainty regarding the suitability of the available rock, it has been assumed at this stage that the material extracted from the borrow pit will be suitable for use as general fill (e.g. Class 1) but that selected fill, e.g. 6N2, will need to be imported from local quarries. At this stage, it has been assumed that 65% of the excavated rock will be suitable for use on-site. The remaining unsuitable material has been classed as spoil.

The excavated rock from the borrow pit will be used in the construction of the infrastructure elements (crane hardstands, roads, etc.). An example excavation profile showing the profile through a borrow pit is shown in Appendix D.

Slopes within the excavated rock formed around the perimeter of the pit borrow pits will be formed at stable inclinations to suit local in-situ rock conditions, with a cut slope of 1:1 assumed at this stage. The rock within each proposed borrow pit footprint will be removed by either breaking or ripping depending on its excavatability, which will be determined from a detailed GI carried out at each of the proposed borrow pits.

Upon removal of the overburden and rock from the proposed borrow pit, it is proposed to reinstate the borrow pit using surplus excavated peat and spoil generated onsite during the construction of the Proposed Development. The contractor will be required to develop the borrow pit to allow the excavated peat and spoil to be placed safely. The final profile of the peat and spoil will vary across the base of the borrow pit. The volumes assessment carried out at the borrow pit suggests that the

available stone fill capacity is in excess of the stone requirements at the site, allowing for contingency should any design changes be required following detailed design. The borrow pits will only be used to extract fill required for the Proposed Development, no fill from the borrow pits will be exported off site. The Contractor will develop the borrow pit to ensure that peat placement capacity is maintained.

The proposed design incorporates construction of upstands of intact bedrock within the borrow pits to help contain the reinstated peat and overburden, and the Contractor may further divide this into

to cells using berms. This will allow for the safe placement and grading of the materials usingdumper trucks and excavators.

A geogrid or geotextile material may be used to aid in the strengthening of the upper surface of the deposited material within the proposed borrow pit and to aid in the promotion of growth and rehabilitation of the borrow pit area.

An indicative layout of each of the proposed borrow pits is presented in Appendix B. Refer to Figure 6-1 and Figure 6-2 for photographs of the borrow pit locations taken during the site walkovers.

Figure 6-1: Proposed BP1 location.

Figure 6-2: Proposed BP2 location.

7 Peat And Spoil Volumes

The GI and design layout drawings have been reviewed to inform this section of the PSMP. Peat and spoil volumes can be estimated based on the results of intrusive investigations and the Proposed Development's design.

Peat and spoil excavation will be required for the following elements of the Proposed Development:

- Founded and upgraded access road and associated drainages;
- Turbine hardstands and foundations (including crane pads);
- Borrow Pits;
- Cable Trenches and
- Substation.

A preliminary estimate of the approximate volumes of excavation and fill needed to construct the Proposed Development was carried out. This was produced using typical limits to road and hardstand gradients and using road and hardstanding thickness typical to the ground conditions of the Proposed Development.

7.1 PEAT AND SPOIL EXCAVATION VOLUMES

The peat depths determined in the GI were reviewed at the infrastructural elements of the Proposed Development, such as each turbine, crane hardstand, borrow pit location and access tracks. The calculated peat and spoil volumes include a 20% contingency factor to account for bulking.

A breakdown of the estimated peat excavation volumes is summarised in Table 7-1.

Table 7-1: Summary of preliminary excavation volumes

Infrastructure Item	Excavated peat volume (m^3)*	Excavated spoil volume (m^3) **
Floated Access Roads - New	0	0
Founded Access Roads -ExistingRoads	6,680	5,030
Founded Access Roads -New Roads (Including widening)	22,260	12,310
Temporary Compound	0	0
Turbine foundations	2,670	1,110
WTG Hardstands	19,390	48,760
Substation	1,340	0
Borrow Pit	7,700	58,290
Total	60,040	125,500

* The volume of peat material excavated has been estimated using the average peat depth calculated acrossthe footprint of the structure to define the basal surface of the peat.

**The spoil volume includes all excavated glacial till, soft clay and weathered bedrock.

7.2 PEAT REINSTATEMENT VOLUMES

Peat generated during construction can be reused or reinstated across the development. Peat may be reused for landscaping on edges of constructed infrastructure (including road verges and around hardstand areas) and shall be placed as soon as reasonably practical after construction. This shall act as part of the landscaping enhancement and tie in with the surrounding topography, reducing visual impacts and restoring the existing habitat.

Several considerations have been made in the estimation of reinstatement volumes:

- A conservative reinstatement volume of 2m^3 per linear metre (lin.m) along the new access roads (1m^3 placed on each side) has been used.
- A conservative reinstatement volume of 1m^3 per lin.m on existing access road widenings, accounting for placement of 1m^3 on one side only of the proposed widening.
- A conservative reinstatement volume of 1m^3 per lin.m on existing access road upgrades, accounting for placement of 0.5m^3 on each side of the roads to be upgraded.
- An estimated reinstatement capacity of 3m^3 per external lin.m perimeter of hardstand areas such as the crane hardstands and temporary construction compounds.
- Three peat repository areas have been identified for the permanent placement of peat, aswell as for borrow-pit reinstatement.
- It is assumed that an average of 2m of peat can be placed to reinstate the borrow pits, witha 20% reduction in reinstatement capacity applied to account for rock buttresses.

Potential peat and spoil reuse/reinstatement volumes have been estimated and are also presentedin Table 7-2 and Table 7-3.

7.3 SPOIL REINSTATEMENT VOLUMES

Non-peat spoil generated during construction can be reused or reinstated across the development. Several considerations have been made in the estimation of reinstatement volumes:

- It is assumed that a proportion of excavated glacial till, estimated at 20,870 m³, can be re- used as bulk fill, classified as Class 1 and Class 2 material. This is subject to further detailed GI and laboratory testing to confirm suitability for re-use. It is assumed that this material, provided it is found to be suitable, can be used for the construction and upgrading of embankments and berms associated with the construction of new access tracks. This material is considered suitable for reinstatement and general earthworks where stable fill isrequired. Geotechnical parameters for the glacial till are available and can be referenced in the Geotechnical Interpretative Report (A08-03).

- An estimate of 50% of the total cohesive spoil volumes has been considered as available for reuse in the construction of safety berms across the Proposed Development.
- It is assumed that an average of 2m of spoil can be placed to reinstate the borrow pits, witha 20% reduction in reinstatement capacity applied to account for rock buttresses. This will consist of any excavated soft silt/clay unsuitable for re-use.
- An estimated additional reinstatement capacity of 19,670m³ is assumed to be available for backfilling at the turbine foundations and hardstands.

Table 7-2: Summary of preliminary peat reinstatement volumes

Comment	Peat Reinstatement volume (m^3)	Comments
Founded Access Roads - Existing Roads	2,200	Placement of arisings 1m3/lin.m alongside upgraded roads, where topography allows..
Founded Access Roads -New Roads (Including widening)	4210	Placement of arisings 2m3/lin.m alongside existing and new founded roads, where topography allows
Temporary Compound	600	Placement of arisings 3m3/lin.m of external compound perimeter where topography allows.
Turbine foundations	1,080	Placement of arisings 3m3/lin.m of external foundation perimeter where topography allows.
Hardstands	10,030	Placement of arisings 3m3/lin.m of external hardstand perimeter, where topography allows
Substation	270	Placement of arisings 3m3/lin.m of external substation perimeter where topography allows.
Borrow Pit	28,980	2m peat reinstatement within borrowpits, with a reduction to account for stone buttresses.
Peat Repository Areas	16,140	1m peat placement within peat repository areas, with a reduction to

Comment	Peat Reinstatement volume (m^3)	Comments
		account for granular cell berms.
Total	63,510	

Table 7-3: Summary of preliminary spoil reinstatement volumes

Comment	Spoil Reinstatement volume (m^3)
50% Reinstatement of Total Volume for Use in Safety Berms	61,030
Spoil Re-used as Bulk Fill	20,870
Borrow Pit Reinstatement	28,980
Reinstatement at Hardstands	19,670
Total	130,550

The volumes stated in Table 7-2 and Table 7-3 reflect normal earthworks practice where volumes of cut and fill are evaluated on a $1m^3$ cut to 1 m^3 filled basis. It is acknowledged that bulking can occur where placed soils occupy a greater volume due to a reduction in density. It is considered that bulking will be offset to a considerable degree by the compaction of soils during placement and subsequent settlement to achieve the volumes outlined.

At the construction stage, the peat stability risk assessment will be updated to include consideration of the peat stability and landslide risks arising from variations to the layout which may occur during the construction stage.

A preliminary assessment has been undertaken to assess peat and spoil material placement and reinstatement. This assessment indicates that stability is acceptable. A detailed assessment must be undertaken as part of the detailed design when locations are confirmed and additional GI information becomes available.

The Contractor will conduct a confirmatory construction stage PSRA to investigate the peat stability and landslide risks arising from variations to the layout that may occur during the detailed design and/or construction stage.

7.4 PEAT AND SPOIL BALANCE

The volume balance of excavated and reinstated peat is outlined in Table 7-4. This table outlines the estimated volumes of peat excavation and the reinstatement volumes as outlined in Sections 7.1 and 7.2. A negative value (deficit) indicates that reinstatement capacity exceeds the supply of excavated peat or spoil and that surplus capacity is available.

Table 7-4: Peat and spoil balance assessment

ITEM	SUPPLY	DEMAND	BALANCE
	Excavation Volume (m^3)	Reinstatement Capacity (m^3)	Surplus (+) or Deficit (-) (m^3)
Peat Balance	60,040	63,510	-3,470
Spoil Balance	125,500	130,550	-5,050
TOTAL	185,540	194,060	-8,520

The preliminary earthwork volume summary indicates that the development's peat and spoil placement capacity, provided once the peat repository areas and borrow pits are reinstated,exceeds the volume of peat excavated for the various infrastructures.

The earthwork volume summary indicates that the Proposed Development has sufficient capacity for peat placement, exceeding the volume of peat excavated for the associated infrastructure.

8 Guidelines For Good Construction Practice

Inappropriate storage of excavated peat and overburden, as well as uncontrolled loading of peat material, is considered one of the main causes of peat instability and landslide event triggers during the wind farm construction process. It is required that the construction method statements for the project also consider, but are not limited to, the guidance documents listed in Section 1 and the recommendations and requirements outlined throughout this document.

The risk of instability at all infrastructure elements has been classified as negligible based on the assessment undertaken in the PSRA (EIAR Technical Appendix A09-02). Mitigation measures in relation to peat instability are discussed in further detail in section 6 of the PSRA (EIAR Technical Appendix A09-02).

