MANAGEMENT PLAN 4 –
PEAT AND SPOIL MANAGEMENT PLAN

INCHAMORE WIND DAC

INCHAMORE WIND FARM

CO. CORK

CONSTUCTION ENVIRONMENTAL MANAGEMENT PLAN (CEMP)

MANAGEMENT PLAN 4

PEAT AND SPOIL MANAGEMENT PLAN

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Appendix A – Site Investigations Report

Topsoil and surface vegetation excavated during the construction of the wind farm infrastructure will be used to finish reinstated surfaces around Turbine Foundations and Turbine Hardstands. Reinstatement and reprofiling of, and around, infrastructure will be carried out during the construction phase.

Landscaping will allow for sympathetic restoration of the ground surface and ground profile to reduce the visual impact of new infrastructure, facilitate vegetation regrowth and reduce scour and erosion of bare surfaces prior to vegetation establishment. Reinstatement will be undertaken as work progresses. This work will be completed only by experienced personnel under guidance from the appointed Ecological Clerk of Works, and they will conduct regular inspections of the work to ensure it is completed in an appropriate manner.

All areas subjected to reinstatement will be fenced with stock-proof fencing to prevent livestock disturbance until vegetation has become established.

Excavated material is used in several ways:

- Excavated rock is used for Site Access Roads and Turbine Hardstands.
- Excavated sub-soil material will be used as fill material where suitable (e.g., back filling around and on top of Turbine Foundations) with any other sub-soil material to be placed in shallow deposition areas around the WTG foundations (always avoiding sensitive habitats).
- Excavated topsoil will be used to vegetate edges of Turbine Hardstands and Turbine Foundations.
- All surplus material will be used to reinstate the proposed borrow pits.

1.4 Management of Excavated Material

The excess excavated material will be permanently stored in the borrow pit. Excavated materials during the construction phase required for reinstatement, shall in the first instance be stored on site, in an environmentally safe manner that will not result in the pollution of waters, until it is required for re-use.

A buffer of 25 m from watercourses will be implemented for storage areas of excavated materials to be re-used for reinstatement works.

Excavated material will not be stored adjacent to slopes (>15 degrees gradient). This will be subject to evaluation and approval by the Civil Contractors' geotechnical engineer and will accommodate the Site stockpiling requirements based on earthwork calculations.

2 ESTIMATED EXCAVATION QUANTITIES

The environs of the Site are characterised by relatively complex (hilly) topography with associated elevations ranging between c. 350 to 460 metres above datum (m AOD) throughout the Development. Geotechnical drawings prepared by Minerex Environmental Limited were used in conjunction with the peat depth probes and geotechnical trial pit logs as seen in **Appendix I – Site Investigations Report** to calculate the spoil volumes generated by the Development, as can be seen in **Tables 2.1** to **2.6**.

2.1 Road Construction

The minimum useful road width required for delivery of turbine components is 4.5 m. **Table 2.1** tabulates the volumes of topsoil and sub-soil to be excavated for the Site access roads.

Trial Pit data is available in the Site Investigation Report (**Appendix A**). Average peat depth from this data was calculated to be 0.6 m. Excavation for roads is required to 0.6 m only. From this, the volume of peat, soil and rock to be extracted was extrapolated and can be seen in **Table 2.1**.

2.2 Wind Turbine Foundations

The depth of excavation required for each wind turbine foundation will vary depending on peat depths. The diameter of the gravity Turbine Foundations will range from 22 m to 25.5 m. Each Turbine Foundation excavation will be 2.8 m to 3.2 m deep. **Tables 2.2a (i and ii) and b (i and ii)** provide a breakdown of the estimated total excavation volume for the Turbine Foundations.

Table 2.2b (i) Estimated Excavation for WTG Foundations (25.5 m Diameter and 2.8 m depth)

25.5 m diameter										
Turbine No.	Area of Foundation Excavation (m^2)	Foundation Depth (m)	Max Peat Depth (m)	Mineral Soil (m)	Depth to suitable formation (m)	Rock depth (m)	Total Excavation (m^3)	Total Peat (m^3)	Total Soil (m^3)	Total Rock (m^3)
T1	511	2.80	1.40	0.10	1.50	1.30	1,430	715	51	664
T2	511	2.80	0.30	0.70	1.00	1.80	1,430	153	357	919
T3	511	2.80	0.20	2.40	2.60	0.20	1,430	102	1,226	102
T4	511	2.80	0.40	2.40	2.80	0.00	1,430	204	1,226	0
T5	511	2.80	0.70	0.30	1.00	1.80	1,430	357	153	919
Met Mast	100.0	1.0	0.3	0.7	1.0	0.0	100.0	30.0	70.0	0.0
Totals							7,250	1,562	3,083	2,605

Table 2.2b (ii) Estimated Excavation for WTG Foundations (25.5 m Diameter and 3.2 m depth)

25.5 m diameter										
Turbine No.	Area of Foundation Excavation (m^2)	Foundation Depth (m)	Max Peat Depth (m)	Mineral Soil (m)	Depth to suitable formation (m)	Rock depth (m)	Total Excavation (m^3)	Total Peat (m^3)	Total Soil (m^3)	Total Rock (m^3)
T1	511	3.20	1.40	0.10	1.50	1.70	1,634	715	51	868
T2	511	3.20	0.30	0.70	1.00	2.20	1,634	153	357	1,124
T3	511	3.20	0.20	2.40	2.60	0.60	1,634	102	1,226	306
T4	511	3.20	0.40	2.45	2.85	0.35	1,634	204	1,251	179
T5	511	3.20	0.70	0.30	1.00	2.20	1,634	357	153	1,124
Met Mast	100.0	1.0	0.3	0.7	1.0	0.0	100.0	30.0	70.0	0.0
Totals							8,271	1,562	3,109	3,601

2.5 Electrical Sub-Station and Site Compound

Table 2.4a Dimensions of Sub-Station and Site Compound

Description	Length	Width	No.	Area (m^2)
Electrical Substation	-	-	1	1,314
Site Compound	70	52	1	3,640
Total				**4,954**

Table 2.4b Estimated Excavation from Sub-Stations and Site Compounds

Infrastructure	Area (m^2)	Depth to Formation (m)	Average Peat Depth (m)	Mineral Soil (m)	Relevant Trial Pits/Bore Holes	Total Excavation (m^3)	Total Peat (m^3)	Total Soil (m^3)	Total Rock (m^3)
Electrical Substation	1,314	2.0	0.5	1.5	TP010	2,627	657	1,970	0
Site Compound	3,640	2.0	0.2	1.8	TP006	7,280	728	6,552	0
Total						**9,907**	**1,385**	**8,522**	**0**

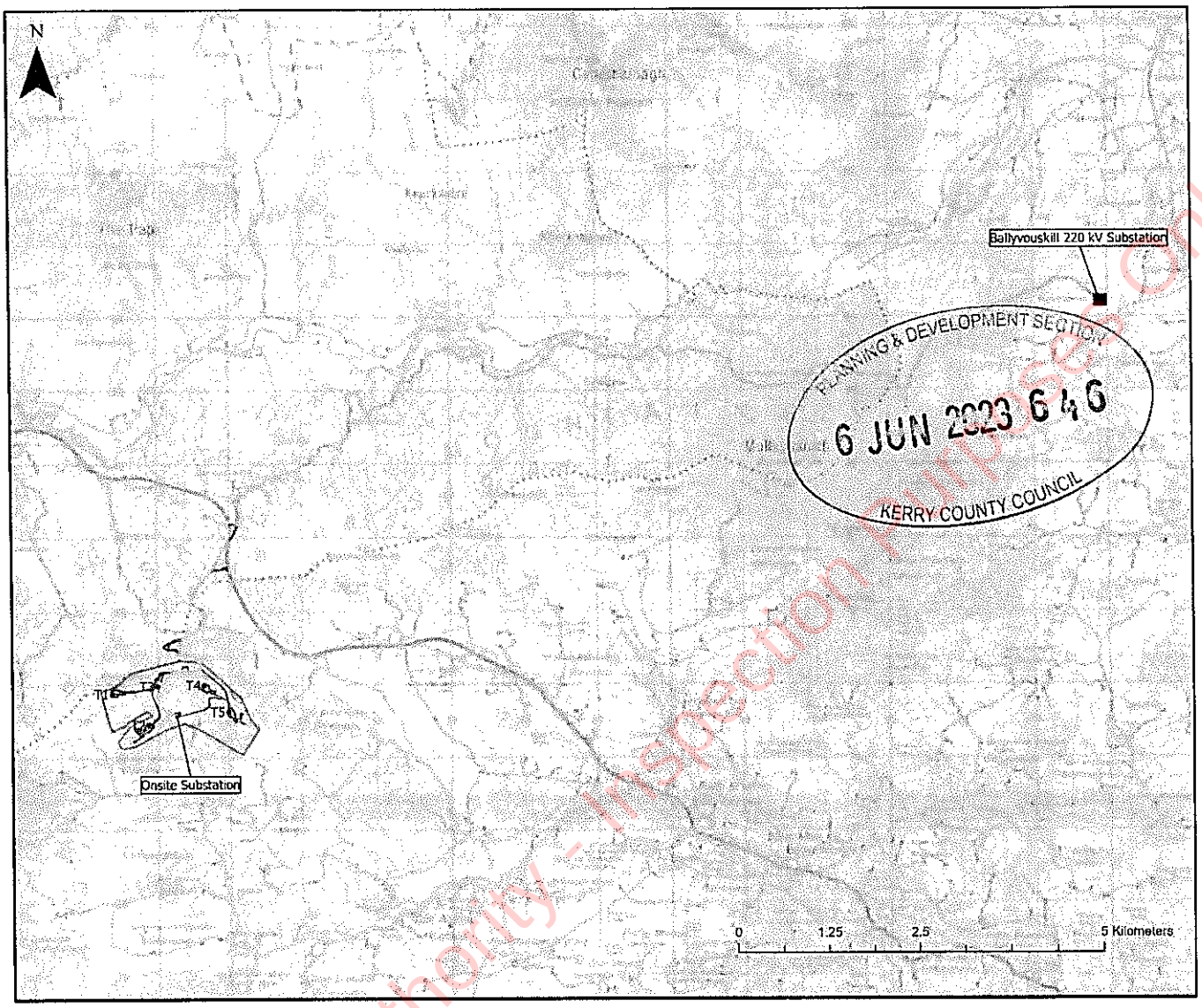

Figure 2.1 Inchamore Wind Farm Grid Connection Route

The cable network will be installed in trenches approximately 0.6 m wide by 1.3 m in depth. There will be 18 No. pre-cast concrete jointing bays measuring 6 m by 2.5 m buried approximately 2 m deep along the grid connection route and at varying intervals from c. 500-820 m intervals (See **EIAR Appendix 2.4**).

Excavated material from the installation of the Grid Connection Route will be used to backfill the trenches once the cable has been laid. Any surplus material will be disposed of at a licensed facility according to **Management Plan 5: Waste Management Plan** due to the presence of bituminous material and hydrocarbons.

In addition, **Table 2.5** provides a breakdown of the estimated total excavation volume for the Grid Connection Route.

2.7 Drainage

There are 28 No. stilling ponds at the Site with a combined area of 2,280 m^2 and a combined volume of 2,280 m^3. Please see **CEMP 3: Surface Water Management Plan** of the CEMP for further details of drainage for the Project.

2.8 Total Estimated Excavation Volume Summary

As detailed in Sections 2.1 to 2.5, the total estimated excavation volume is 84,116 m^3, of which 31,856 m^3 is peat soil and 50,271 m^3 is mineral subsoil. These quantities are detailed in **Table 2.6**.

Excavated Material Type	Excavated Material Volume (m^3)	Proposed Re-Use Volume	Comments
		8,522 m^3 subsoil 0 m^3 rock	Subsoil will be dried and used to reinstate the borrow pits after extraction
Grid Connection*	6,854	0 m^3 peat 6,557 m^3 subsoil 297 m^3 rock	To be disposed of at a licensed facility (LoW 17 05 03*, 17 05 04) Please see Waste Managament Plan for more details
Drainage	2,280	2,280 m^3 peat	Peat is to be temporally stored and re-used to reinstate the Temporary Compound Areas.

As the excavated materials arising from the construction of the Grid Connection Route will be disposed of at a licensed facility, and rock won onsite will be used before using the on-site borrow pit, 77,262 m^3 of peat and soil will need to be re-used within the Site as per **Table 2.6**.

3.5 Bedrock

Rock encountered in the excavations such as cobbles or boulders will be crushed and used for hardcore in the Site Access Roads and Turbine Hardstands. When this resource has been used up, the onsite borrow pits will be used to provide rock. The onsite borrow pit will provide 50,276 m^3 excavated material to provide for the Site Access Roads, Turbine Hardstands, upfill to foundations and temporary compounds. However, a volume of 5,070 m^3 of imported stone will be imported as a finish to these elements of infrastructure.

Table 3.1a Rock required from Borrow Pit

Volume of imported rock required (m^3)	Rock required for Road Construction / Upgrade (m^3)	Rock required for Turbine Hardstand Construction (m^3)	Total Rock required for Construction (m^3)	Volume of Rock to be Extracted from Excavations (m^3)	Rock required from Borrow Pit (m^3)
5,070	13,741	39,105	52,846	2,902	49,945

Table 3.1b Volume of Rock to be Extracted from Borrow Pits

Length (m)	Width (m)	Area (m^2)	Depth (m)	Volume to be extracted from Borrow Pits (m^3)
-	-	38,674	1.30	50,276
Total Volume of Rock to be Extracted from Borrow Pits				***50,276***

Table 3.1c Volume of Excavated Material to be Re-used On-Site

Total Volume (m^3) of Excavated Material to be stored	Volume of Borrow Pits (m^3)	Volume used to top borrow pits (m3)	Total Volume of material to be stored in Borrow Pits (m^3)	Volume to be used in berms (Turbine Foundations and Hardstands) (m^3)
77,262	***50,276***	***30,939***	***81,215***	***504***

The borrow pit will provide 50,276 m^3 of material to be used on-site. It also has the capacity to be filled to 81,215 m^3 and to be topped by up to 0.7 m (30,939 m^3). The total volume of fill to reinstate the borrow pit will be 81,215 m^3. A volume of 504 m^3 will be reused in berms around Turbine Foundations and Turbine Hardstands. See **Table 3.2b** for detailed volumes.

Table 3.2a Summary of Estimated Excavation Quantities (m^3)

Excavated Material Type	Excavated Material Volume (m^3)	Proposed Re-Use Volume	Comments
Roads	15,876	13,321 m^3 peat 2,556 m^3 subsoil	Peat and subsoil will reinstate the onsite borrow pit.
Turbine Foundations	7,250	1,562 m^3 peat 3,083 m^3 subsoil 2,605 m^3 rock	Peat will be used as backfill to foundations. Any surplus will be used to reinstate the borrow pit after extraction. Subsoil will be deposited locally adjacent to Turbine Bases. 144 m^3 will be used as berms around Turbines. Any surplus will be used to reinstate the borrow pits after extraction. Rock will be crushed and used as hardcore in Site Access Tracks and Turbine Hardstands.
Turbine Hardstands	41,949	14,220 m^3 peat 27,729 m^3 subsoil	Peat and subsoil are to be deposited locally at hardstand edges. 360 m^3 will be used as berms around Turbine Hardstands. Any outstanding peat will be naturally air dried and used to fill borrow pits.
Electrical Sub-Stations & temporary Compounds.	9,907	1,385 m^3 peat 8,522 m^3 subsoil 0 m^3 rock	Peat is to be temporally stored and re-used to reinstate the Temporary Compound Areas. Subsoil will be dried naturally with air and used to reinstate the borrow pits after extraction Rock will be crushed and used as hardcore in Site Access Tracks and Crane Hardstands.
Grid Connection*	6,854	0 m^3 peat 6,557 m^3 subsoil	Subsoil and rock will be used to backfill tranches as part of the Grid Connection Route construction. The remaining material is to be disposed of at a licensed facility (LoW 17 05 03*, 17 05 04)

4 RECOMMENDATION

Based on the available information, Jennings O'Donovan make the following recommendations:

- The estimated potential total volume of excavated material is 77,262 m^3.
- Excavated material along the Grid Connection Route will be used to backfill the trenches once the cable has been laid. Any surplus material will be disposed of at a licensed facility according to **Management Plan 5: Waste Management Plan** due to the presence of bituminous material and hydrocarbons. All other excavated material can be re-used on the Site.
- A minimum of 5,070 m^3 of imported stone is required for finishing of road construction/upgrade and Turbine Hardstands if the rock onsite is determined to be insufficient quality.

APPENDIX A

Site Investigations Report

Prepared for;

Jennings O'Donovan

Inchamore Windfarm (IWF)

Site Investigation Report & Peat & Subsoil Stability Risk Assessment

JENNINGS O'DONOVAN & PARTNERS LIMITED
CONSULTING ENGINEERS

603679 IWF EIAR App. 6.1 SI & PSSRA (02)

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MARCH 2023

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1. Introduction

1.1 Background

RSK Ireland was commissioned by Jennings O'Donovan & Partners (JOD, the Client) on behalf of Inchamore Wind DAC (the Developer/s) to assess the geological site characteristics in relation to the planning application for the Inchamore Wind Farm (IWF, the Development) in Co. Cork.

1.2 Purpose

Site Investigation for the purposes of assessing ground conditions at EIA design phase of a proposed wind farm development, Inchamore Wind Farm, Co. Cork. Assessing ground conditions in terms of peat and slope stability risk, subsoil and geological characterisation and classification.

1.3 Scope of Works – Tender

The scope of works was initially specified by the Developer at tender phase. The scope of works for ground investigations at tender included the following works;

- Peat probing (50 m grid), 50 ha
- Trial pits, 35 no.
- Number of groundwater monitoring wells, 4 no.
- SI report with detailed findings, records and interpretation

Provisional works included;

- Gouge auger samples
- Boreholes up to 15 m, 5 no.
- Ground penetrating radar surveys (5 days)

In consultation with the Client and Developer the scope of works was adapted to the site based on observations made by desk study and initial site walk overs and assessments. The actual completed scope of works is detailed in **Section 2**.

This work has been carried out in unison with the EIAR for the Project. Therefore, this report will be appended to **EIAR Chapter 8 - Soils & Geology** as part of the planning application for the Project. The EIAR tender scope includes for a stand-alone Peat Stability Report as well as stand alone Site Investigation report, however the two will be merged in this Site Investigation report. This is done with a view streamlining the site geological assessment.

Further to the above, the geological or environmental setting of the site will be described in detail in **EIAR Chapter 8 – Soil & Geology** with appended maps and graphics for reference. This report will refer and summarise the EIAR chapter/s to avoid duplication of information or graphics. This report will also reference **EIAR Chapter 9 – Hydrology & Hydrogeology** in relation to groundwater.

1.4 Statement of Authority

RSK (Ireland) Ltd. (RSK), part of RSK Group, is a consultancy providing environmental services in the hydrological, hydrogeological and other environmental disciplines. The company and group provide consultancy to clients in both the public & private sectors. More information can be found at www.rskgroup.com. The principal members of the RSK EIA team involved in this assessment include the following persons;

- Sven Klinkenbergh – B.Sc. (Environmental Science), P.G.Dip. (Environmental Protection) – Associate, Project Manager and EIA Lead Author with c. 10 years industry experience in the preparation of hydrological, hydrogeological and geological reports..
- Project Scientist: Lissa Colleen McClung - B.Sc. (Hons.) Environmental Studies, M.Sc. (Hons.) Environmental Science. Current Role: Graduate Project Scientist
- Project Scientist: Mairéad Duffy – B.Sc. (Environmental Science), M.Sc. (Climate Change). Current Role: Graduate Project Scientist

hazard and risk in peatland areas, particularly in relation to proposed electricity generation developments. The document is published and written in context of Scottish peatlands, however in the absence of relevant guidance, it is widely accepted as relevant guidance in Ireland.

The guide emphasizes the need for a comprehensive assessment of landslide hazard and risk in peatland areas, which is particularly important due to the unique characteristics of these environments. Peatlands are often found in areas of high rainfall, and the accumulation of peat can result in unstable ground conditions, which can increase the risk of landslides.

The guide provides a step-by-step approach to landslide hazard and risk assessment, including the identification of potential landslide triggers, the characterization of the peatland environment, the assessment of landslide susceptibility, and the estimation of landslide hazard and risk. The guide also provides guidance on the selection of appropriate methods for landslide hazard and risk assessment, such as field mapping, remote sensing, and numerical modelling. The guide emphasizes the importance of stakeholder engagement and communication in the landslide hazard and risk assessment process, particularly in relation to proposed electricity generation developments, which can potentially have significant impacts on the surrounding environmental receptors and communities. The guide covers the following aspects which should be included in the site risk assessment;

- Sampling Regime: The guide recommends a sampling regime that includes both surface and subsurface surveys, using techniques such as; depth probing, gouge coring, trialpitting, drilling, and geophysical surveys. The aim is to obtain a comprehensive understanding of the geology and hydrogeology of the site, as well as the depth and condition of the peat layer.
- Assessment of Desk Top Data: The guide recommends an assessment of desktop data to identify potential sources of instability, such as steep slopes, drainage features, and areas of peat degradation. This assessment should be based on available data sources such as geological maps, aerial photographs, and LiDAR data.
- Degree of Geomorphological Assessment: The guide recommends a high degree of geomorphological assessment, using methods such as aerial photography interpretation and field mapping to identify potential instability features such as landslides and erosion channels. Many sources of data can input to the interpretation of stability risk at any particular location, and field reconnasance is also a valuable tool in this repsect.
- Interpretation of Data: The guide recommends a detailed interpretation of all data collected, including the results of field surveys and laboratory testing. This should involve the identification of key parameters such as peat depth, soil properties, and groundwater levels or saturation, as well as the integration of all available data to develop a comprehensive understanding of the potential for instability. This can result in screening out peat stability risk, for example; in areas of extensive shallow bedrock or bedrock outcrops, or areas with very minor inclines. Conversly, high risk areas can potentially be identified by desk top assessment alone, for example; steep slopes in excess 15 degrees, or areas with historical stability issues or historic landslides.
- The development of numerical models for peat stability risk assessments has been driven by advances in computer technology (e.g. QGIS) and modeling techniques, as well as an increased awareness of the risks associated with peat instability. The use of numerical modeling in peat stability risk assessments typically involves the following steps:
    - Development of a conceptual model: This involves the development of a conceptual model of the site based on the results of field investigations and laboratory testing. The conceptual model should include information on the geometry and properties of the peat layer, as well hydrogeological characteristics such as pore water pressure or bul unit weight (saturation).
    - Selection of appropriate modeling techniques: There are a variety of modeling techniques that can be used to simulate peat stability, including finite element and finite difference methods. The selection of an appropriate modeling technique will depend on the specific characteristics of the site and the goals of the assessment.
    - Calibration and validation of the model: The model is calibrated and validated using data collected during field investigations and laboratory testing. This involves adjusting model parameters to improve the match between simulated and observed data.