The general requirements for the management of peat and spoil materials and the mitigation of peat instability at the Proposed Development are:

- A Project Geotechnical Engineer shall be appointed to oversee peat excavation andmanagement for the construction stage;
- Placement of peat material, including temporary and side casting, shall be carried out in the permitted areas only. No peat material shall be stored, side cast, or used for landscaping in the designated Safety Buffer Areas;
- Excavated peat shall not be stored on-site and will be immediately moved to the designated peat repository areas. Acrotelm (upper) peat material will be used as landscaping material where topography allows and the detail designer has assessed the stability risk;
- Peat and spoil will only be placed in the proposed repository areas or reused for landscaping.The velocity of water flows within drainage systems will be controlled using check damns, and the uncontrolled release of water onto slopes can create a landslide risk and must be avoided;
- All earthworks shall be designed by a competent geotechnical designer, informed by a post-consent detailed GI campaign. This investigation will include intrusive methods, such as trial pitting and borehole drilling, with a specified suite of in-situ and geotechnical laboratory testing to further assess the engineering characteristics of the infrastructure locations;
- All construction requiring cut and fill earthworks requires a robust monitoring and inspection programme. The details of this inspection programme will depend on the purpose and methodologies of the works and the ground conditions;
- A risk assessment and method statement (RAMS), which considers the potential causes and mitigations of peat instabilities and landslides, is required and shall be regularly communicated to all site staff. An observational approach by all site staff to the ground conditions and the risks will be promoted, and any changes in the ground or site conditions will be reported and the risk dynamically assessed; and

- Regular briefing of all site staff (e.g. toolbox talks) to provide feedback on construction and ground performance and to promote reporting any observed change in ground conditions.

9 Risk Register

Table 9-1: Risk register.

Ref.	Risk	Cause	Mitigation
1	Excavation of larger quantities of peat than expected	Increase in peat depth encountered	This report outlines the calculations carried out in the peat balance exercise. The report outlines the volumes of peat excavation required for the construction of the Proposed Development and the capacity for the development for peat placement or rehabilitation, concluding that the peat balance is satisfactory for the construction of the Proposed Development. The peat depths used are developed from the GI, including peat probes, trial pits and hand shear vanes. Peat material can vary largely locally and the risk of missing a local deep area of peat may exist. An increased density of GI was carried out in the areas of proposed infrastructure. However, some areas had limited or no access and so GI are limited. A conservative estimate of peat volumes has been taken into account. Road construction types have been considered based on a threshold of a minimum 1m peat depth for floated roads. If further GI changes the peat depth calculation in areas proposed for floated road construction, or if this threshold is altered, then the peat excavation may change accordingly. Further GI will be required during the detailed design and construction stage to assess peat depths and strengths. This will be carried out by the detail designer and the Contractors' team. The design team will develop their own peat balance calculation to satisfy and de-risk the possibility of larger peat excavation volumes being encountered at these locations.
2	Inadequate repository space for excavated peat	Inadequate peat reinstatement volumes	The peat balance calculation has considered a conservative estimate of the peat reinstatement quantities. Following detailed design, it is likely that the reinstatement volumes will be able to be increased, targeting topographically confined areas for increased volume of side casting while remaining in compliance with the requirements outlined in this PSMP and industry best practices. It is assumed that a suitable construction methodology and project timeline can be developed by the construction stage contractor and design team to manage peat excavations and placement areas effectively.
3	Peat slippage	Overloading of in-situ peat by sidecasting	The PSRA report (EIAR Technical Appendix A09-02) examines the stability of the peat in several conditions, including the inclusion of a 1m peat placement surcharge.

Ref.	Risk	Cause	Mitigation
	from side casting of		GI has been carried out, providing peat depths at 229 locations, and GDG is satisfied that the design at this stage
	peat material		is in line with the Scottish Guidelines for development on peatlands (Section 1.2). This report outlines the methodologies to safely carry out the construction of the Proposed Development, including the restriction for the placement of peat at some key infrastructure locations. The construction stage design and contractor team will need to construct the Proposed Development using these mitigation measures. Further confirmatory GI will be required across the full Proposed Development including at the identified hazard areas during the detail and construction stage to assess peat depths and strengths. This will be carried out by the detailed designer and contractor's team. The design team shall develop their own testing criteria to satisfy and de-risk the possibility of instability and peat failure. The works will be undertaken by a competent contractor experienced in working in peat and soft ground conditions in upland areas and will have carried out the appropriate due diligence and assessment relating to peat stability and appropriate peat placement.

10 Conclusion

This PSMP has been prepared to outline a peat and spoil management strategy to ensure the workable and sustainable management of peat during the construction of the Proposed Development.

This PSMP identifies that most of the excavated material will consist of peaty soil and acrotelmic peat, with some catotelmic peat also present. The catotelmic peat will be fully utilised within the peat repository areas and is not classified as waste.

The preliminary earthwork volume summary confirms that once the peat repository areas and borrow pits are reinstated, the available capacity for peat and spoil placement will exceed the volume excavated for infrastructure works.

For the peat balance assessment, peaty soil volumes have been included to account for the superficial material needed for enhancement and infrastructure dressing at the Proposed Development.

The peat balance analysis outlines a conservative estimate of the volumes of peat and spoil excavation and reinstatement during the construction of the Proposed Development, and as such, it is concluded that all of the peat material excavated can be reused safely on-site during construction. Should further refinement of the detailed infrastructure design be undertaken, the assessment completed herein will be revisited.

11 References

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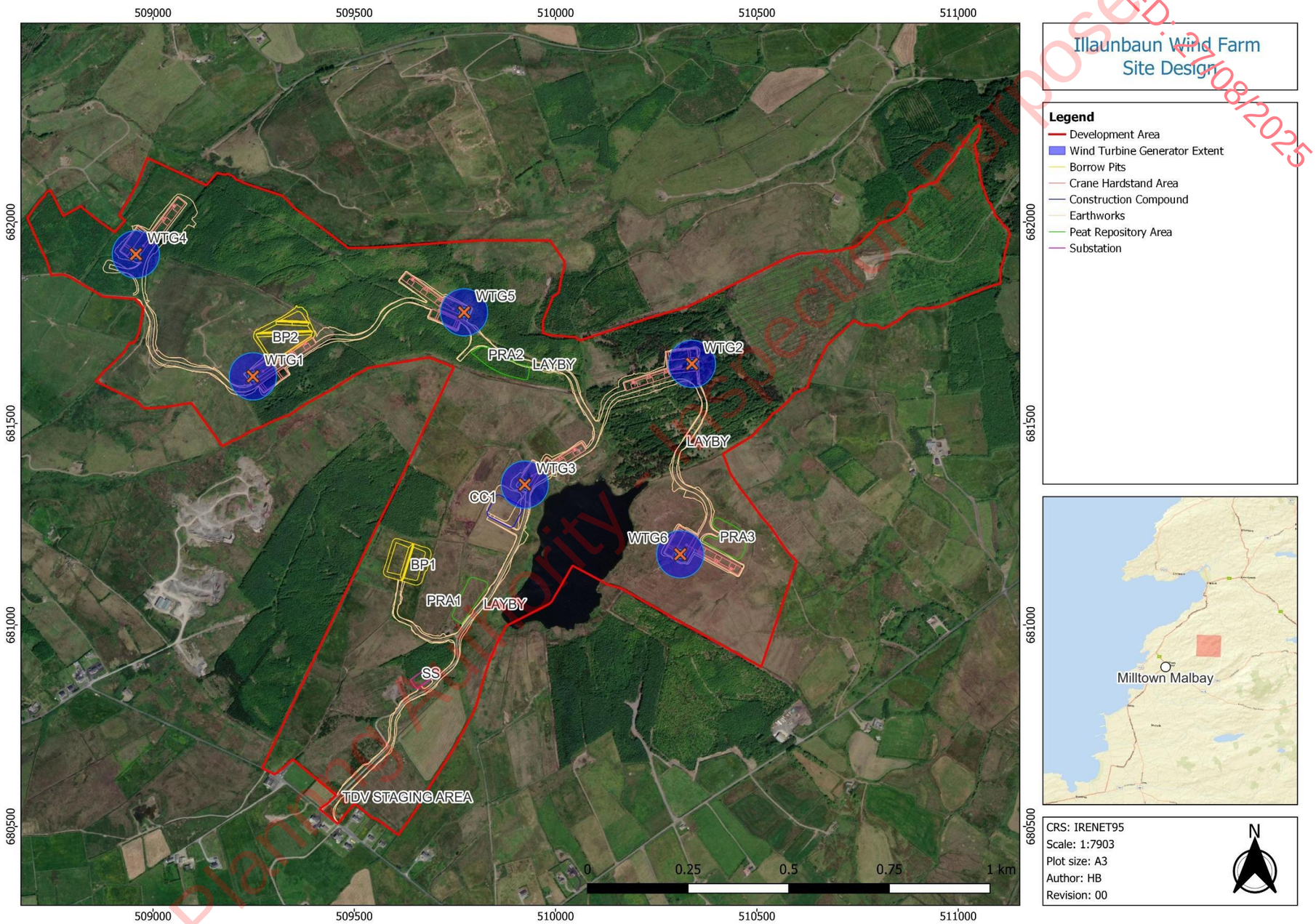
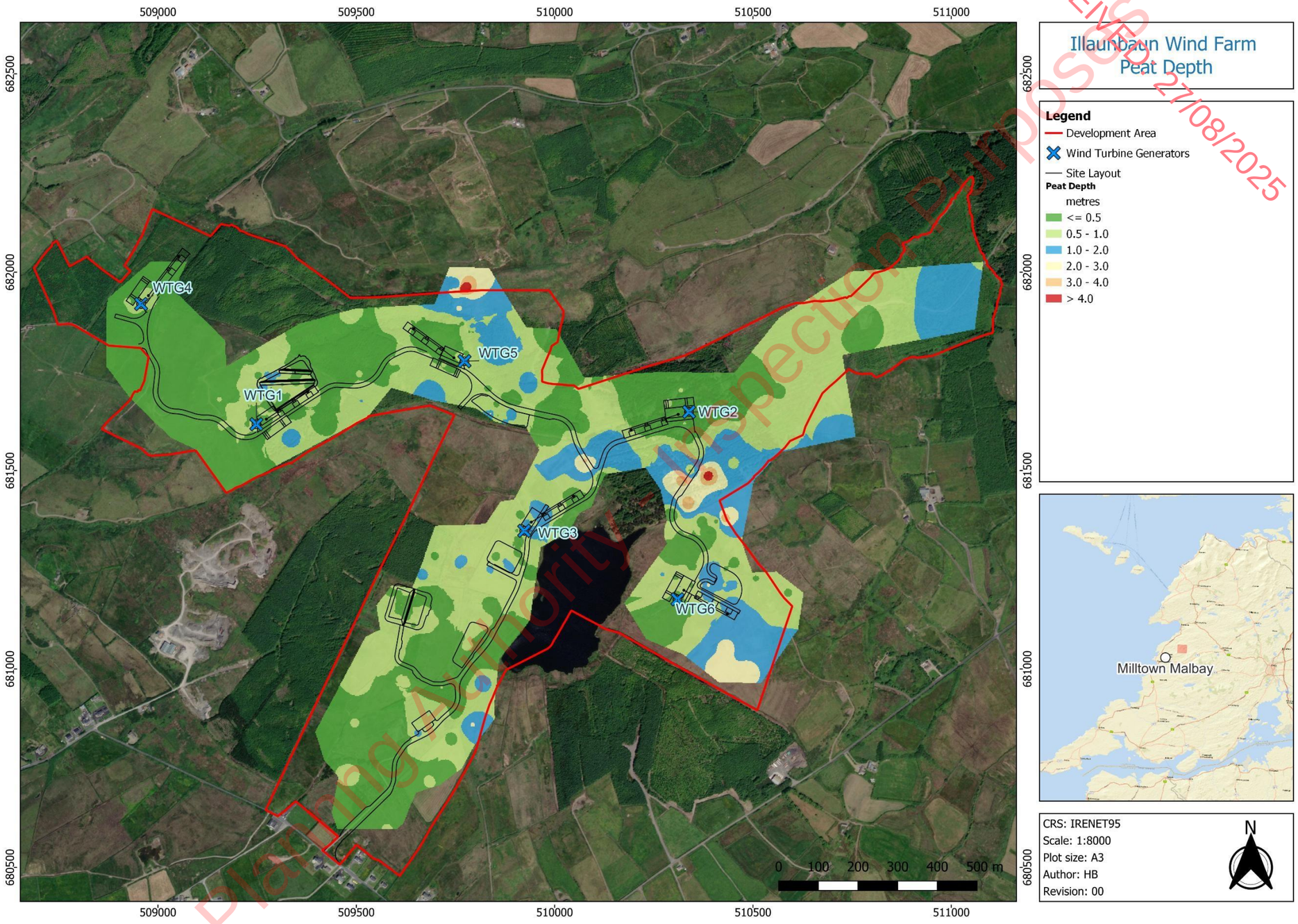
Scottish Renewables and SEPA (2012) Guidance on the Assessment of Peat Volumes, Reuse of Excavated Peat and the Minimisation of Waste