Overall, the guide emphasizes the importance of a comprehensive and integrated approach to peat landslide hazard and risk assessments, which includes a thorough sampling regime, an assessment of desktop data, a high degree of geomorphological assessment, and a detailed interpretation of all data collected. By following these guidelines potential hazards and risks associated with peat instability can be identified and managed effectively.

$$FoS = \frac{cu}{yz \sin \alpha \cos \alpha}$$

For the purpose of this assessment, the above formula will be referred to as the *FoS Formula*.

Qualifying peat stability at all peat survey points and trial pit locations was done using the following parameters;

Table 1: Formula Parameters & Symbols

Symbol	Description	Unit
FoS	Factor of Safety	FoS
c_u	Effective cohesion or Undrained Shear Strength	kPa
y	Bulk Unit Weight of Peat	kN/m3
z	Depth to failure plain	m
α	Slope Angle	Degrees

The Factor of Safety (FoS) result will range from 0 to infinity, however the following ranges are prescribed ratings as follows;

Table 2: Factor of Safety (FoS) Classifications (Scottish Gov., 2017)

Description	FoS Value Range	Classification
Stable	>1.3	Acceptable
Marginally Stable	1.0 > < 1.3	Acceptable
Unstable	<1.0	Unacceptable

As per the guidance listed in Section 2 of this report, FoS values of 1.0 or greater are considered acceptable in terms of peat stability (Scottish Gov., 2017).

The assessment has been completed on the basis of 2 no. scenarios, which are as follows;

1. Scenario A – Peat stability in terms of the receiving environment as is, that is using the depth of peat observed and recorded during site surveys.
2. Scenario B – Peat stability in terms of the in-situ peat with 1m fill (presumed peat) placed on top, that is using the depth of peat observed and recorded during site surveys plus 1 metre fill (depth + 1.0m). This is the assessment worst case scenario, and this will be used to assess stability at proposed infrastructure locations.

Undrained shear strength (effective cohesion) (c_u) has been derived by means of assessing moisture content results, which is; there is a correlation between peat moisture content and shear strength (effective cohesion). Shear vane testing has been carried out on the site however, shear vane test, or in situ barrel shear tests are not considered representative of shear strength characteristics of the peat being assessed in terms of stability assessment given numerous flaws with the test itself, namely; the shear vane test evaluates the shear strength where by the force is exerted in a vertical and cylindrical plane, which is not indicative of forces at play with respect slope stability or mass movement; and fibres and roots within the peat will effect the test itself, potentially exaggerating, or giving misleading data. The following graph presents conceptual shear strength values for peat (Boylan N, Jennings P & Long M., 2008).

The following table lists parameter values, including inferred conservative parameter values used in numerical assessments.

Table 4: Formula Parameters, Symbols & Inferred Conservative Values

Symbol	Description	Value	Unit
c_u	Effective cohesion	3.5	kPa
y	Bulk Unit Weight of Peat	11	kN/m3
z	Depth to failure plain	Depth of Peat	m
α	Slope Angle	Surface Topography	Degrees

2.2.8 Risk Matrices & Ranking

In assessing the risk in relation to peat stability on site it is important to rate the risk in terms of the hazard, the likelihood and the consequences if any such issue should arise. Therefore, the slope stability risk assessment considers the following parameters, which are assessed by means of a series of risk matrices (Scottish Gov., 2017).

Table 5: Parameters Included in Risk Matrices and Assessed

Category	Description
Landslide History	Considers the likelihood of landslide events occurring based on the history of the site, including the current site use.
Factor of Safety	As described above, includes the following; • Peat depth • Peat quality / condition • Moisture content • Incline (surface topography) • Shear strength • Bulk unit weight of peat
Substrate Topology	Identifying and qualifying variance in substrate topology and qualifying variance from theory underlining the stability formula used i.e., Infinite Slope (Parallel and no foot and head forces)
Significance of Receptor	Qualifying potential receptors in terms of significance.
Distance to Receptor	Qualifying localised proposed development areas in terms of distance to nearest receptor.

Considering the above parameters, the stability assessment follows the following steps;

1. FoS_{RAW} - Assess the site in terms of soil stability using the FoS Formula and calculate a Factor of Safety (FoS) using the *raw* data. This step is considered as preparation of the data obtained for the site i.e., translating the data to a value related to stability, and is not considered the final output of the stability assessment.
2. $FoS_{ADJUSTED}$ - Assess the FoS_{RAW} values in terms of suitability of the application of FoS Formula by considering the history of landslides in relation to the proposed site, and the topology of the substrate compared to the surface topology of the site. This is done by means of a risk matrix which qualifies the point, and also applies a coefficient for the next risk assessment step.
3. Risk Ranking RR_{SF} - The $FoS_{ADJUSTED}$ data is assessed in terms of significance of associated receptor. This is done by means of a risk matrix which qualifies the point, and also applies a coefficient for the next risk assessment step.
4. Risk Ranking RR_D – The RR_{SF} data is assessed in terms of distance to associated receptor. This is done by means of a risk matrix which qualifies the point.

For the purpose of assessing subsoil stability for the Site a conservative undrained shear strength (effective cohesion) value will be used in numerical assessments, i.e., 40 kPa.

In situ bulk density (kg/m^3), or bulk unit weight (kN/m^3) of soils/subsoils (y), namely silty sandy subsoils, is typically within the range of 2500 to 2700 kg/m^3, or 24.5 to 26.5 kN/m^3. For the purpose of assessing subsoil stability for the Site a conservative bulk unit weight value will be used in numerical assessments i.e., 27 .0 kN/m^3.

The depth to failure plane (z) is presumed to be thickness or depth of subsoils at any given sampling point being assessed. However, subsoil depths will be inferred in areas of the site with limited data. It should be noted that the failure plane can potentially be within subsoils (subsoil on subsoil movement), or the substrate i.e., weathered bedrock. In relation to the Site specifically, it is important to note the presence of iron pan. Iron pan is a layer of oxidised iron within the subsoil. The iron pan layer is relatively impermeable which can impede or significantly alter groundwater movement in the subsoils. Under the right circumstances the iron pan layer can therefore become a slip or failure plane. In such instances the failure plane has the potential to parallel to the overlying topography.

Slope angle (α) is presumed to be topographical incline measured on site / evaluated using high resolution elevation data at any given sampling point being assessed, however it should be noted that the slope angle (α) relates to the failure plane angle, which is presumed to be the peat and substrate interface, and which is presumed to be parallel to the surface when using FoS Formula (Infinite Slope Formula). In reality the underlying substrate (bedrock) is unlikely to be parallel to the surface topology. However, considering the presence of iron pan in subsoils at the site it is important to consider the potential for parallel failure planes when assessing stability at the site.

It should be noted that FoS Formula does not account for forces related to the toe and head of an area or mass of soil with the potential for mass movement, which is in reality the Infinite Slope formula will likely exaggerate stability conditions negatively.

The following table lists parameter values, including inferred conservative parameter values used in numerical assessments.

Table 6: Formula Parameters, Symbols & Inferred Conservative Values

Symbol	Description	Value	Unit
c_u	Effective cohesion	40	kPa
y	Bulk Unit Weight of Peat	27.0	kN/m3
z	Depth to failure plain	Depth of subsoil to bedrock	m
α	Slope Angle	Surface Topography	Degrees

2.3.2 Risk Matrices & Ranking

In assessing the risk in relation to subsoil stability on site it is important to rate the risk in terms of the hazard, the likelihood and the consequences if any such issue should arise. Therefore, the slope stability risk assessment considers the following parameters, which are assessed by means of a series of risk matrices (Scottish Gov., 2017)

Table 7: Parameters Included in Risk Matrices and Assessed

Category	Description
Landslide History	Considers the likelihood of landslide events occurring based on the history of the site, including the current site use.
Factor of Safety	As described above, includes the following; • Subsoil depth (to failure plain)

3. Baseline Conditions

3.1 Site Description & History

There no recorded landslide events in close proximity to the Site (GSI, Accessed 2021).

There were no indications of stability issues or mass movement observed on the Site during site surveys.

The Site is mapped as having areas ranging from Low Risk to High Risk in terms of Landslide Stability, that is; full spectrum of slope stability risk categories (GSI, ND). Larger areas of High-Risk landslide susceptibility are associated with relatively expansive steep slopes.

Refer to EIAR baseline section for further information (**Chapter 8: Soils and Geology**).

3.2 Site Geology

Consultation with Geological Survey Ireland Spatial Resources (GSI) indicates that the bedrock at 1:1,000,000 scale the Site is underlain by;

- Gun Point Formation (GP) – Green-grey to purple medium to fine-grained sandstones, interbedded with green and red to purple siltstones to fine sandstones.

The region contains a multitude of complex geological features however, there are no mapped faults or other significant features underlying the area of the Site.

Rocky outcrops are common within the Site Boundary.

Refer to EIAR baseline section for further information (**Chapter 8: Soils and Geology**).

3.3 Site Soils & Subsoils

Consultation with available maps (GSI) indicate that the soil type across the entire area of the Site, and the general area in the region is mostly Blanket Peat and Till derived from Devonian sandstones with several significant areas mapped as being Bedrock at Surface.

Peat depths observed on the Site are generally 'Rock' to 'shallow' with isolated pockets of moderately deep peat, however depths at most sampling points are within the range of 0.0-0.5 m and areas with deeper, particularly extremely deep peat have been avoided in terms of the Project footprint. Peat depths are mapped and presented in **Appendix A**.

Peat quality assessment (by gouge coring / trial pitting / observations at cut locations) indicate relatively moderate to high Von Post values (generally H5 to H8) across the Site.

Refer to EIAR baseline section for further information (**Chapter 8: Soils and Geology**).

3.4 Topography & Substrate Topology

The topography at and in the immediate area surrounding the Site is highly variable with multiple peaks, ridges with variable elevations and inclines. At lower elevations the topography is relatively flat or comprising of low magnitude inclines, however at mid and high elevation relative to the Site, steep high magnitude inclines are commonplace.

4. Site Investigation Data & Results

4.1 Peat Depth Data

Approximately 150 no. peat depth probe locations were assessed at the Site. Georeferenced and categorized peat depth locations are presented in **Appendix A**. Peat depth data is presented in **Appendix B**. Number of probe locations by Depth Category are presented in **Table 8**.

Table 8: Peat Depth Probe Points per Depth Category

Peat Depth Category	No.
A – Rock (0.00-0.01 m)	16
B – Very Shallow (0.01-0.5 m)	92
C – Shallow (0.5-2.0 m)	66
D – Moderately Deep (2.0-3.5m)	12
E – Deep (3.5-5.0 m)	1
F – Very Deep (>5.0 m)	0
TOTAL	187 (21 Inferred)

4.2 Trial Pit Data

A total of 16 no. Trial Pits were completed, logged and sampled at the Site. Trial Pit and Borehole locations are presented in **Appendix C**. Trial Pit Logs are presented in **Appendix D**. Trial Pit and Site Investigation Photos are presented in **Appendix E**. A total of 3 no. subsoil samples were obtained from the Site and tested for particle size distribution (PSD). Subsoil laboratory certificates are presented in **Appendix G**.

Particle Size Distribution (PSD) Soil Description results for subsoils (BS 1377: Part 2: 1990: Clause 9) at the site are presented in **Table 9**. Note: cobble size particles observed on trial pit log sheets and have likely been screened out to a degree at the time of sampling.

Table 9: Reported Subsoil Description (PSD)

Sample ID	Cobbles (%)	Gravel (%)	Sand (%)	Silt & Clay (%)	Description
TP03-A2 (SS1)	0.0	43.0	32.0	25.0	Very clayey very sandy GRAVEL
TP08-A2 (SS1)	0.0	50.0	19.0	31.0	Slightly sandy gravelly CLAY
TP11-A2 (SS1)	0.0	51.0	26.0	22.0	Very clayey very sandy GRAVEL

Cobbles were observed on site and were likely screened out at the time of sampling. Further details are presented in **Appendix D**. Iron pan was observed in several trial pits as listed in **Appendix H**, and presented in **Appendix C, Appendix D** and **Appendix E**.

4.3 Borehole Data

A total of 1 no. rotary core borehole was completed, logged, and sampled at the Site. Borehole logs are presented in **Appendix F**. Drill logs indicate that;

- Bedrock underlying the site is described as SILTSTONE (BH01I)
- Bedrock shows minor signs of weathering.
- Driller notes water strike at BH01I at ~2.50m bGL likley perched groundwater on top of unweathered bedrock. .

The following plates present the available peat data per proposed turbine locations, including the results of numerical model stability risk assessment.

SI Appendix B - Peat & Subsoil Survey Database
Inchamore WF, Co. Cork

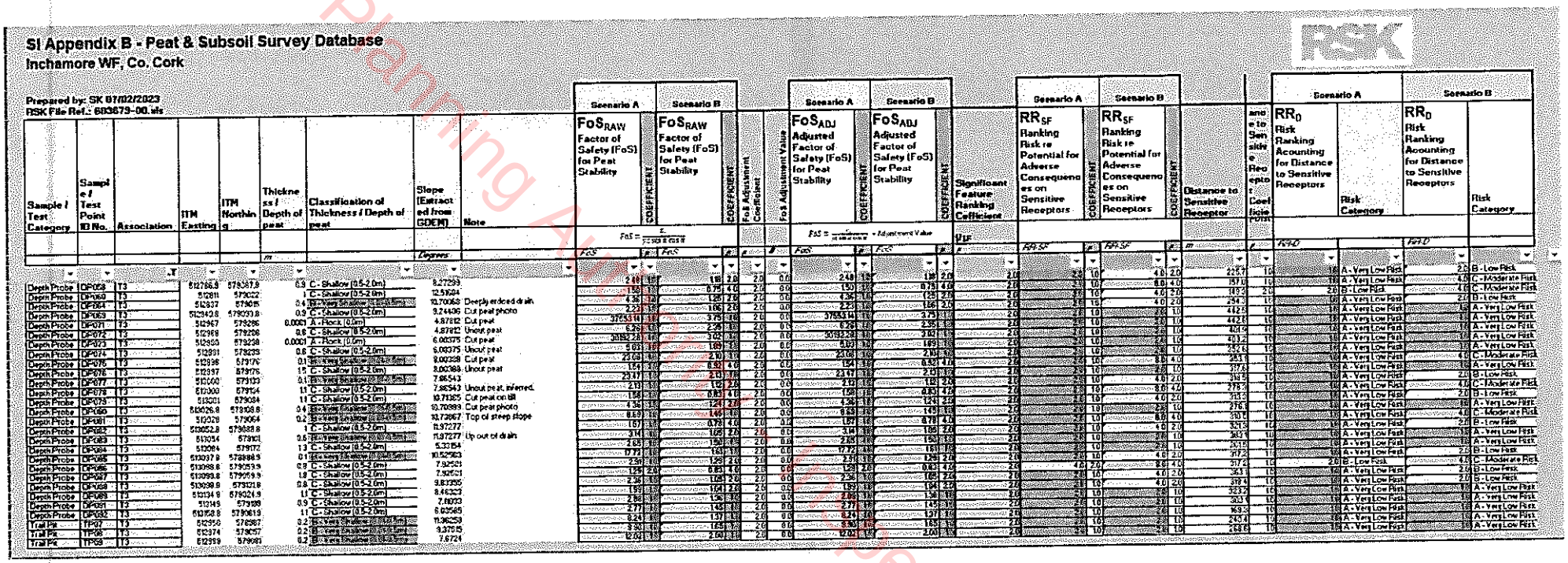
Prepared by: SK 07/02/2023
RSK File Ref.: 603679-00.xls

Sample / Test Category	Sample / Test Point ID No.	Association	ITM Easting	ITM Northing	Thickness / Depth of peat	Classification of Thickness / Depth of peat	Slope (Extracted from GOEM)	Note	Scenario A FoS_{RAW} Factor of Safety (FoS) for Peat Stability	Scenario B FoS_{RAW} Factor of Safety (FoS) for Peat Stability	FoS Adjustment Coefficient	FoS Adjustment Value	Scenario A FoS_{ADJ} Adjusted Factor of Safety (FoS) for Peat Stability	Scenario B FoS_{ADJ} Adjusted Factor of Safety (FoS) for Peat Stability	Significant Feature Ranking Coefficient	Scenario A RR_{SF} Ranking Risk re Potential for Adverse Consequences on Sensitive Receptors	Scenario B RR_{SF} Ranking Risk re Potential for Adverse Consequences on Sensitive Receptors	Distance to Sensitive Receptor	Sensitive Receptor Coefficient	Scenario A RR_D Risk Ranking Accounting for Distance to Sensitive Receptors	Scenario A Risk Category	Scenario B RR_D Risk Ranking Accounting for Distance to Sensitive Receptors	Scenario B Risk Category
					m		Degrees		FoS				FoS					m					
Depth Probe	DP001	T1	512342.0	5789239	0.1	B - Very Shallow (0.05-0.5m)	5.76569		31.82	2.89	2.0	0.0	31.82	2.89	2.0	2.0	1.0	420.0	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP002	T1	512348.9	5789242.9	0.1	B - Very Shallow (0.05-0.5m)	5.76569		31.83	2.89	2.0	0.0	31.83	2.89	2.0	2.0	1.0	419.9	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP003	T1	512360.9	5789212.9	0.2	B - Very Shallow (0.05-0.5m)	2.54232		26.93	5.96	2.0	0.0	26.93	5.96	2.5	2.5	1.0	414.9	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP004	T1	512386.9	5789413	0.1	B - Very Shallow (0.05-0.5m)	5.89515		31.14	2.83	2.0	0.0	31.14	2.83	2.0	2.0	1.0	378.9	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP005	T1	512398.9	5789263.9	0.1	B - Very Shallow (0.05-0.5m)	10.09382	Rocky outcrop east west steep	18.44	1.68	2.0	0.0	18.44	1.68	2.0	2.0	1.0	369.4	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP006	T1	512401.8	5789342.9	0.7	C - Shallow (0.5-2.0m)	8.0635	Cut peat. Photo 0150	4.33	1.78	2.0	0.0	4.33	1.78	2.0	2.0	1.0	348.9	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP007	T1	512411.9	5789713.9	0.6	C - Shallow (0.5-2.0m)	3.6166		11.65	4.37	2.0	0.0	11.65	4.37	2.0	2.5	1.0	368.6	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP008	T1	512440.9	5789755.9	2.1	D - Moderately Deep (2.0-3.5m	4.97205		1.75	1.19	2.0	0.0	1.75	1.19	2.0	2.0	1.0	311.5	1.0	2.0	B - Low Risk	2.0	B - Low Risk
Depth Probe	DP009	T1	512417.9	5789507.9	1	C - Shallow (0.5-2.0m)	3.12206		5.86	2.93	2.0	0.0	5.86	2.93	2.0	2.0	1.0	343.2	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP010	T1	512456.9	5789449.9	0.0001	A - Rock (0.0m)	0.87893	Rock	297449.24	20.74	2.0	0.0	297449.24	20.74	2.0	2.0	1.0	367.7	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP011	T1	512465.9	5789426.9	1.2	C - Shallow (0.5-2.0m)	0.87893	Rocky adjacent	17.29	9.43	2.0	0.0	17.29	9.43	2.0	2.0	1.0	348.2	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP012	T1	512513	579376	1.1	C - Shallow (0.5-2.0m)	2.52249		6.58	3.45	2.0	0.0	6.58	3.45	2.0	2.0	1.0	345.2	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP013	T1	512521.9	5787283	0.0001	A - Rock (0.0m)	6.05489	Rock	30334.02	3.03	2.0	0.0	30334.02	3.03	2.0	2.0	1.0	345.6	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP014	T1	512524	579340	0.0001	A - Rock (0.0m)	2.06887	Rock	87251.72	8.73	2.0	0.0	87251.72	8.73	2.0	2.0	1.0	387.7	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP015	T1	512526	579308	0.0001	A - Rock (0.0m)	4.37171	Rock	41963.31	4.19	2.0	0.0	41963.31	4.19	2.0	2.0	1.0	287.7	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP016	T1	512529	579286	0.0001	A - Rock (0.0m)	2.27531	Rock	58781.76	5.88	2.0	0.0	58781.76	5.88	2.0	2.0	1.0	293.7	1.0	2.0	B - Low Risk	2.0	B - Low Risk
Depth Probe	DP017	T1	512532	579259	2.1	D - Moderately Deep (2.0-3.5m	4.90234		1.79	1.21	2.0	0.0	1.79	1.21	2.0	2.0	1.0	450.1	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP018	T1	512543	579001	0.0001	A - Rock (0.0m)	3.75734	Rock	54424.69	5.44	2.0	0.0	54424.69	5.44	2.0	2.0	1.0	271.7	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP019	T1	512544	579308	2.6	D - Moderately Deep (2.0-3.5m	2.09689		3.50	2.63	2.0	0.0	3.50	2.63	2.0	2.0	1.0	350.0	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP020	T1	512545	579027	2.3	D - Moderately Deep (2.0-3.5m	2.53487		2.72	2.01	2.0	0.0	2.72	2.01	2.0	2.0	1.0	287.6	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP021	T1	512546	579046	1.5	C - Shallow (0.5-2.0m)	2.09693	Rocky adjacent photo	6.06	3.64	2.0	0.0	6.06	3.64	2.0	2.0	1.0	297.4	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP022	T1	512559	579057	2.5	D - Moderately Deep (2.0-3.5m	148967		4.90	3.50	2.0	0.0	4.90	3.50	2.0	2.0	1.0	390.2	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP023	T1	512553	579039	2.2	D - Moderately Deep (2.0-3.5m	3.25734		2.47	1.76	2.0	0.0	2.47	1.76	2.0	2.0	1.0	278.6	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP024	T1	512554	579029	3	D - Moderately Deep (2.0-3.5m	2.39487		2.54	1.91	2.0	0.0	2.54	1.91	2.0	2.0	1.0	334.3	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP025	T1	512556.8	5790387.9	2.5	D - Moderately Deep (2.0-3.5m	2.00689	Rocky adjacent photo	3.64	2.60	2.0	0.0	3.64	2.60	2.0	2.0	1.0	293.1	1.0	2.0	B - Low Risk	2.0	B - Low Risk
Depth Probe	DP026	T1	512569	579056	3	D - Moderately Deep (2.0-3.5m	4.10768		1.49	1.16	2.0	0.0	1.49	1.16	2.0	2.0	1.0	299.4	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP027	T1	512575	579077	2.1	D - Moderately Deep (2.0-3.5m	1.83698		4.82	3.10	2.0	0.0	4.82	3.10	2.0	2.0	1.0	257.7	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP032	T1	512580	579039	0.1	B - Very Shallow (0.05-0.5m)	7.22121		28.52	2.37	2.0	0.0	28.52	2.37	2.0	2.0	1.0	243.3	1.0	2.0	B - Low Risk	2.0	B - Low Risk
Depth Probe	DP033	T1	512583	579002	1.1	C - Shallow (0.5-2.0m)	7.22121		2.32	1.22	2.0	0.0	2.32	1.22	2.0	2.0	1.0	238.5	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP034	T1	512591	578975	0.0001	A - Rock (0.0m)	6.60087	Rocky adjacent	26755.39	2.67	2.0	0.0	26755.39	2.67	2.0	2.0	1.0	346.2	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP035	T1	512594	579054	1.1	C - Shallow (0.5-2.0m)	1.44498		11.48	6.51	2.0	0.0	11.48	6.51	2.0	2.0	1.0	278.6	1.0	2.0	B - Low Risk	2.0	B - Low Risk
Depth Probe	DP036	T1	512614	579081	2.5	D - Moderately Deep (2.0-3.5m	4.96378		1.76	1.26	2.0	0.0	1.76	1.26	2.0	2.0	1.0	354.1	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP037	T1	512635	579062	2	C - Shallow (0.5-2.0m)	3.50355		2.61	1.74	2.0	0.0	2.61	1.74	2.0	2.0	1.0	290.1	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP040	T1	512649	579030	0.0001	A - Rock (0.0m)	4.87526	Rock	37874.96	3.76	2.0	0.0	37874.96	3.76	2.0	2.0	1.0	297.7	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP041	T1	512651	579011	0.2	B - Very Shallow (0.05-0.5m)	5.55167		15.43	2.57	2.0	0.0	15.43	2.57	2.5	2.5	1.0	395.5	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP044	T1	512657	579101	1.1	C - Shallow (0.5-2.0m)	4.61596		2.98	1.63	2.0	0.0	2.98	1.63	2.0	2.0	1.0	395.7	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP045	T1	512657	579131	1.1	C - Shallow (0.5-2.0m)	4.55508		3.59	1.97	2.0	0.0	3.59	1.97	2.0	2.0	1.0	297.7	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP047	T1	512657	579151	1.2	C - Shallow (0.5-2.0m)	4.63383		3.29	1.80	2.0	0.0	3.29	1.80	2.0	2.0	1.0	297.7	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP048	T1	512667.8	579037.8	0.0001	A - Rock (0.0m)	8.54413	Rock	29056.48	2.17	2.0	0.0	29056.48	2.17	2.0	2.0	1.0	297.7	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP049	T1	512671	579068	0.1	B - Very Shallow (0.05-0.5m)	6.30361		29.85	2.65	2.0	0.0	29.85	2.65	2.0	2.0	1.0	297.7	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Trial Pit	TP13	T1	512549	579311	0.1	B - Very Shallow (0.05-0.5m)	2.39487		2.46	1.86	2.0	0.0	2.46	1.86	2.0	2.0	1.0	297.7	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Trial Pit	TP14	T1	512554	579045	3.1	D - Moderately Deep (2.0-3.5m	3.12206		11.50	4.50	2.0	0.0	11.50	4.50	2.5	2.5	1.0	297.7	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Trial Pit	TP15	T1	512435	578989	0.3	B - Very Shallow (0.05-0.5m)	4.67019	Groundwater logged at base	19.60	3.27	2.0	0.0	19.60	3.27	2.0	2.0	1.0	743.5	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Trial Pit	TP16	T1	512253	578980	0.2	B - Very Shallow (0.05-0.5m)																	