APPENDIX A PROPOSED DEVELOPMENT MAPS

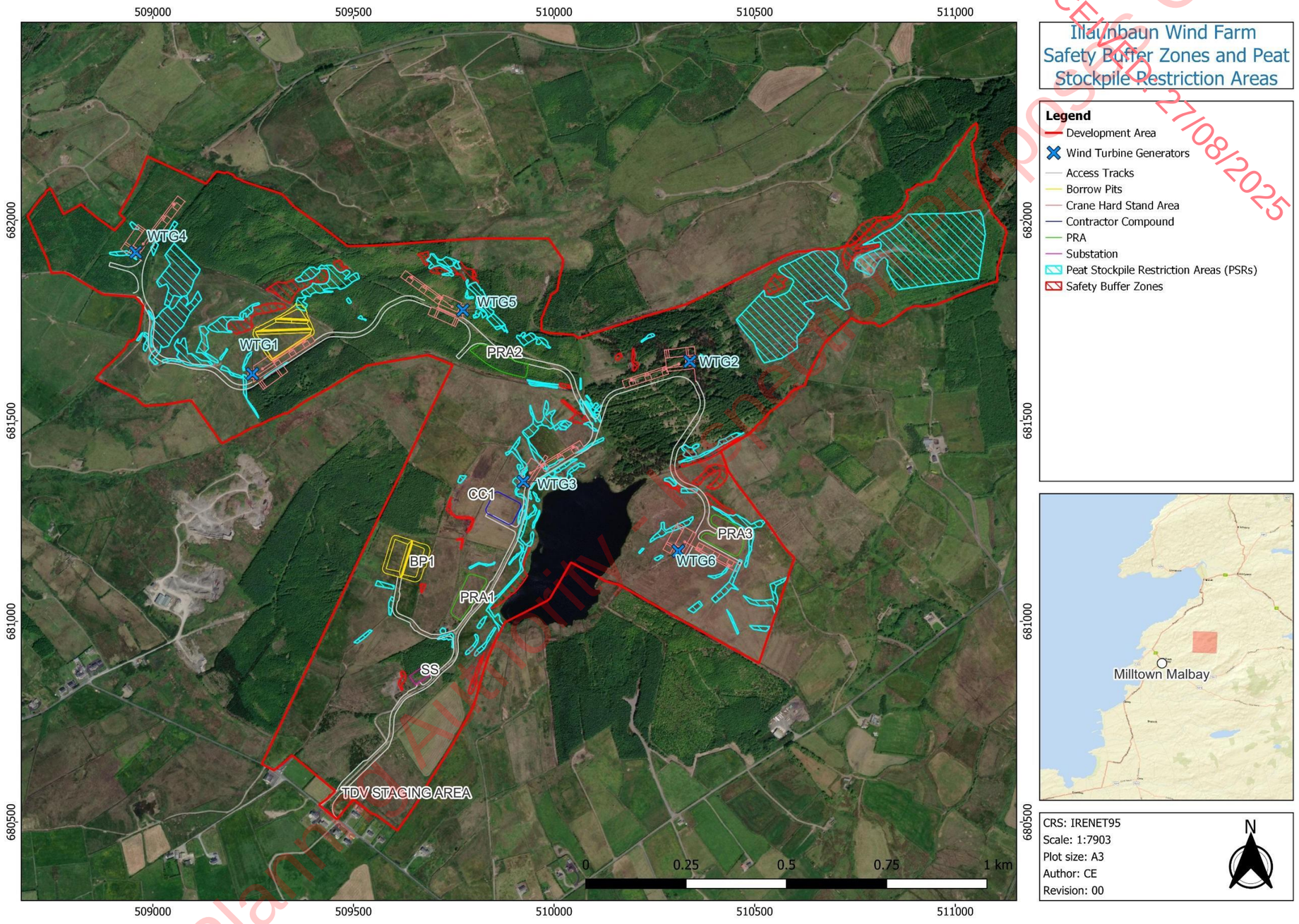
A.1 PROPOSED DEVELOPMENT LAYOUT



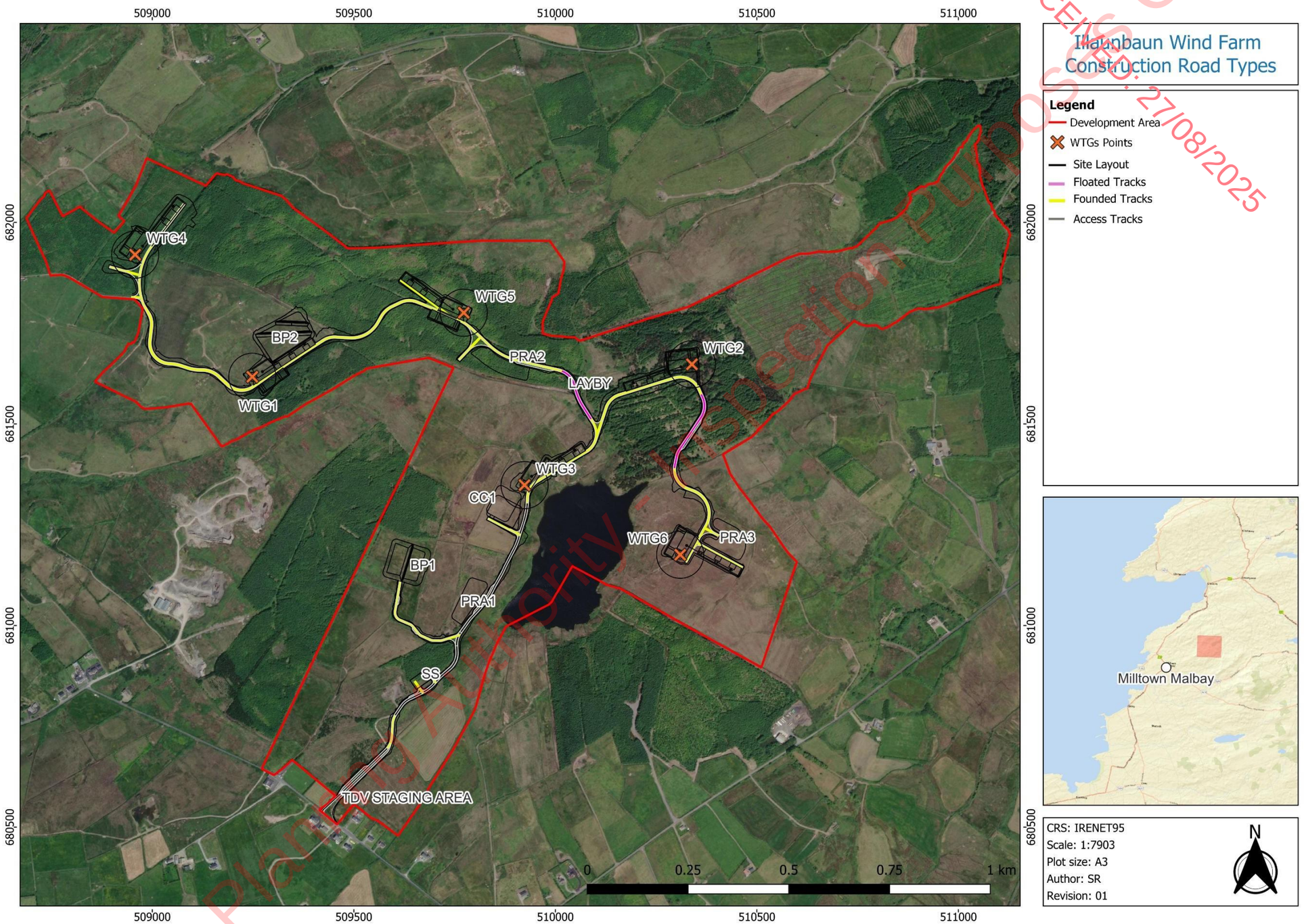
A.2 INTERPOLATED PEAT DEPTH



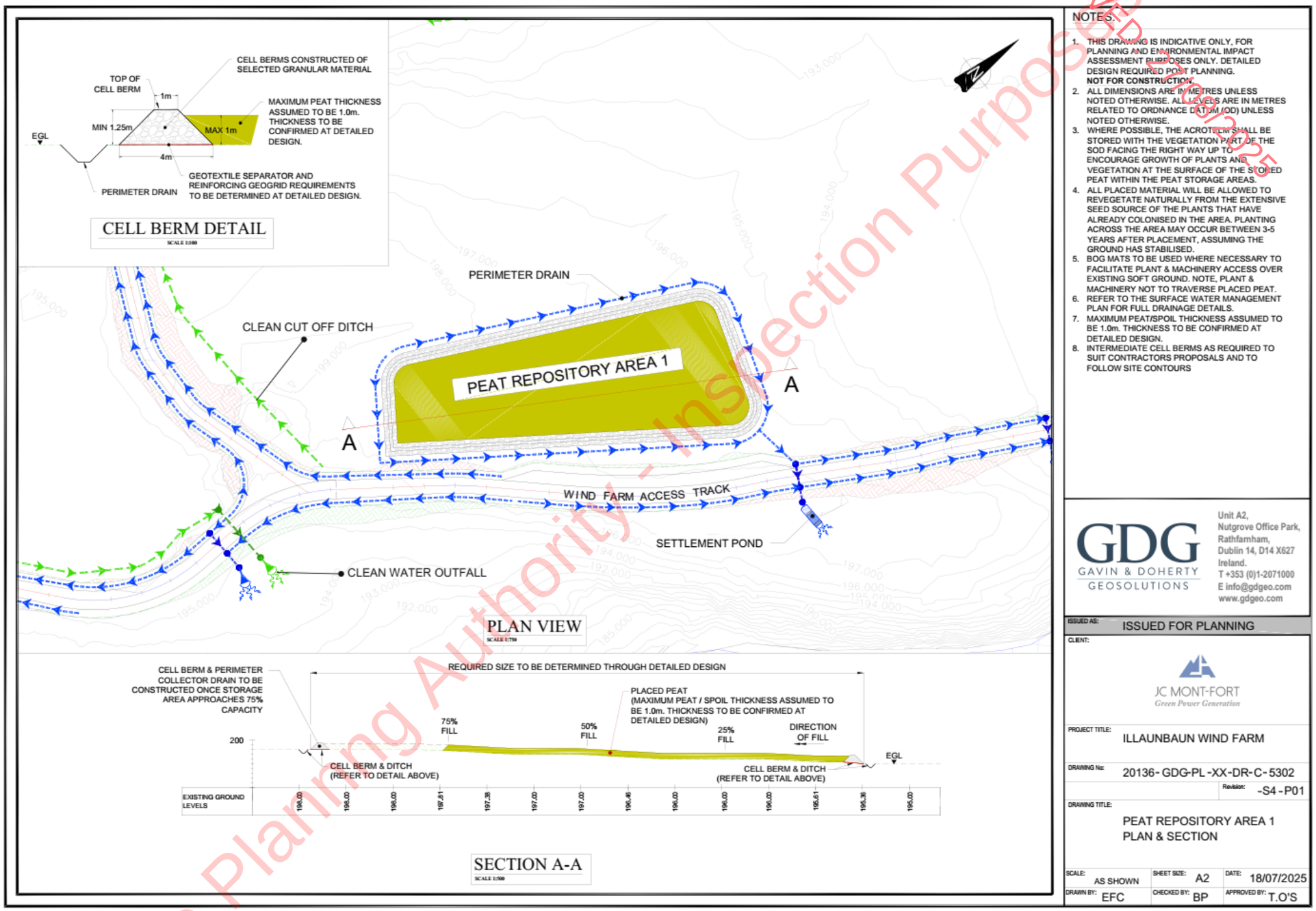
A.3 SAFETY BUFFER AND PEAT STOCKPILE RESTRICTION ZONES



A.4 PROPOSED ROAD CONSTRUCTION TYPES



APPENDIX B PEAT AND SPOIL REPOSITORY DETAILS



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4. ALL PLACED MATERIAL WILL BE ALLOWED TO REVEGETATE NATURALLY FROM THE EXTENSIVE SEED SOURCE OF THE PLANTS THAT HAVE ALREADY COLONISED IN THE AREA. PLANTING ACROSS THE AREA MAY OCCUR BETWEEN 3-5 YEARS AFTER PLACEMENT, ASSUMING THE GROUND HAS STABILISED.
5. BOG MATS TO BE USED WHERE NECESSARY TO FACILITATE PLANT & MACHINERY ACCESS OVER EXISTING SOFT GROUND. NOTE, PLANT & MACHINERY NOT TO TRAVERSE PLACED PEAT.
6. REFER TO THE SURFACE WATER MANAGEMENT PLAN FOR FULL DRAINAGE DETAILS.