Plate 1: Peat Data & Risk Assessment Results – T1

SI Appendix B - Peat & Subsoil Survey Database
Inchamore WF, Co. Cork

Prepared by: SK 01/02/2023
RSK File Ref.: 603679-00.xls



Sample / Test Category	Sample / Test Point ID No.	Association	ITM Easting	ITM Northing	Thickness / Depth of peat	Classification of Thickness / Depth of peat	Slope (Extracted from GDEM)	Note	Scenario A FoS$_{RAW}$ Factor of Safety (FoS) for Peat Stability	COEFFICIENT	Scenario B FoS$_{RAW}$ Factor of Safety (FoS) for Peat Stability	COEFFICIENT	FoS Adjustment Coefficient	FoS Adjustment Value	Scenario A FoS$_{ADJ}$ Adjusted Factor of Safety (FoS) for Peat Stability	COEFFICIENT	Scenario B FoS$_{ADJ}$ Adjusted Factor of Safety (FoS) for Peat Stability	COEFFICIENT	Significant Feature Ranking Coefficient	Scenario A RR_{SF} Ranking Risk re Potential for Adverse Consequences on Sensitive Receptors	COEFFICIENT	Scenario B RR_{SF} Ranking Risk re Potential for Adverse Consequences on Sensitive Receptors	COEFFICIENT	Distance to Sensitive Receptor	Distance to Sensitive Receptor Coefficient Point	Scenario A RR_0 Risk Ranking Accounting for Distance to Sensitive Receptors	Risk Category	Scenario B RR_0 Risk Ranking Accounting for Distance to Sensitive Receptors	Risk Category
					m		Degrees		FoS	#	FoS	#	#	#	FoS	#	FoS	#	#	RPA-SF	#	RPA-SF	#	m	#	RPA-D		RPA-D	
Depth Probe	DP058	T3	512786.9	579387.9	0.9	C - Shallow (0.5-2.0m)	8.27293		2.48	1.0	1.88	2.0	2.0	0.0	2.48	1.0	1.88	2.0	2.0	2.0	1.0	4.0	2.0	2267	1.0	1.8	A - Very Low Risk	2.0	B - Low Risk
Depth Probe	DP060	T3	512811	579422	1	C - Shallow (0.5-2.0m)	12.53624		1.58	1.0	0.75	4.0	2.0	0.0	1.58	1.0	0.75	4.0	2.0	2.0	1.0	8.0	4.0	1870	1.0	1.8	A - Very Low Risk	4.0	C - Moderate Risk
Depth Probe	DP064	T3	512837	579405	0.4	Very Shallow (0.0-0.5m)	10.70065	Deeply eroded drain	4.36	1.0	1.26	2.0	2.0	0.0	4.36	1.0	1.26	2.0	2.0	2.0	1.0	4.0	2.0	2564	1.0	1.8	A - Very Low Risk	2.0	B - Low Risk
Depth Probe	DP063	T3	512943.8	579093.8	0.9	C - Shallow (0.5-2.0m)	9.24496	Cut peat photo	2.23	1.0	1.06	2.0	2.0	0.0	2.23	1.0	1.06	2.0	2.0	2.0	1.0	2.0	1.0	4425	1.0	1.8	A - Very Low Risk	1.8	A - Very Low Risk
Depth Probe	DP071	T3	512967	579286	0.0001	A - Rock (0.0m)	4.87812	Cut peat	376534	1.0	3.75	1.0	2.0	0.0	376534	1.0	3.75	1.0	2.0	2.0	1.0	2.0	1.0	4426	1.0	1.8	A - Very Low Risk	1.8	A - Very Low Risk
Depth Probe	DP072	T3	512969	579206	0.6	C - Shallow (0.5-2.0m)	4.87812	Uncut peat	6.26	1.0	2.98	1.0	2.0	0.0	6.26	1.0	2.98	1.0	2.0	2.0	1.0	2.0	1.0	4409	1.0	1.8	A - Very Low Risk	1.8	A - Very Low Risk
Depth Probe	DP073	T3	512993	579238	0.0001	A - Rock (0.0m)	6.00375	Cut peat	30182.28	1.0	3.02	1.0	2.0	0.0	30182.28	1.0	3.02	1.0	2.0	2.0	1.0	2.0	1.0	4432	1.0	1.8	A - Very Low Risk	1.8	A - Very Low Risk
Depth Probe	DP074	T3	512991	579233	0.6	C - Shallow (0.5-2.0m)	6.00375	Uncut peat	5.01	1.0	1.89	1.0	2.0	0.0	5.01	1.0	1.89	1.0	2.0	2.0	1.0	2.0	1.0	4414	1.0	1.8	A - Very Low Risk	1.8	A - Very Low Risk
Depth Probe	DP075	T3	512996	579176	0.1	Very Shallow (0.0-0.5m)	9.00259	Cut peat	23.06	1.0	2.10	1.0	2.0	0.0	23.06	1.0	2.10	1.0	2.0	2.0	1.0	2.0	1.0	3821	1.0	1.8	A - Very Low Risk	1.8	A - Very Low Risk
Depth Probe	DP076	T3	512997	579175	1.5	C - Shallow (0.5-2.0m)	5.00388	Uncut peat	1.54	1.0	0.82	4.0	2.0	0.0	1.54	1.0	0.82	4.0	2.0	2.0	1.0	8.0	4.0	3776	1.0	1.8	A - Very Low Risk	4.0	C - Moderate Risk
Depth Probe	DP077	T3	512999	579173	0.1	Very Shallow (0.0-0.5m)	7.86543		23.47	1.0	2.10	1.0	2.0	0.0	23.47	1.0	2.10	1.0	2.0	2.0	1.0	2.0	1.0	3815	1.0	1.8	A - Very Low Risk	1.8	A - Very Low Risk
Depth Probe	DP078	T3	513000	579154	1.1	C - Shallow (0.5-2.0m)	7.98543	Uncut peat, inferred.	2.13	1.0	1.02	2.0	2.0	0.0	2.13	1.0	1.02	2.0	2.0	2.0	1.0	4.0	2.0	3785	1.0	1.8	A - Very Low Risk	2.0	B - Low Risk
Depth Probe	DP079	T3	513001	579084	1.1	C - Shallow (0.5-2.0m)	10.71385	Cut peat on hill	1.58	1.0	0.83	4.0	2.0	0.0	1.58	1.0	0.83	4.0	2.0	2.0	1.0	8.0	4.0	3782	1.0	1.8	A - Very Low Risk	4.0	C - Moderate Risk
Depth Probe	DP080	T3	513026.8	579108.8	0.4	Very Shallow (0.0-0.5m)	10.70999	Cut peat photo	4.36	1.0	1.24	2.0	2.0	0.0	4.36	1.0	1.24	2.0	2.0	2.0	1.0	4.0	2.0	3776	1.0	1.8	A - Very Low Risk	2.0	B - Low Risk
Depth Probe	DP081	T3	513028	579064	0.2	Very Shallow (0.0-0.5m)	10.72967	Top of steep slope	8.63	1.0	1.65	1.0	2.0	0.0	8.63	1.0	1.65	1.0	2.0	2.0	1.0	2.0	1.0	3814	1.0	1.8	A - Very Low Risk	1.8	A - Very Low Risk
Depth Probe	DP082	T3	513052.8	579088.8	1	C - Shallow (0.5-2.0m)	11.97277	Up out of drain	1.67	1.0	0.78	4.0	2.0	0.0	1.67	1.0	0.78	4.0	2.0	2.0	1.0	8.0	4.0	3776	1.0	1.8	A - Very Low Risk	4.0	C - Moderate Risk
Depth Probe	DP083	T3	513054	579101	0.6	Very Shallow (0.0-0.5m)	11.97277		3.14	1.0	1.05	2.0	2.0	0.0	3.14	1.0	1.05	2.0	2.0	2.0	1.0	4.0	2.0	3776	1.0	1.8	A - Very Low Risk	2.0	B - Low Risk
Depth Probe	DP084	T3	513064	579102	1.3	C - Shallow (0.5-2.0m)	5.33154		2.65	1.0	1.58	2.0	2.0	0.0	2.65	1.0	1.58	2.0	2.0	2.0	1.0	4.0	2.0	3776	1.0	1.8	A - Very Low Risk	2.0	B - Low Risk
Depth Probe	DP085	T3	513097.9	579084.9	0.1	Very Shallow (0.0-0.5m)	10.52963		17.72	1.0	1.61	1.0	2.0	0.0	17.72	1.0	1.61	1.0	2.0	2.0	1.0	2.0	1.0	3813	1.0	1.8	A - Very Low Risk	1.8	A - Very Low Risk
Depth Probe	DP086	T3	513098.8	579059.9	0.9	C - Shallow (0.5-2.0m)	7.92501		2.50	1.0	1.29	2.0	2.0	0.0	2.50	1.0	1.29	2.0	2.0	2.0	1.0	4.0	2.0	3776	1.0	1.8	A - Very Low Risk	2.0	B - Low Risk
Depth Probe	DP087	T3	513099.8	579059.9	1.8	C - Shallow (0.5-2.0m)	7.92501		1.25	2.0	0.63	4.0	2.0	0.0	1.25	2.0	0.63	4.0	2.0	2.0	1.0	8.0	4.0	3776	1.0	1.8	A - Very Low Risk	4.0	C - Moderate Risk
Depth Probe	DP088	T3	513098.9	579021.8	0.8	C - Shallow (0.5-2.0m)	9.83955		2.36	1.0	1.05	2.0	2.0	0.0	2.36	1.0	1.05	2.0	2.0	2.0	1.0	4.0	2.0	3776	1.0	1.8	A - Very Low Risk	2.0	B - Low Risk
Depth Probe	DP089	T3	513134.9	579024.9	0.9	C - Shallow (0.5-2.0m)	8.44203		1.93	1.0	1.04	2.0	2.0	0.0	1.93	1.0	1.04	2.0	2.0	2.0	1.0	4.0	2.0	3776	1.0	1.8	A - Very Low Risk	2.0	B - Low Risk
Depth Probe	DP091	T3	513149	579089	0.9	C - Shallow (0.5-2.0m)	7.16053		2.86	1.0	1.56	1.0	2.0	0.0	2.86	1.0	1.56	1.0	2.0	2.0	1.0	2.0	1.0	3803	1.0	1.8	A - Very Low Risk	1.8	A - Very Low Risk
Depth Probe	DP092	T3	513158.8	579061.8	1.1	C - Shallow (0.5-2.0m)	6.03565		2.77	1.0	1.45	1.0	2.0	0.0	2.77	1.0	1.45	1.0	2.0	2.0	1.0	2.0	1.0	3803	1.0	1.8	A - Very Low Risk	1.8	A - Very Low Risk
Trial Pit	TP57	T3	512956	579367	0.2	Very Shallow (0.0-0.5m)	11.96259		8.24	1.0	1.37	1.0	2.0	0.0	8.24	1.0	1.37	1.0	2.0	2.0	1.0	2.0	1.0	4693	1.0	1.8	A - Very Low Risk	1.8	A - Very Low Risk
Trial Pit	TP58	T3	512974	579357	0.2	Very Shallow (0.0-0.5m)	9.37515		8.90	1.0	1.65	1.0	2.0	0.0	8.90	1.0	1.65	1.0	2.0	2.0	1.0	2.0	1.0	4434	1.0	1.8	A - Very Low Risk	1.8	A - Very Low Risk
Trial Pit	TP59	T3	512999	579365	0.2	Very Shallow (0.0-0.5m)	7.6724		12.02	1.0	2.00	1.0	2.0	0.0	12.02	1.0	2.00	1.0	2.0	2.0	1.0	2.0	1.0	4566	1.0	1.8	A - Very Low Risk	1.8	A - Very Low Risk

Plate 3: Peat Data & Risk Assessment Results – T3

SI Appendix B - Peat & Subsoil Survey Database
Inchamore WF, Co. Cork

Prepared by: SK 07/02/2023
RSK File Ref.: 603679-00.xls

Sample / Test Category	Sample / Test Point ID No.	Association	ITM Easting	ITM Northing	Thickness / Depth of peat	Classification of Thickness / Depth of peat	Slope (Extracted from GDEM)	Note	Scenario A FoS_{RAW} Factor of Safety (FoS) for Peat Stability	COEFFICIENT	Scenario B FoS_{RAW} Factor of Safety (FoS) for Peat Stability	COEFFICIENT	FoS Adjustment Coefficient	FoS Adjustment Value	Scenario A FoS_{ADJ} Adjusted Factor of Safety (FoS) for Peat Stability	COEFFICIENT	Scenario B FoS_{ADJ} Adjusted Factor of Safety (FoS) for Peat Stability	COEFFICIENT	Significant Feature Ranking Coefficient	Scenario A RR_{SF} Ranking Risk re Potential for Adverse Consequences on Sensitive Receptors	COEFFICIENT	Scenario B RR_{SF} Ranking Risk re Potential for Adverse Consequences on Sensitive Receptors	COEFFICIENT	Distance to Sensitive Receptor	Distance to Sensitive Receptor Coefficient	Scenario A RR_D Risk Ranking Accounting for Distance to Sensitive Receptors	Risk Category	Scenario B RR_D Risk Ranking Accounting for Distance to Sensitive Receptors	Risk Category
					m		Degrees		$FoS = \frac{R}{\text{Driving Forces}}$						$FoS = \frac{R}{\text{Driving Forces}} + \text{Adjustment Value}$				μ_{SF}							RR_D		RR_D	
									FoS	#	FoS	#	#	#	FoS	#	FoS	#	#	RR_{SF}	#	RR_{SF}	#	m	#	RR_D		RR_D	
Depth Probe	DP135	T5	513982.6	578542	0.6	C - Shallow (0.5-2.0m)	9.02916		3.421	1.0	1.29	2.0	2.0	0.0	3.42	1.0	1.29	2.0	2.0	2.0	1.0	4.0	2.0	490.7	1.0	2.0	D - Low Risk	2.0	D - Low Risk
Depth Probe	DP136	T5	514008.6	578535	0.5	C - Shallow (0.5-2.0m)	7.72535		5.91	1.0	1.78	2.0	2.0	0.0	5.91	1.0	1.78	2.0	2.0	2.0	1.0	4.0	2.0	610.7	1.0	2.0	A - Very Low Risk	2.0	A - Very Low Risk
Depth Probe	DP137	T5	514018.6	578535	0.3	C - Shallow (0.5-2.0m)	9.42644		8.51	1.0	1.95	2.0	2.0	0.0	8.51	1.0	1.95	2.0	2.0	2.0	1.0	4.0	2.0	527.1	1.0	2.0	A - Very Low Risk	2.0	A - Very Low Risk
Depth Probe	DP138	T5	514034.6	578581	0.1	C - Shallow (0.5-2.0m)	5.54965		21.96	1.0	2.66	2.0	2.0	0.0	21.96	1.0	2.66	2.0	2.0	2.0	1.0	4.0	2.0	641.5	1.0	2.0	A - Very Low Risk	2.0	A - Very Low Risk
Depth Probe	DP142	T5	514182.9	5786748	1.2	C - Shallow (0.5-2.0m)	5.54965		2.76	1.0	1.66	2.0	2.0	0.0	2.76	1.0	1.66	2.0	2.0	2.0	1.0	4.0	2.0	685.0	1.0	2.0	A - Very Low Risk	2.0	A - Very Low Risk
Trial Pit	TP01	T5	514105	578550	0.3	Shallow (0.5-2.0m)	6.5297		9.39	1.0	2.17	2.0	2.0	0.0	9.39	1.0	2.17	2.0	2.0	2.0	1.0	4.0	2.0	607.4	1.0	2.0	A - Very Low Risk	2.0	A - Very Low Risk
Trial Pit	TP02	T5	513979	578573	1	C - Shallow (0.5-2.0m)	6.22902		2.26	1.0	1.47	2.0	2.0	0.0	2.26	1.0	1.47	2.0	2.0	2.0	1.0	4.0	2.0	480.8	1.0	2.0	A - Very Low Risk	2.0	A - Very Low Risk
Trial Pit	TP03	T5	513964	578729	0.8	C - Shallow (0.5-2.0m)	5.85128		4.06	1.0	1.96	2.0	2.0	0.0	4.06	1.0	1.96	2.0	2.0	2.0	1.0	4.0	2.0	463.3	1.0	2.0	A - Very Low Risk	2.0	A - Very Low Risk

Plate 5: Peat Data & Risk Assessment Results – T5

4.5 Peat Stability Risk Assessment Interpretation

Table 13: Peat Stability Risk Assessment – Factor of Safety (Adjusted) (Scenario B) at Main Infrastructure Units presents the interpretation of stability risk assessment data in the context of stability, or factor of safety (FoS) (Adjusted, Scenario B) at each significant development infrastructure unit.

Table 13: Peat Stability Risk Assessment – Factor of Safety (Adjusted) (Scenario B) at Main Infrastructure Units

Turbine No. / Unit	FoS_{ADJ} (Factor of Safety adjusted according considering site specific conditions)	Geo-Hazard / Comment (Important to consider when carrying out detailed design and preconstruction planning)
T1	Generally acceptable. Data indicates peat stability is primarily acceptable, with the exception of * pockets of moderately deeper peat (marginally acceptable / unstable at localised scale north of proposed turbine locality).	Localised steep inclines and potential for pockets of deep peat. Residual risk = localised stability issues. Relatively extensive area of deep peat to north / northwest of development footprint at T1. Development footprint avoids this area however vehicular movements must be managed, and this area avoided completely.
T2	Generally acceptable with localised areas of marginally stable FoS, localised areas of unstable peat. Data indicates that peat depth in the area is generally shallow with relatively extensive rock outcrops. Steep inclines in the area are a key driver of unfavourable results.	Localised steep inclines and potential for pockets of deep peat. Residual risk = localised stability issues. Proximity to receptor (river).
T3	Data indicates peat stability is primarily acceptable, marginally acceptable. Some locations on approach (access tracks) possess locally unstable data due to relatively higher localized slope angles, and/or deeper peat however peat depths are shallow.	Localised steep inclines and potential for pockets of deep peat. Residual risk = localised stability issues.
T4	Generally acceptable. Data indicates peat stability is primarily acceptable, with isolated pockets Marginally acceptable.	Localised steep inclines and potential for pockets of deep peat. Residual risk = localised stability issues.
T5	Generally acceptable. Data indicates peat stability is primarily acceptable, with isolated pockets Marginally acceptable.	Localised steep inclines and potential for pockets of deep peat. Residual risk = localised stability issues.

Turbine No. / Unit	RR(D) (Ranked Risk considering Distance to Sensitive Receptors)	Geo-Hazard / Comment (Important to consider when carrying out detailed design and preconstruction planning)
Borrow Pit	Very Low to Moderate Risk	Localised stability and drainage network.
Substation	Very Low to Low Risk	Localised stability and drainage network.

4.6 Subsoil Stability Risk Assessment Results

Review of subsoil stability assessment result data and maps as presented in **Appendix I** indicate that the factor of safety is generally acceptable and very low to low stability risk across the site (areas assessed / trial pit locations*) with the exception of minor isolated areas of steeper inclines and deeper till deposits (inferred*).

Summary of risk at the site under varying conditions and scenarios is presented in the following tables.

Table 15: Factor of Safety (Adjusted) at Trial Pit Locations

	Acceptable	Marginally Stable	Unstable
FoS (Adj.) Scenario A	16	0	0
FoS (Adj.) Scenario B	14	2	0

Table 16: Risk Ranking (Distance) at Trial Pit Locations

	Very Low	Low	Moderate	High
RR (Dist.) Scenario A	14	1	1	0
RR (Dist.) Scenario B	13	1	2	0

Based on the inferred conservative values applied to the above stability risk assessment, the factor of safety is highly dependent on cohesive strength, which in turn is highly dependent on hydrogeological characteristics including pore water pressure. **Figure 2** presents potential varying Factors of Safety for subsoils at the Site depending on varying cohesive strength and depths to failure plane.

Turbine No. / Unit	RR_D (Ranked Risk considering Distance to Sensitive Receptors)	Geo-Hazard / Comment
Met Mast	Low	Localised stability and drainage network.
Borrow Pit	Low	Localised stability and drainage network.
Substation	Low	Localised stability and drainage network.