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8. INTERMEDIATE CELL BERMS AS REQUIRED TO SUIT CONTRACTORS PROPOSALS AND TO FOLLOW SITE CONTOURS

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CLIENT: JC MONT-FORT Green Power Generation

PROJECT TITLE: ILLAUNBAUN WIND FARM

DRAWING No: 20136-GDG-PL-XX-DR-C-5302

Revision: -S4-P01

DRAWING TITLE: PEAT REPOSITORY AREA 1 PLAN & SECTION

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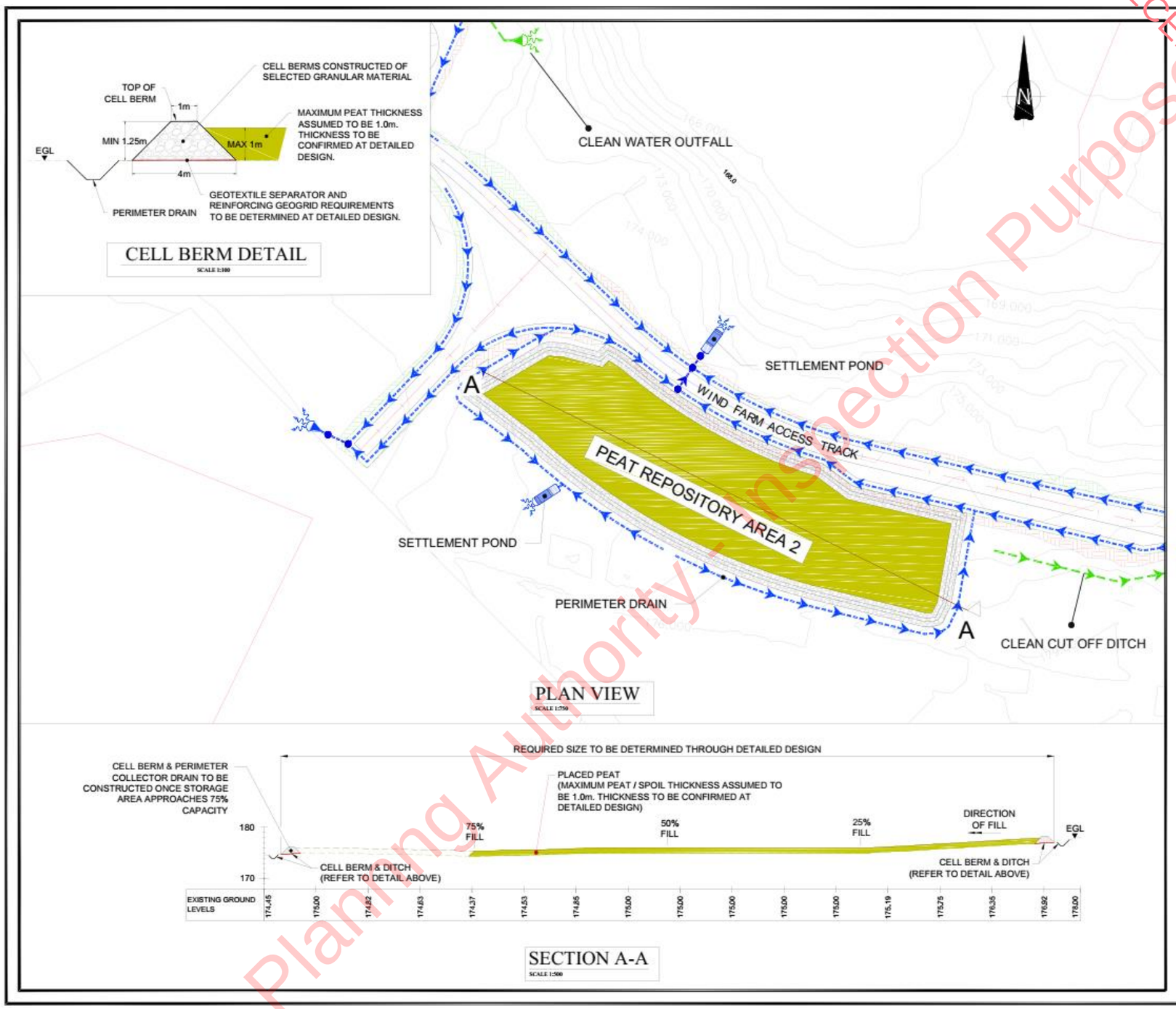

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Revision: -S4-P01

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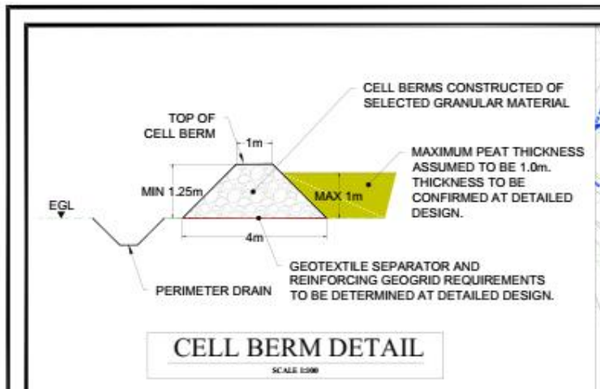
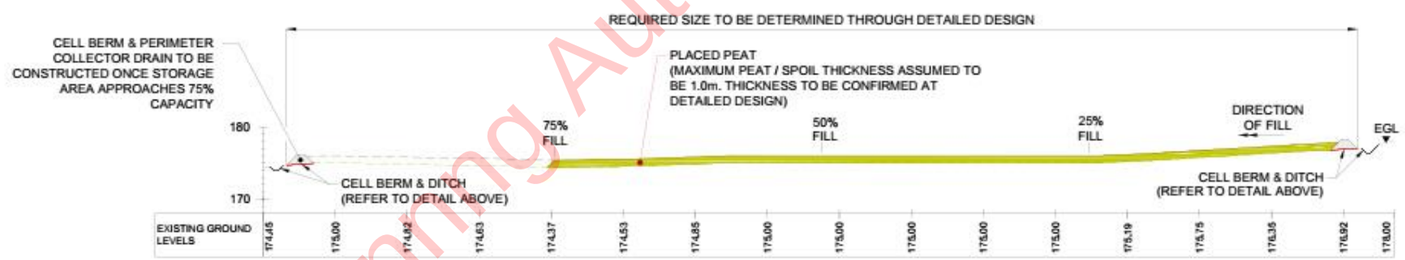


CELL BERM DETAIL
SCALE 1:100

PLAN VIEW
SCALE 1:250



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Revision: -S4-P01

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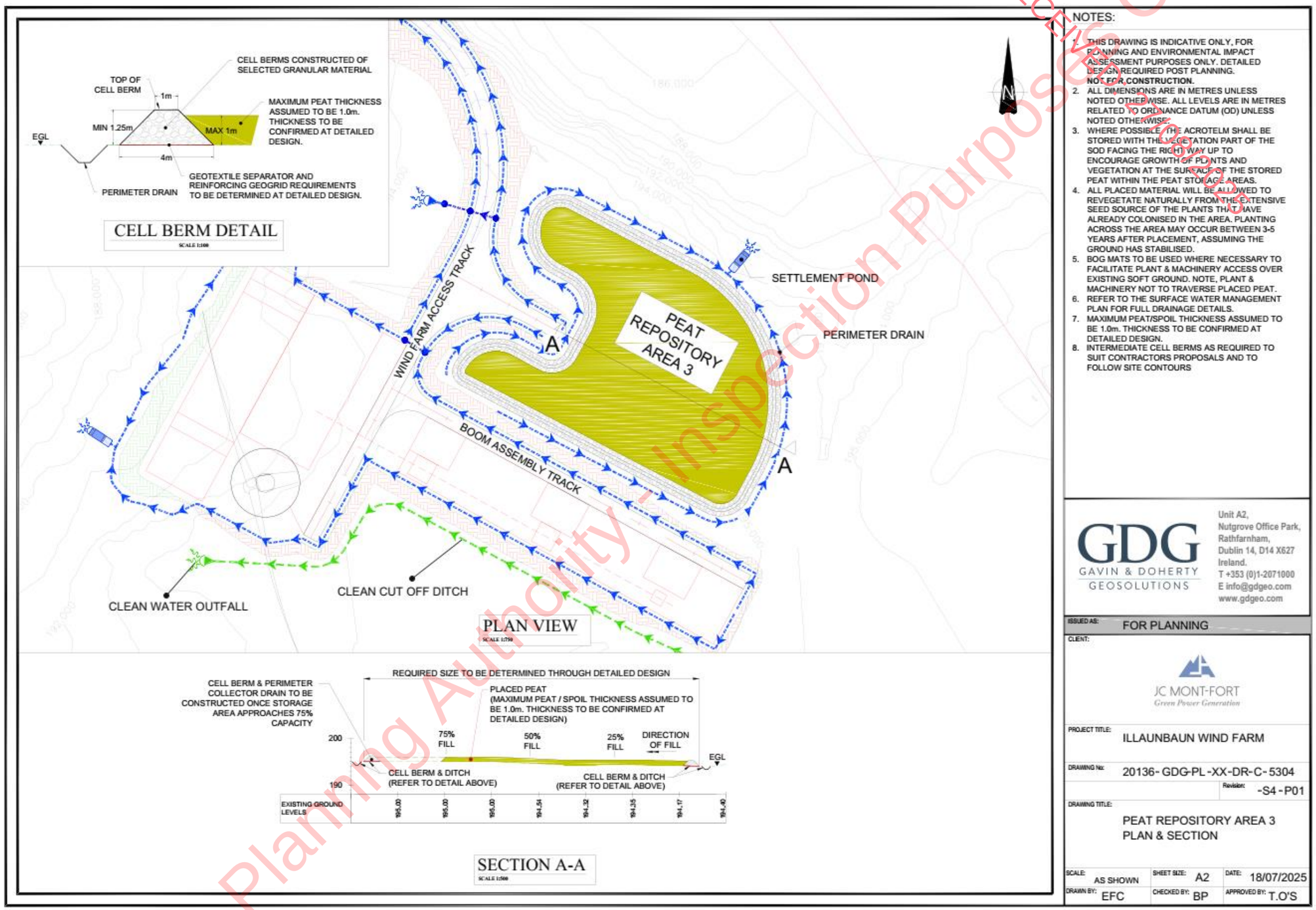

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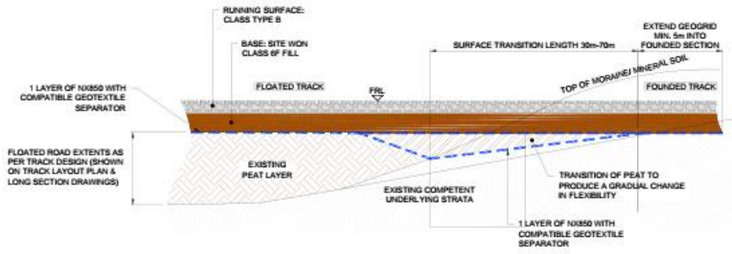
APPENDIX C ROAD CONSTRUCTION DETAILS



TRANSITION DETAIL - FLOATED TO FOUNDED TRACK CONSTRUCTION
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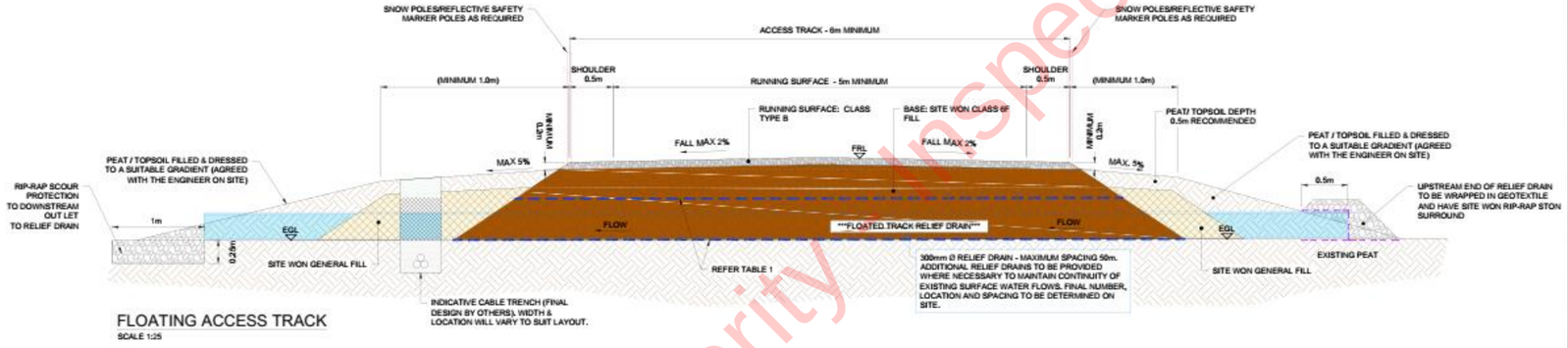

FLOATING ACCESS TRACK
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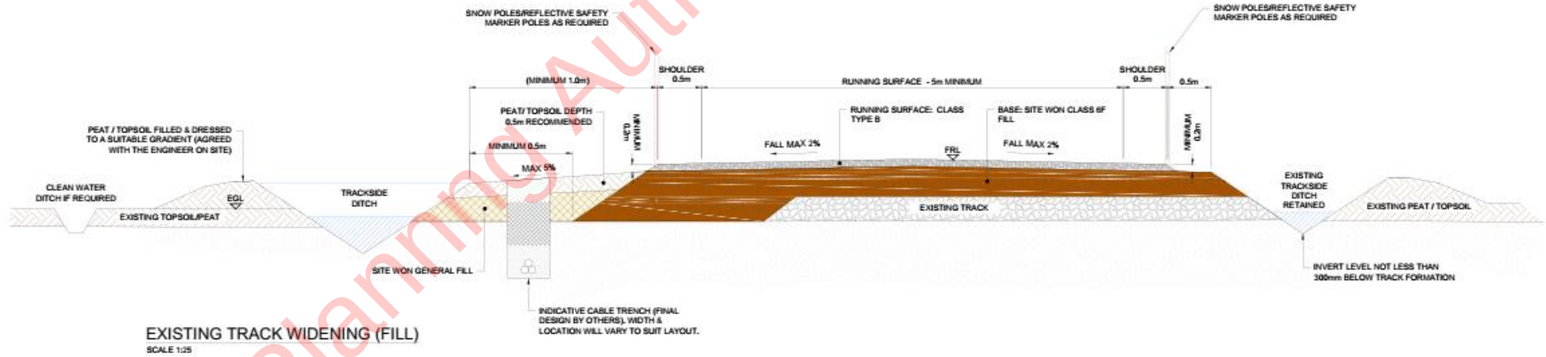

EXISTING TRACK WIDENING (FILL)
SCALE 1:25

NOTES:

1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED. USE DIMENSIONS ON DRAWINGS (DO NOT SCALE FROM DRAWINGS).
2. FOR SITE LAYOUT REFER TO GENERAL ARRANGEMENT DRAWINGS.
3. ACCESS TRACK CONSTRUCTION TO BE CONTINUALLY ASSESSED AND RECORDED DURING CONSTRUCTION BY A COMPETENT ENGINEER. ALL SOFT SPOTS TO BE SE DUG OUT AND BACK FILLED WITH SELECTED SITE WON CRUSHED ROCK FILL OR SUITABLE ALTERNATIVES TO THE SATISFACTION OF A COMPETENT ENGINEER.
4. GEOTEXTILE SEPARATOR TO BE USED AT INTERFACE BETWEEN SUB-FORMATION AND PROPOSED ACCESS TRACK CONSTRUCTION WHERE DEEMED APPROPRIATE BY A COMPETENT ENGINEER.
5. TO AID ACCESS TRACK CONSTRUCTION LONGEVITY ALL DRAINAGE DITCHES ARE TO BE CUT TO A MINIMUM DEPTH OF 300mm BELOW FORMATION LEVEL TO ENSURE DITCH TO DISCHARGE DIRECTLY TO WATER COURSE. TREATMENT MEASURES TO BE INSTALLED FOR WET RUN-OFF PRIOR TO DISCHARGE.
6. PERIODIC INSPECTION AND MAINTENANCE OF THE ACCESS TRACK WILL BE REQUIRED DURING THE OPERATIONAL PHASE, PARTICULARLY AFTER PERIODS OF HEAVY TRAFFICKING OR PROLONGED RAINFALL.
7. THE FORMATION SHOULD BE SHAPED TO FALL TOWARDS THE DRAINAGE DITCH TO PREVENT ANY PONDING IN THE SUBGRADE.
8. ALL EARTHWORKS SLOPES AND EXCAVATIONS TO BE ASSESSED BY A COMPETENT ENGINEER AT A FREQUENCY IN ACCORDANCE WITH THE ACTIVITIES RISK ASSESSMENT AND METHOD STATEMENT. THIS SHOULD INCLUDE DAILY INSPECTION WHILST WORK IS PROGRESSING, INSPECTION AT THE START OF EACH SHIFT AND AFTER ANY EVENT THAT MAY IMPACT STABILITY SUCH AS INCLEMENT WEATHER OR ADJACENT WORKS.
9. ALL ORGANIC MATERIAL TO BE REMOVED FROM THE EXISTING OR LOWER/PREVIOUS TRACK SURFACE AND THE EXISTING SURFACE TO RECEIVE SUFFICIENT MECHANICAL PREPARATION AS REQUIRED PRIOR TO INSTALLATION OF ANY NEW GRANULAR LAYER ABOVE.
10. START AND END POINTS OF FLOATED ROADS TO BE MARKED WITH SIGNAGE WARNING HEAVILY LOADED VEHICLES NOT TO STOP WITHIN THE FLOATED SECTION.
11. FLOATED TRACK SECTIONS BASED ON INFORMATION FROM THE SCOTTISH NATIONAL HERITAGE / FORESTRY COMMISSION DOCUMENT "FLOATING ROADS ON PEAT" PUBLISHED AUGUST 2010.
12. GEOGRID REINFORCED GRANULAR TRACK CONSTRUCTION WILL PROVIDE DURABILITY, MATERIAL QUANTITY AND ENVIRONMENTAL BENEFIT ON WEAKER SOILS.
13. NO FROST SUSCEPTIBLE MATERIALS ARE TO BE USED WITHIN 450mm OF THE FINISHED TRACK (IE. INCLUDING THE SUBFORMATION MATERIAL)
14. MAXIMUM SPACING OF FLOATED TRACK RELIEF DRAINS TO BE 100m FINAL SPACING REQUIREMENT TO BE DETERMINED ON SITE BASED ON OVERLAND FLOW PATHS, LOW POINTS AND OR FLUSHES.
15. STRIPPED PEAT & PEAT TURFS TO BE SUITABLY STORED FOR POTENTIAL FUTURE REINSTATEMENT WORKS.