Geo-Hazards

A register of Geo-Hazards is mapped and presented in **Appendix H**.

7. References

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Appendix A

Inchamore Wind Farm
Inchamore, Co. Cork / Co. Kerry

App 8.1 - App A1 (01) SI - Peat Depth Overview

Legend

Development Layout

WF
- Red Line 23
- 230313 Site Layout
- Turbine Locations
- Site_Entrances
- Proposed Met Mast
- Watercourse Crossings
- Proposed Borrow Pits
- Borrow Pit
- Proposed Temporary Construction Compound
- Proposed On-Site Substation

UGC
- Inchamore Grid Connection Route
- HDD Crossings

Delivery
- Redline-250 Haul Road - 256-Polyline
- Turbine Delivery Route
- Redline-250 Haul Road - 256-Polyline
- urbine Delivery Route

Geology

3188-A2-IWF Peat Depth Probe Data
- 0.0 - 0.1m
- 0.1 - 0.5m
- 0.5 - 2.0m
- 2.0 - 3.5m
- Geological Linework (100k GSI)

Base Maps

Bing Aerial

OpenStreetMap

Project ID: 604162 Inchamore Wind Farm
Projection: ITM
Drawn by: Sven K.
Reviewed by: Sven K.
Version: 21/09/2022

References/Sources:
Environmental Protection Agency (EPA)
Geological Services Ireland (GSI)
Bing Aerial / GeoHive / Open Street Map / Google Roads
GDEM Elevation Contours
Phase 1 (250m Grid Peat Depth - Greensource

Note: Data points presented are georeferenced using open source data and/or a handheld GPS. This drawing / map is considered a conceptual model with reasonable accuracy for the purposes of environmental assessment. This drawing should not be relied upon for detailed design puposes.

Scale: 0 0.27 0.54 km

RSK

N

N22 Crossing

Site Entrance

Temporary Compound

Borrow Pit

Substation

Met Mast

T1 T2 T3 T4 T5

WC1 WC2 WC3

Inchamore Wind Farm
Inchamore, Co. Cork / Co. Kerry

App 8.1 - App A2 (01) SI - Peat Depth - Tile 1

Legend

Development Layout

WF
- Red Line 23
- 230313 Site Layout
- Turbine Locations
- Proposed Met Mast
- Watercourse Crossings
- Proposed On-Site Substation

UGC
- Inchamore Grid Connection Route

Geology

3188-A2-1WF Peat Depth Probe Data
- 0.0 - 0.1m
- 0.1 - 0.5m
- 0.5 - 2.0m
- 2.0 - 3.5m

Base Maps

Bing Aerial

OpenStreetMap

Project ID:604162 Inchamore Wind Farm
Projection:ITM
Drawn by: Sven K.
Reviewed by: Sven K.
Version: 21/09/2022

References/Sources:
Environmental Protection Agency (EPA)
Geological Services Ireland (GSI)
Bing Aerial / GeoHive / Open Street Map / Google Roads
GDEM Elevation Contours
Phase 1 (250m Grid Peat Depth - Greensource

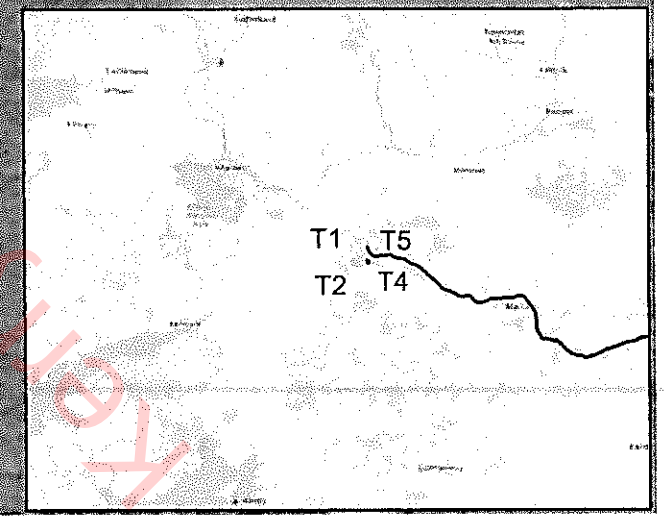
Note: Data points presented are georeferenced using open source data and/or a handheld GPS. This drawing / map is considered a conceptual model with reasonable accuracy for the purposes of environmental assessment. This drawing should not be relied upon for detailed design puporses.

Scale: 0 0.076 0.152 km

RSK

T1
T2
T3
Met Mast
Substation
WC1
WC2

N



Inchamore Wind Farm
Inchamore, Co. Cork / Co. Kerry

App 8.1 - App A2 (01) SI - Peat Depth - Tile 2

Legend

Development Layout

WF
- Red Line 23
- 230313 Site Layout
- Turbine Locations
- Watercourse Crossings
- Proposed Borrow Pits
- Borrow Pit
- Proposed On-Site Substation

UGC
- Inchamore Grid Connection Route

Geology

3188-A2-IWF Peat Depth Probe Data
- 0.0 - 0.1m
- 0.1 - 0.5m
- 0.5 - 2.0m

Base Maps

Bing Aerial

OpenStreetMap

Project ID:604162 Inchamore Wind Farm
Projection:ITM
Drawn by: Sven K.
Reviewed by: Sven K.
Version: 21/09/2022

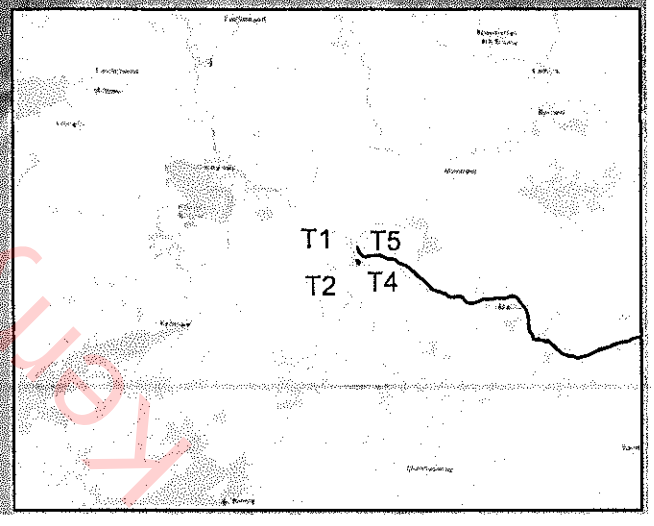
References/Sources:
Environmental Protection Agency (EPA)
Geological Services Ireland (GSI)
Bing Aerial / GeoHive / Open Street Map / Google Roads
GDEM Elevation Contours
Phase 1 (250m Grid Peat Depth - Greensource

Note: Data points presented are georeferenced using open source data and/or a handheld GPS. This drawing / map is considered a conceptual model with reasonable accuracy for the purposes of environmental assessment. This drawing should not be relied upon for detailed design puporses.