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CLIENT: JC MONT-FORT Green Power Generation

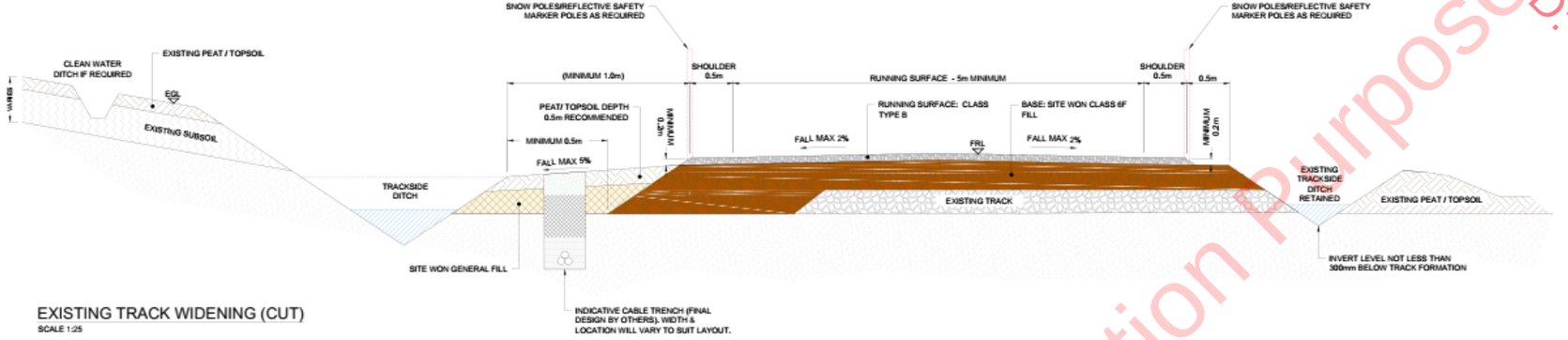
PROJECT TITLE: ILLAUNBAUN WIND FARM

DRAWING No: 20136- GDG-PL -XX-DR-C- 5500

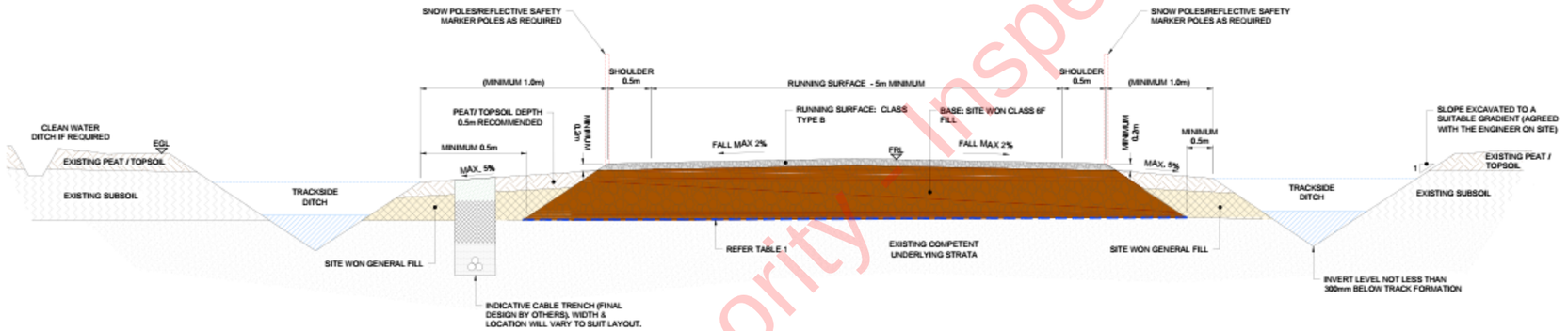
Revision: -S4 - P01

DRAWING TITLE: ACCESS TRACK DETAILS SHEET 1 OF 3

SCALE: AS SHOWN	SHEET SIZE: A1	DATE: 15/08/2025
DRAWN BY: EFC	CHECKED BY: B.P.	APPROVED BY: T.O'S



EXISTING TRACK WIDENING (CUT)
SCALE 1:25



FOUNDED ACCESS TRACK CONSTRUCTION ON LEVEL OR GENTLY SLOPING TOPOGRAPHY (CUT-CUT)
SCALE 1:25

NOTES:

1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED. USE DIMENSIONS ON DRAWINGS (DO NOT SCALE FROM DRAWINGS).
2. FOR SITE LAYOUT REFER TO GENERAL ARRANGEMENT DRAWINGS.
3. ACCESS TRACK CONSTRUCTION TO BE CONTINUALLY ASSESSED AND RECORDED DURING CONSTRUCTION BY A COMPETENT ENGINEER. ALL SOFT SPOTS TO BE BE DUG OUT AND BACK FILLED WITH SELECTED SITE WON CRUSHED ROCK FILL OR SUITABLE ALTERNATIVE TO THE SATISFACTION OF A COMPETENT ENGINEER.
4. GEOTEXTILE SEPARATOR TO BE USED AT INTERFACE BETWEEN SUB-FORMATION AND FOUNDED ACCESS TRACK CONSTRUCTION WHERE DEEMED APPROPRIATE BY A COMPETENT ENGINEER.
5. TO AID ACCESS TRACK CONSTRUCTION LONGEVITY ALL DRAINAGE DITCHES ARE TO BE DUG TO A MINIMUM DEPTH OF 300mm BELOW FORMATION LEVEL. NO DRAINAGE DITCH TO DISCHARGE DIRECTLY TO WATER COURSE. TREATMENT MEASURES TO BE INSTALLED TO ANY RUN-OFF PRIOR TO DISCHARGE.
6. PERIODIC INSPECTION AND MAINTENANCE OF THE ACCESS TRACK WILL BE REQUIRED DURING THE OPERATIONAL PHASE, PARTICULARLY AFTER PERIODS OF HEAVY TRAFFICKING OR PROLONGED RAINFALL.
7. THE FORMATION SHOULD BE SHAPED TO FALL TOWARDS THE DRAINAGE DITCH TO PREVENT ANY PONDING IN THE SUBGRADE.
8. ALL EARTHWORKS SLOPES AND EXCAVATIONS TO BE ASSESSED BY A COMPETENT ENGINEER AT A FREQUENCY IN ACCORDANCE WITH THE ACTIVITIES RISK ASSESSMENT AND METHOD STATEMENT. THIS SHOULD INCLUDE DAILY INSPECTION WHILST WORK IS PROGRESSING, INSPECTION AT THE START OF EACH SHIFT AND AFTER ANY EVENT THAT MAY AFFECT STABILITY SUCH AS INCLEMENT WEATHER OR ADJACENT WORKS.
9. ALL ORGANIC MATERIAL TO BE REMOVED FROM THE EXISTING OR LOWER/PREVIOUS TRACK SURFACE AND THE EXISTING SURFACE TO RECEIVE SUFFICIENT MECHANICAL PREPARATION AS REQUIRED PRIOR TO INSTALLATION OF ANY NEW GRANULAR LAYER ABOVE.
10. START AND END POINTS OF FLOATED ROADS TO BE MARKED WITH SIGNAGE WARNING HEAVILY LOADED VEHICLES NOT TO STOP WITHIN THE FLOATED SECTION.
11. FLOATED TRACK SECTIONS BASED ON INFORMATION FROM THE SCOTTISH NATIONAL HERITAGE / FORESTRY COMMISSION DOCUMENT "FLOATING ROADS ON PEAT" PUBLISHED AUGUST 2010.
12. GEOGRID REINFORCED GRANULAR TRACK CONSTRUCTION WILL PROVIDE DURABILITY, MATERIAL QUANTITY AND ENVIRONMENTAL BENEFIT ON WEAKER SOILS.
13. NO FROST SUSCEPTIBLE MATERIALS ARE TO BE USED WITHIN 450mm OF THE FINISHED TRACK (IE. INCLUDING THE SUBFORMATION MATERIAL).
14. MAXIMUM SPACING OF FLOATED TRACK RELIEF DRAINS TO BE 100m FINAL SPACING REQUIREMENT TO BE DETERMINED ON SITE BASED ON OVERLAND FLOW PATHS, LOW POINTS AND OR FLUSHES.
15. STRIPPED PEAT & PEAT TURFS TO BE SUITABLY STORED FOR POTENTIAL FUTURE REINSTATEMENT WORKS.

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ISSUED AS: FOR PLANNING

CLIENT: JC MONT-FORT Green Power Generation

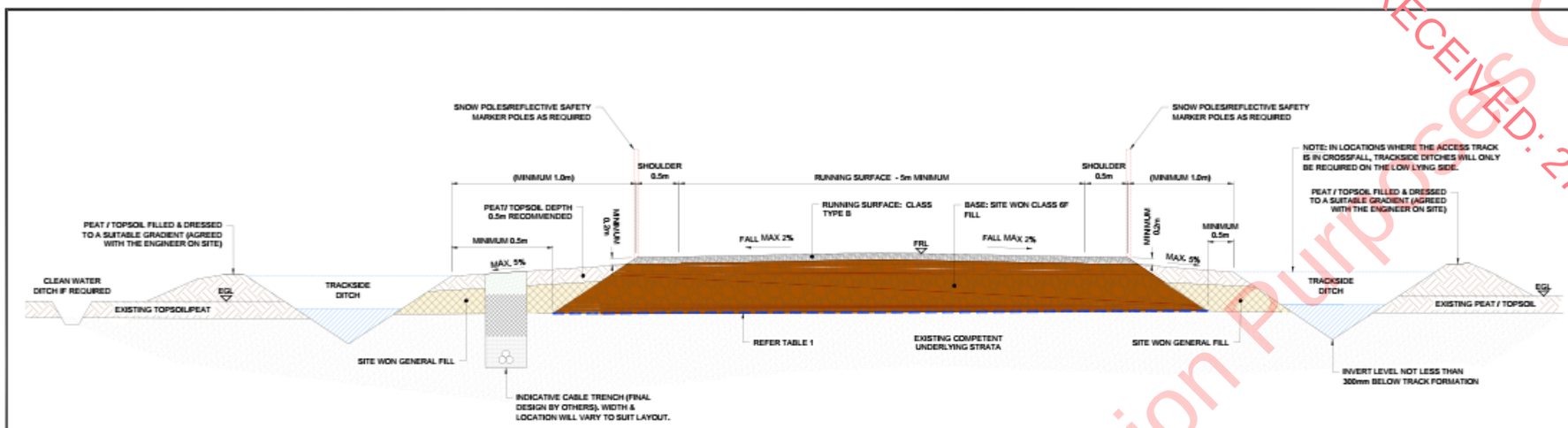
PROJECT TITLE: ILLAUNBAUN WIND FARM

DRAWING No: 20136-GDG-PL-XX-DR-C-5501

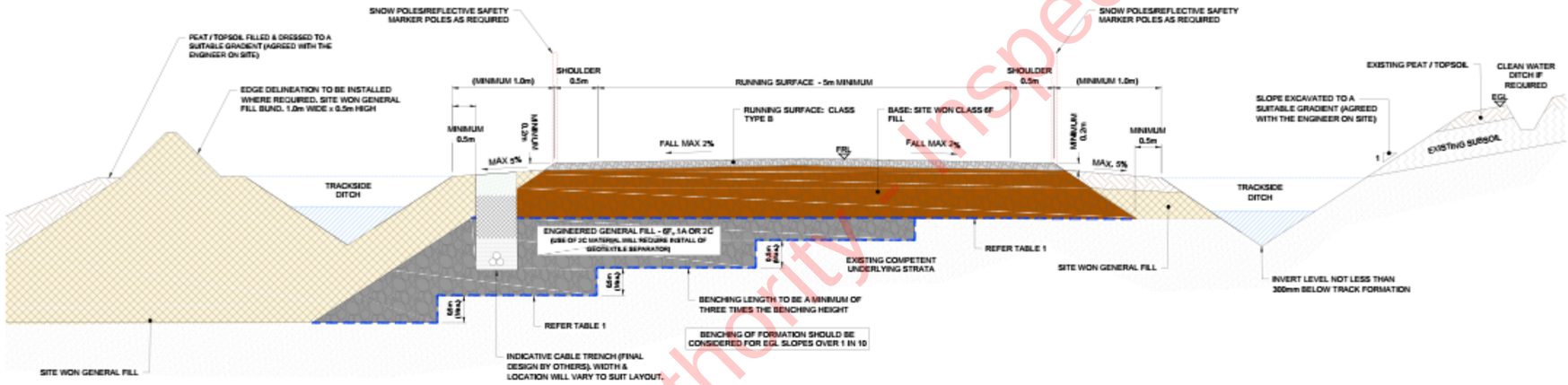
Revision: -S4-P01

DRAWING TITLE: ACCESS TRACK DETAILS SHEET 2 OF 3

SCALE:	SHEET SIZE:	DATE:
AS SHOWN	A1	15/08/2025
DRAWN BY: EFC	CHECKED BY: B.P.	APPROVED BY: T.O'S



FOUNDED ACCESS TRACK CONSTRUCTION ON LEVEL OR GENTLY SLOPING TOPOGRAPHY (FILL-FILL)
SCALE 1:25



FOUNDED ACCESS TRACK CONSTRUCTION ON SLOPING TOPOGRAPHY
SCALE 1:25

NOTES:

1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED. USE DIMENSIONS ON DRAWINGS (DO NOT SCALE FROM DRAWINGS).
2. FOR SITE LAYOUT REFER TO GENERAL ARRANGEMENT DRAWINGS.
3. ACCESS TRACK CONSTRUCTION TO BE CONTINUALLY ASSESSED AND RECORDED DURING CONSTRUCTION BY A COMPETENT ENGINEER. ALL SOFT SPOTS TO BE BE DUG OUT AND BACK FILLED WITH SELECTED SITE WON CRUSHED ROCK FILL OR SUITABLE ALTERNATIVE TO THE SATISFACTION OF A COMPETENT ENGINEER.
4. GEOTEXTILE SEPARATOR TO BE USED AT INTERFACE BETWEEN SUB-FORMATION AND FOUNDED ACCESS TRACK CONSTRUCTION WHERE DEEMED APPROPRIATE BY A COMPETENT ENGINEER.
5. TO AID ACCESS TRACK CONSTRUCTION LONGEVITY ALL DRAINAGE DITCHES ARE TO BE DUG TO A MINIMUM DEPTH OF 300mm BELOW FORMATION LEVEL. NO DRAINAGE DITCH TO DISCHARGE DIRECTLY TO WATER COURSE. TREATMENT MEASURES TO BE INSTALLED FOR ANY RUN-OFF PRIOR TO DISCHARGE.
6. PERIODIC INSPECTION AND MAINTENANCE OF THE ACCESS TRACK WILL BE REQUIRED DURING THE OPERATIONAL PHASE, PARTICULARLY AFTER PERIODS OF HEAVY TRAFFICKING OR PROLONGED RAINFALL.
7. THE FORMATION SHOULD BE SHAPED TO FALL TOWARDS THE DRAINAGE DITCH TO PREVENT ANY PONDING IN THE SUBGRADE.
8. ALL EARTHWORKS SLOPES AND EXCAVATIONS TO BE ASSESSED BY A COMPETENT ENGINEER AT A FREQUENCY IN ACCORDANCE WITH THE ACTIVITIES RISK ASSESSMENT AND METHOD STATEMENT. THIS SHOULD INCLUDE DAILY INSPECTION WHILST WORK IS PROGRESSING, INSPECTION AT THE START OF EACH SHIFT AND AFTER ANY EVENT THAT MAY IMPACT STABILITY SUCH AS INCLEMENT WEATHER OR ADJACENT WORKS.
9. ALL ORGANIC MATERIAL TO BE REMOVED FROM THE EXISTING OR LOWER/PREVIOUS TRACK SURFACE AND THE EXISTING SURFACE TO RECEIVE SUFFICIENT MECHANICAL PREPARATION AS REQUIRED PRIOR TO INSTALLATION OF ANY NEW GRANULAR LAYER ABOVE.
10. START AND END POINTS OF FLOATED ROADS TO BE MARKED WITH SIGNAGE WARNING HEAVILY LOADED VEHICLES NOT TO STOP WITHIN THE FLOATED SECTION.
11. FLOATED TRACK SECTIONS BASED ON INFORMATION FROM THE SCOTTISH NATIONAL HERITAGE / FORESTRY COMMISSION DOCUMENT "FLOATING ROADS ON PEAT" PUBLISHED AUGUST 2015.
12. GEOGRID REINFORCED GRANULAR TRACK CONSTRUCTION WILL PROVIDE DURABILITY, MATERIAL QUANTITY AND ENVIRONMENTAL BENEFIT ON WEAKER SOILS.
13. NO FROST SUSCEPTIBLE MATERIALS ARE TO BE USED WITHIN 450mm OF THE FINISHED TRACK (IE. INCLUDING THE SUBFORMATION MATERIAL)
14. MAXIMUM SPACING OF FLOATED TRACK RELIEF DRAINS TO BE 100m FINAL SPACING REQUIREMENT TO BE DETERMINED ON SITE BASED ON OVERLAND FLOW PATHS, LOW POINTS AND CR FLUSHES.
15. STRIPPED PEAT & PEAT TURFS TO BE SUITABLY STORED FOR POTENTIAL FUTURE REINSTATEMENT WORKS.

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FOR PLANNING

CLIENT: JC MONT-FORT Green Power Generation

PROJECT TITLE: ILLAUNBAUN WIND FARM

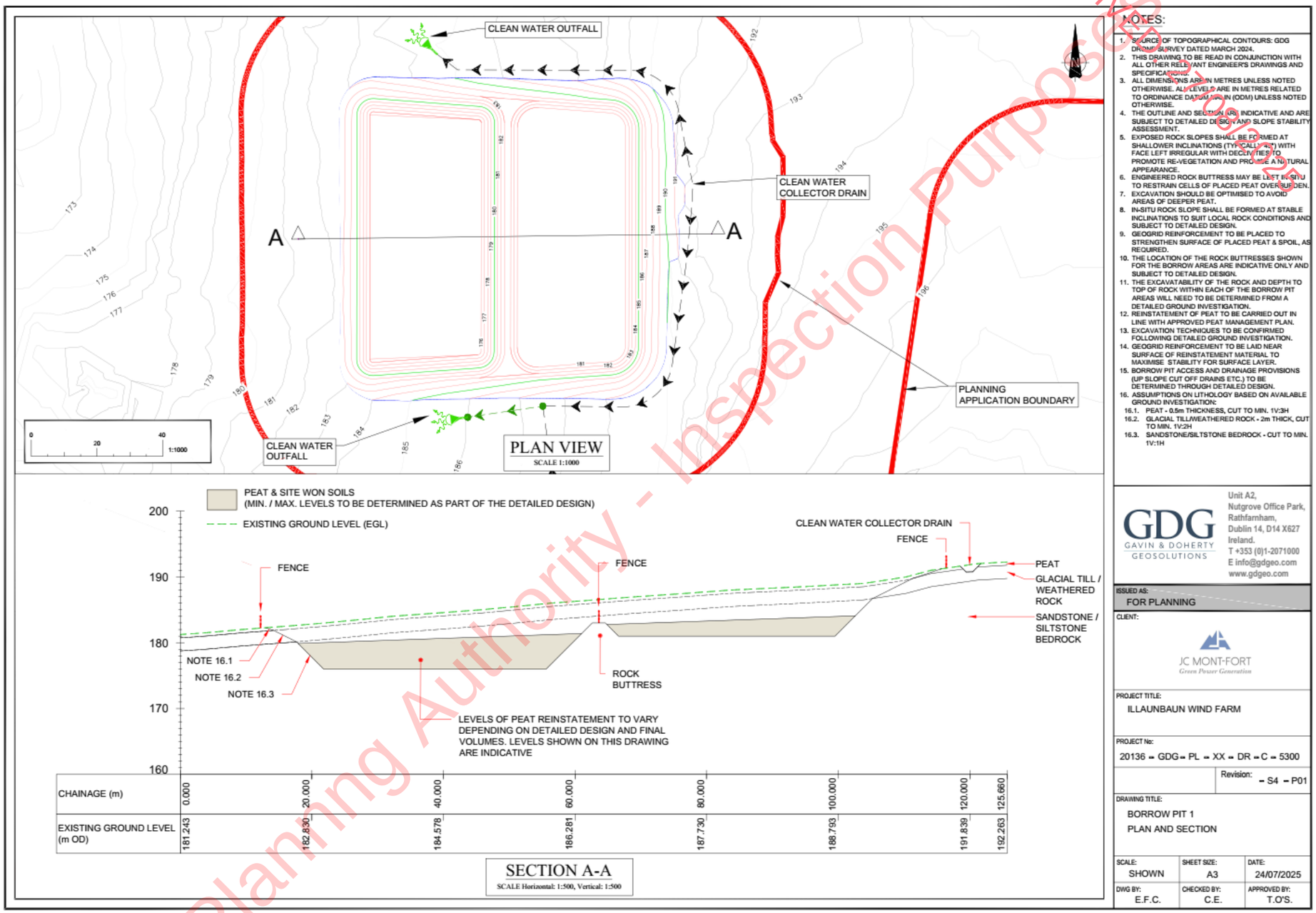
DRAWING NO: 20136-GDG-PL-XX-DR-C-5502

REVISION: -S4-P01

DRAWING TITLE: ACCESS TRACK DETAILS SHEET 3 OF 3

SCALE	SHEET SIZE	DATE
AS SHOWN	A1	15/08/2025
DRAWN BY: EFC	CHECKED BY: B.P.	APPROVED BY: T.O'S

APPENDIX D BORROW PIT DETAILS



NOTES:

1. SOURCE OF TOPOGRAPHICAL CONTOURS: GDG DRONE SURVEY DATED MARCH 2024.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ENGINEER'S DRAWINGS AND SPECIFICATIONS.
3. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE. ALL LEVELS ARE IN METRES RELATED TO ORDINANCE DATUM MEAN (ODM) UNLESS NOTED OTHERWISE.
4. THE OUTLINE AND SECTIONS ARE INDICATIVE AND ARE SUBJECT TO DETAILED DESIGN AND SLOPE STABILITY ASSESSMENT.
5. EXPOSED ROCK SLOPES SHALL BE FORMED AT SHALLOWER INCLINATIONS (TYPICALLY 4H:1V) WITH FACE LEFT IRREGULAR WITH DECLIVITIES TO PROMOTE RE-VEGETATION AND PROVIDE A NATURAL APPEARANCE.
6. ENGINEERED ROCK BUTTRESS MAY BE LEFT IN-SITU TO RESTRAIN CELLS OF PLACED PEAT OVERBURDEN.
7. EXCAVATION SHOULD BE OPTIMISED TO AVOID AREAS OF DEEPER PEAT.
8. IN-SITU ROCK SLOPE SHALL BE FORMED AT STABLE INCLINATIONS TO SUIT LOCAL ROCK CONDITIONS AND SUBJECT TO DETAILED DESIGN.
9. GEOGRID REINFORCEMENT TO BE PLACED TO STRENGTHEN SURFACE OF PLACED PEAT & SPOIL, AS REQUIRED.
10. THE LOCATION OF THE ROCK BUTTRESSES SHOWN FOR THE BORROW AREAS ARE INDICATIVE ONLY AND SUBJECT TO DETAILED DESIGN.
11. THE EXCAVATABILITY OF THE ROCK AND DEPTH TO TOP OF ROCK WITHIN EACH OF THE BORROW PIT AREAS WILL NEED TO BE DETERMINED FROM A DETAILED GROUND INVESTIGATION.
12. REINSTATEMENT OF PEAT TO BE CARRIED OUT IN LINE WITH APPROVED PEAT MANAGEMENT PLAN.
13. EXCAVATION TECHNIQUES TO BE CONFIRMED FOLLOWING DETAILED GROUND INVESTIGATION.
14. GEOGRID REINFORCEMENT TO BE LAID NEAR SURFACE OF REINSTATEMENT MATERIAL TO MAXIMISE STABILITY FOR SURFACE LAYER.
15. BORROW PIT ACCESS AND DRAINAGE PROVISIONS (UP SLOPE CUT OFF DRAINS ETC.) TO BE DETERMINED THROUGH DETAILED DESIGN.
16. ASSUMPTIONS ON LITHOLOGY BASED ON AVAILABLE GROUND INVESTIGATION:
    - 16.1. PEAT - 0.5m THICKNESS, CUT TO MIN. 1V:3H
    - 16.2. GLACIAL TILL/WEATHERED ROCK - 2m THICK, CUT TO MIN. 1V:2H
    - 16.3. SANDSTONE/SILTSTONE BEDROCK - CUT TO MIN. 1V:1H

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ISSUED AS: FOR PLANNING

CLIENT: JC MONT-FORT Green Power Generation

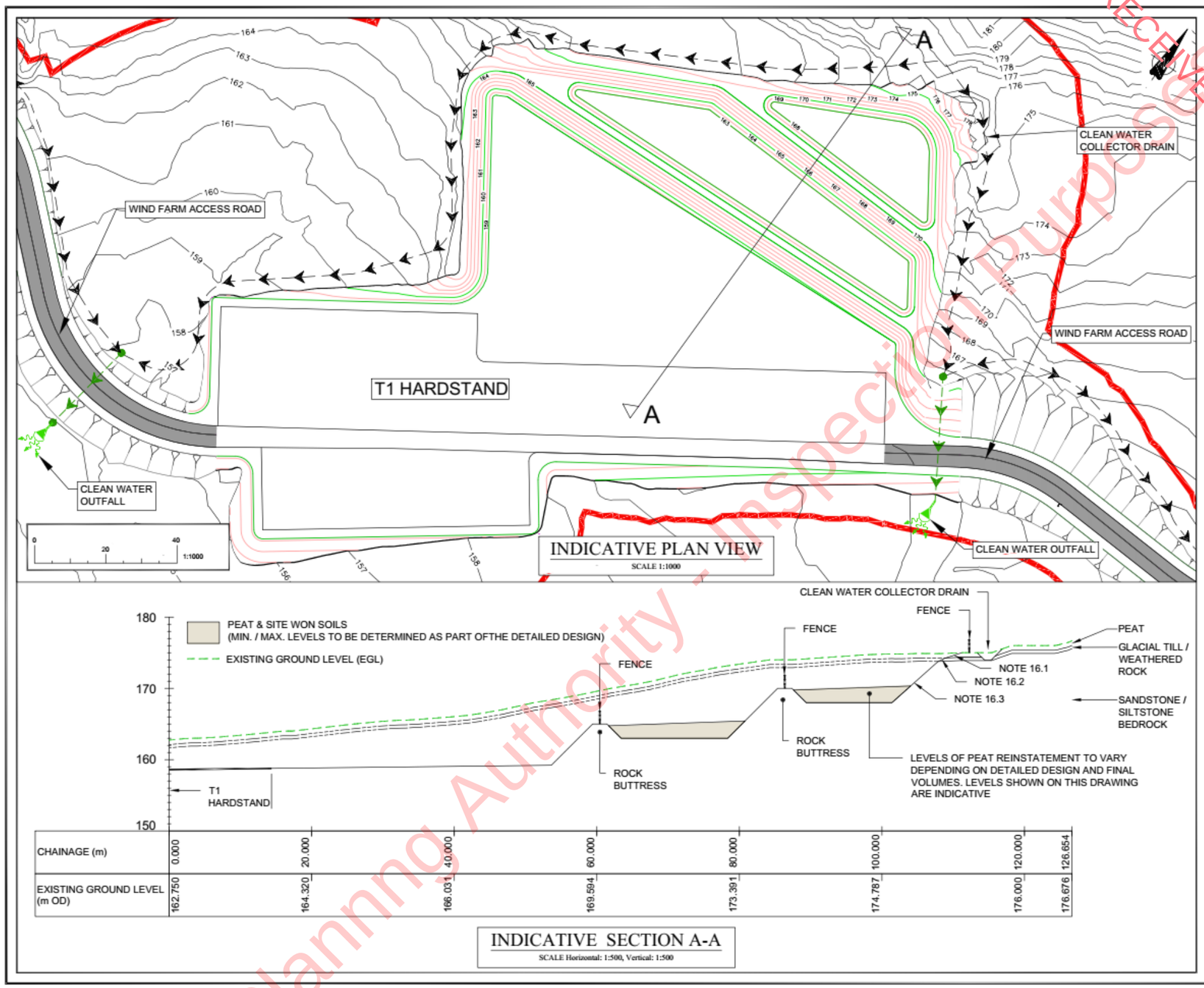
PROJECT TITLE: ILLAUNBAUN WIND FARM

PROJECT No: 20136 - GDG - PL - XX - DR - C - 5300

Revision: - S4 - P01

DRAWING TITLE: BORROW PIT 1 PLAN AND SECTION

SCALE:	SHEET SIZE:	DATE:
SHOWN	A3	24/07/2025
DWG BY: E.F.C.	CHECKED BY: C.E.	APPROVED BY: T.O'S.



NOTES:

1. SOURCE OF TOPOGRAPHICAL CONTOURS: GDG DRONE SURVEY DATED MARCH 2024.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ENGINEER'S DRAWINGS AND SPECIFICATIONS.
3. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE. ALL LEVELS ARE IN METRES RELATED TO ORDNANCE DATUM MALIN (ODM) UNLESS NOTED OTHERWISE.
4. THE OUTLINE AND SECTION ARE INDICATIVE AND ARE SUBJECT TO DETAILED DESIGN AND SLOPE STABILITY ASSESSMENT.
5. EXPOSED ROCK SLOPES SHALL BE FORMED AT SHALLOWER INCLINATIONS (TYPICALLY 45°) WITH FACE LEFT IRREGULAR WITH DECLIVITIES TO PROMOTE RE-VEGETATION AND PROVIDE A NATURAL APPEARANCE.
6. ENGINEERED ROCK BUTTRESS MAY BE LEFT IN-SITU TO RESTRAIN CELLS OF PLACED PEAT OVERBURDEN.
7. EXCAVATION SHOULD BE OPTIMISED TO AVOID AREAS OF DEEPER PEAT.
8. IN-SITU ROCK SLOPE SHALL BE FORMED AT STABLE INCLINATIONS TO SUIT LOCAL ROCK CONDITIONS AND SUBJECT TO DETAILED DESIGN.
9. GEOGRID REINFORCEMENT TO BE PLACED TO STRENGTHEN SURFACE OF PLACED PEAT & SPOIL, AS REQUIRED.
10. THE LOCATION OF THE ROCK BUTTRESSES SHOWN FOR THE BORROW AREAS ARE INDICATIVE ONLY AND SUBJECT TO DETAILED DESIGN.
11. THE EXCAVATABILITY OF THE ROCK AND DEPTH TO TOP OF ROCK WITHIN EACH OF THE BORROW PIT AREAS WILL NEED TO BE DETERMINED FROM A DETAILED GROUND INVESTIGATION.
12. REINSTATEMENT OF PEAT TO BE CARRIED OUT IN LINE WITH APPROVED PEAT MANAGEMENT PLAN.
13. EXCAVATION TECHNIQUES TO BE CONFIRMED FOLLOWING DETAILED GROUND INVESTIGATION.
14. GEOGRID REINFORCEMENT TO BE LAID NEAR SURFACE OF REINSTATEMENT MATERIAL TO MAXIMISE STABILITY FOR SURFACE LAYER.
15. BORROW PIT ACCESS AND DRAINAGE PROVISIONS (UP SLOPE CUT OFF DRAINS ETC.) TO BE DETERMINED THROUGH DETAILED DESIGN.
16. ASSUMPTIONS ON LITHOLOGY BASED ON AVAILABLE GROUND INVESTIGATION:
    - 16.1. PEAT - 0.65m THICKNESS, CUT TO MIN. 1V:3H
    - 16.2. GLACIAL TILL/WEATHERED ROCK - 0.45m THICK, CUT TO MIN. 1V:2H
    - 16.3. SANDSTONE/SILTSTONE BEDROCK - CUT TO MIN. 1V:1H

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ISSUED AS: FOR PLANNING

CLIENT: JC MONT-FORT Green Power Generation

PROJECT TITLE: ILLAUNBAUN WIND FARM

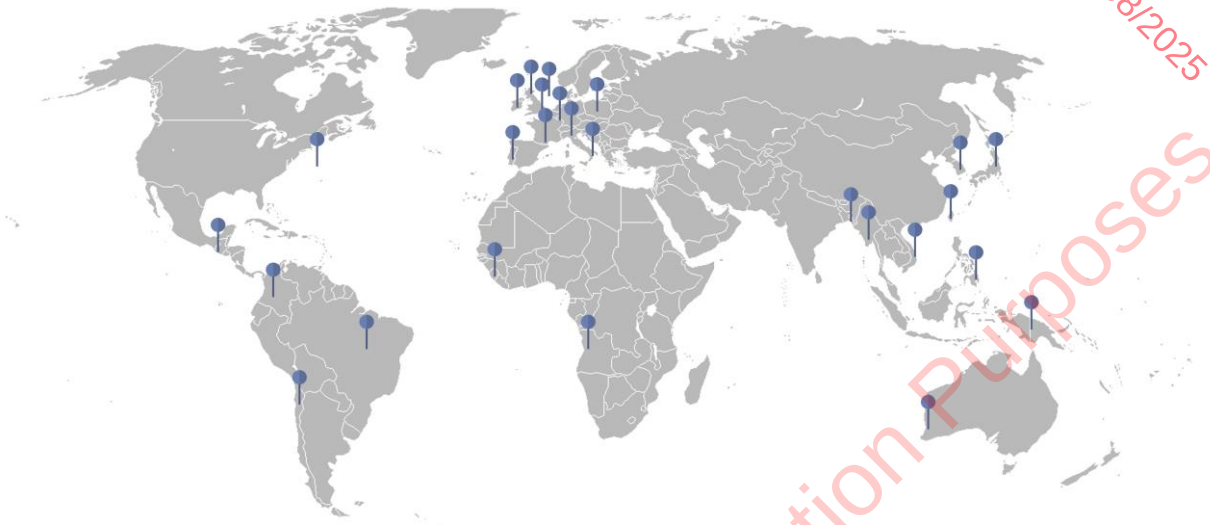
PROJECT No: 20136 - GDG - PL - XX - DR - C - 5301

Revision: - S4 - P01

DRAWING TITLE: BORROW PIT 2 PLAN AND SECTION

SCALE:	SHEET SIZE:	DATE:
SHOWN	A3	24/07/2025
DWG BY: E.F.C.	CHECKED BY: C.E.	APPROVED BY: T.O'S.

GLOBAL PROJECT REACH



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