Scale: 0 0.076 0.152 km

RSK

T4
T5
WC3
Borrow Pit
N



Appendix B

SI Appendix B - Peat & Subsoil Survey Database

Inchamore WF, Co. Cork

Prepared by: SK 07/02/2023
RSK Ref: 603679-00.xls

Peat & Slope Stability Risk Assessment

Sample / Test Category	Sample / Test Point ID No.	Association	ITM Easting	ITM Northing	Thickness / Depth of peat (m)	Classification of Thickness / Depth of peat	Slope (Extracted from GDEM) (Degrees)	Note	Parameter Values: Slope Angle α (Degrees)	Parameter Values: Slope Angle (For Excel Formula) α (Radians)	Parameter Values: Undrained Shear Strenght (Conservative Value) c' (kPa)	Parameter Values: Bulk Unit weight of Peat (Conservative Value) γ (kN/m3)	Scenario A: Depth to failure plane i.e. Peat Depth z (m)	Scenario B: Surcharge Equivalent Placed Fill Depth i.e. +1m z (m)	Scenario A: FoS RAW Factor of Safety (FoS) for Peat Stability	COEFFICIENT μ	Scenario B: FoS RAW Factor of Safety (FoS) for Peat Stability	COEFFICIENT μ	FoS Adjustment Coefficient p	FoS Adjustment Value #	Scenario A: FoS ADJ Adjusted Factor of Safety (FoS) for Peat Stability	COEFFICIENT μ	Scenario B: FoS ADJ Adjusted Factor of Safety (FoS) for Peat Stability	COEFFICIENT μ	Significant Feature Ranking Cefficient μSF	Scenario A: RR SF Ranking Risk re Potential for Adverse Consequences on Sensitive Receptors	COEFFICIENT μ	Scenario B: RR SF Ranking Risk re Potential for Adverse Consequences on Sensitive Receptors	COEFFICIENT μ	Distance to Sensitive Receptor (m)	Distance to Sensitive Receptor Coefficient μDist	Scenario A: RR D Risk Ranking Accounting for Distance to Sensitive Receptors	Scenario A: Risk Category	Scenario B: RR D Risk Ranking Accounting for Distance to Sensitive Receptors	Scenario B: Risk Category
Depth Probe	DP001	T1	512342.945	578929.888	0.1	B - Very Shallow (0.01-0.5m)	5.76569		5.76569	0.10063	3.5	11	0.10	1.10	31.83	1.0	2.89	1.0	2.0	0.0	31.83	1.0	2.89	1.0	2.0	2.0	1.0	2.0	1.0	420.3	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP002	T1	512346.945	578942.885	0.1	B - Very Shallow (0.01-0.5m)	5.76569		5.76569	0.10063	3.5	11	0.10	1.10	31.83	1.0	2.89	1.0	2.0	0.0	31.83	1.0	2.89	1.0	2.0	2.0	1.0	2.0	1.0	419.9	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP003	T1	512380.938	579012.87	0.2	B - Very Shallow (0.01-0.5m)	2.54332		2.54332	0.044388	3.5	11	0.20	1.20	35.89	1.0	5.98	1.0	2.0	0.0	35.89	1.0	5.98	1.0	2.0	2.0	1.0	2.0	1.0	414.1	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP004	T1	512388.935	578941.885	0.1	B - Very Shallow (0.01-0.5m)	6.89515		6.89515	0.10288	3.5	11	0.10	1.10	31.14	1.0	2.83	1.0	2.0	0.0	31.14	1.0	2.83	1.0	2.0	2.0	1.0	2.0	1.0	379.5	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP005	T1	512395.934	578926.888	0.1	B - Very Shallow (0.01-0.5m)	10.09382	Rocky outcrop east west steep incline	10.09382	0.17617	3.5	11	0.10	1.10	18.44	1.0	1.68	1.0	2.0	0.0	18.44	1.0	1.68	1.0	2.0	2.0	1.0	2.0	1.0	368.4	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP006	T1	512401.932	578848.905	0.7	C - Shallow (0.5-2.0m)	6.0615	Cut peat. Photo 11.50	6.0615	0.105793	3.5	11	0.70	1.70	4.33	1.0	1.78	1.0	2.0	0.0	4.33	1.0	1.78	1.0	2.0	2.0	1.0	2.0	1.0	348.9	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP007	T1	512411.931	578971.879	0.6	C - Shallow (0.5-2.0m)	2.61166		2.61166	0.045582	3.5	11	0.60	1.60	11.65	1.0	4.37	1.0	2.0	0.0	11.65	1.0	4.37	1.0	2.0	2.0	1.0	2.0	1.0	368.5	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP008	T1	512440.923	578785.918	2.1	D - Moderately Deep (2.0-3.5m)	4.97205		4.97205	0.086779	3.5	11	2.10	3.10	1.75	1.0	1.19	2.0	2.0	0.0	1.75	1.0	1.19	2.0	2.0	2.0	1.0	4.0	2.0	311.5	1.0	1.0	A - Very Low Risk	2.0	B - Low Risk
Depth Probe	DP009	T1	512447.923	578987.875	1	C - Shallow (0.5-2.0m)	3.12206		3.12206	0.05449	3.5	11	1.00	2.00	5.85	1.0	2.93	1.0	2.0	0.0	5.85	1.0	2.93	1.0	2.0	2.0	1.0	2.0	1.0	343.2	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP010	T1	512458.921	579048.862	0.0001	A - Rock (0.0m)	0.87893	Rock	0.87893	0.01534	3.5	11	0.00	1.00	207449.24	1.0	20.74	1.0	2.0	0.0	207449.24	1.0	20.74	1.0	2.0	2.0	1.0	2.0	1.0	367.2	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP011	T1	512465.919	579026.866	1.2	C - Shallow (0.5-2.0m)	0.87893	Rocky adjacent	0.87893	0.01534	3.5	11	1.20	2.20	17.29	1.0	9.43	1.0	2.0	0.0	17.29	1.0	9.43	1.0	2.0	2.0	1.0	2.0	1.0	348.5	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP012	SITE	512466.462	578343.336	0.2	B - Very Shallow (0.01-0.5m)	6.63083		6.63083	0.11573	3.5	11	0.20	1.20	13.87	1.0	2.31	1.0	2.0	0.0	13.87	1.0	2.31	1.0	2.0	2.0	1.0	2.0	1.0	507.7	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP013	SITE	512508.746	578204.739	0.4	B - Very Shallow (0.01-0.5m)	8.10263		8.10263	0.141418	3.5	11	0.40	1.40	5.70	1.0	1.63	1.0	2.0	0.0	5.70	1.0	1.63	1.0	2.0	2.0	1.0	2.0	1.0	518.8	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP014	T1	512513	579076	1.1	C - Shallow (0.5-2.0m)	2.62048		2.62048	0.043991	3.5	11	1.10	2.10	6.68	1.0	3.45	1.0	2.0	0.0	6.68	1.0	3.45	1.0	2.0	2.0	1.0	2.0	1.0	345.2	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP015	T1	512521.906	578733.919	0.0001	A - Rock (0.0m)	6.05488	Rock	6.05488	0.105678	3.5	11	0.00	1.00	30334.02	1.0	3.03	1.0	2.0	0.0	30334.02	1.0	3.03	1.0	2.0	2.0	1.0	2.0	1.0	245.6	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP016	T1	512524	579140	0.0001	A - Rock (0.0m)	2.08887	Rock	2.08887	0.036458	3.5	11	0.00	1.00	87351.72	1.0	8.73	1.0	2.0	0.0	87351.72	1.0	8.73	1.0	2.0	2.0	1.0	2.0	1.0	387.7	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP017	T1	512528	579008	0.0001	A - Rock (0.0m)	4.37171	Rock	4.37171	0.076301	3.5	11	0.00	1.00	41863.31	1.0	4.19	1.0	2.0	0.0	41863.31	1.0	4.19	1.0	2.0	2.0	1.0	2.0	1.0	287.7	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP018	T1	512529	579026	0.0001	A - Rock (0.0m)	3.27531	Rock	3.27531	0.057165	3.5	11	0.00	1.00	55781.75	1.0	5.58	1.0	2.0	0.0	55781.75	1.0	5.58	1.0	2.0	2.0	1.0	2.0	1.0	298.7	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP019	T1	512532	579119	2.1	D - Moderately Deep (2.0-3.5m)	4.90234		4.90234	0.085562	3.5	11	2.10	3.10	1.78	1.0	1.21	2.0	2.0	0.0	1.78	1.0	1.21	2.0	2.0	2.0	1.0	4.0	2.0	450.3	1.0	1.0	A - Very Low Risk	2.0	B - Low Risk
Depth Probe	DP020	SITE	512542.156	578444.87	0.5	B - Very Shallow (0.01-0.5m)	10.08572		10.08572	0.176029	3.5	11	0.50	1.50	3.69	1.0	1.23	2.0	2.0	0.0	3.69	1.0	1.23	2.0	2.0	2.0	1.0	4.0	2.0	383.4	1.0	1.0	A - Very Low Risk	2.0	B - Low Risk
Depth Probe	DP021	T1	512543	579001	0.0001	A - Rock (0.0m)	3.35734	Rock	3.35734	0.058597	3.5	11	0.00	1.00	54424.85	1.0	5.44	1.0	2.0	0.0	54424.85	1.0	5.44	1.0	2.0	2.0	1.0	2.0	1.0	271.7	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP022	SITE	512543.901	578712.934	1.4	C - Shallow (0.5-2.0m)	3.67259	Rocky adjacent	3.67259	0.064099	3.5	11	1.40	2.40	3.56	1.0	2.07	1.0	2.0	0.0	3.56	1.0	2.07	1.0	2.0	2.0	1.0	2.0	1.0	234.6	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP023	T1	512544	579108	2.6	D - Moderately Deep (2.0-3.5m)	2.00689		2.00689	0.035027	3.5	11	2.60	3.60	3.50	1.0	2.53	1.0	2.0	0.0	3.50	1.0	2.53	1.0	2.0	2.0	1.0	2.0	1.0	350.0	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP024	T1	512545	579027	2.8	D - Moderately Deep (2.0-3.5m)	2.39487		2.39487	0.041798	3.5	11	2.80	3.80	2.72	1.0	2.01	1.0	2.0	0.0	2.72	1.0	2.01	1.0	2.0	2.0	1.0	2.0	1.0	287.8	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP025	T1	512548.902	579095.851	1.5	C - Shallow (0.5-2.0m)	2.00689	Rocky adjacent photo	2.00689	0.035027	3.5	11	1.50	2.50	6.06	1.0	3.64	1.0	2.0	0.0	6.06	1.0	3.64	1.0	2.0	2.0	1.0	2.0	1.0	337.4	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP026	T1	512550	579167	2.5	D - Moderately Deep (2.0-3.5m)	1.48867		1.48867	0.025982	3.5	11	2.50	3.50	4.90	1.0	3.50	1.0	2.0	0.0	4.90	1.0	3.50	1.0	2.0	2.0	1.0	2.0	1.0	396.2	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP027	T1	512550	579019	2.2	D - Moderately Deep (2.0-3.5m)	3.35734		3.35734	0.058597	3.5	11	2.20	3.20	2.47	1.0	1.70	1.0	2.0	0.0	2.47	1.0	1.70	1.0	2.0	2.0	1.0	2.0	1.0	278.6	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP028	T1	512554	579029	3	D - Moderately Deep (2.0-3.5m)	2.39487		2.39487	0.041798	3.5	11	3.00	4.00	2.54	1.0	1.91	1.0	2.0	0.0	2.54	1.0	1.91	1.0	2.0	2.0	1.0	2.0	1.0	282.9	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP029	T1	512556.9	579097.851	2.5	D - Moderately Deep (2.0-3.5m)	2.00689	Rocky adjacent photo	2.00689	0.035027	3.5	11	2.50	3.50	3.64	1.0	2.60	1.0	2.0	0.0	3.64	1.0	2.60	1.0	2.0	2.0	1.0	2.0	1.0	334.3	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP030	T1	512569	579056	3	D - Moderately Deep (2.0-3.5m)	4.10768		4.10768	0.071693	3.5	11	3.00	4.00	1.48	1.0	1.11	2.0	2.0	0.0	1.48	1.0	1.11	2.0	2.0	2.0	1.0	4.0	2.0	293.5	1.0	1.0	A - Very Low Risk	2.0	B - Low Risk
Depth Probe	DP031	T1	512570	579177	2.1	D - Moderately Deep (2.0-3.5m)	1.88168		1.88168	0.032842	3.5	11	2.10	3.10	4.62	1.0	3.13	1.0	2.0	0.0	4.62	1.0	3.13	1.0	2.0	2.0	1.0	2.0	1.0	385.4	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP032	T1	512580	579018	0.1	B - Very Shallow (0.01-0.5m)	7.22121		7.22121	0.126034	3.5	11	0.10	1.10	25.52	1.0	2.32	1.0	2.0	0.0	25.52	1.0	2.32	1.0	2.0	2.0	1.0	2.0	1.0	257.2	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP033	T1	512583	579002	1.1	C - Shallow (0.5-2.0m)	7.22121		7.22121	0.126034	3.5	11	1.10	2.10	2.32	1.0	1.22	2.0	2.0	0.0	2.32	1.0	1.22	2.0	2.0	2.0	1.0	4.0	2.0	243.3	1.0	1.0	A - Very Low Risk	2.0	B - Low Risk
Depth Probe	DP034	T1	512591	578975	0.0001	A - Rock (0.0m)	6.88087	Rocky adjacent	6.88087	0.120094	3.5	11	0.00	1.00	26750.90	1.0	2.67	1.0	2.0	0.0	26750.90	1.0	2.67	1.0	2.0	2.0	1.0	2.0	1.0	218.6	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP035	SITE	512591.89	578663.944	1.2	C - Shallow (0.5-2.0m)	5.14745	Rocky adjacent	5.14745	0.08984	3.5	11	1.20	2.20	2.97	1.0	1.62	1.0	2.0	0.0	2.97	1.0	1.62	1.0	2.0	2.0	1.0	2.0	1.0	218.8	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP036	T1	512594	579134	1.1	C - Shallow (0.5-2.0m)	1.44436		1.44436	0.025209	3.5	11	1.10	2.10	11.48	1.0	6.01	1.0	2.0	0.0	11.48	1.0	6.01	1.0	2.0	2.0	1.0	2.0	1.0	346.2	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP037	SITE	512610.753	578641.295	0.0001	A - Rock (0.0m)	7.67632		7.67632	0.133977	3.5	11	0.00	1.00	24035.57	1.0	2.40	1.0	2.0	0.0	24035.57	1.0	2.40	1.0	2.0	2.0	1.0	2.0	1.0	213.0	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP038	T1	512614	579091	2.5	D - Moderately Deep (2.0-3.5m)	4.16378		4.16378	0.072672	3.5	11	2.50	3.50	1.76	1.0	1.26	2.0	2.0	0.0	1.76	1.0	1.26	2.0	2.0	2.0	1.0	4.0	2.0	298.8	1.0	1.0	A - Very Low Risk	2.0	B - Low Risk
Depth Probe	DP039	SITE	512622.547	578532.831	0.8	C - Shallow (0.5-2.0m)	8.54745		8.54745	0.149181	3.5	11	0.80	1.80	2.71	1.0	1.20	2.0	2.0	0.0	2.71	1.0	1.20	2.0	2.0	2.0	1.0	4.0	2.0	265.2	1.0	1.0	A - Very Low Risk	2.0	B - Low Risk
Depth Probe	DP040	SITE	512632.989	578538.051	0.2	B - Very Shallow (0.01-0.5m)	9.23341		9.23341	0.161153	3.5	11	0.20	1.20	10.05	1.0	1.67	1.0	2.0	0.0	10.05	1.0	1.67	1.0	2.0	2.0	1.0	2.0	1.0	253.9	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP041	T1	512635	579052	2	C - Shallow (0.5-2.0m)	3.50355		3.50355	0.061148	3.5	11	2.00	3.00	2.61	1.0	1.74	1.0	2.0	0.0	2.61	1.0	1.74	1.0	2.0	2.0	1.0	2.0	1.0	254.5	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP042	SITE	512636.019	578210.109	0.1	B - Very Shallow (0.01-0.5m)	9.20516		9.20516	0.16066	3.5	11	0.10	1.10	20.15	1.0	1.83	1.0	2.0	0.0	20.15	1.0	1.83	1.0	2.0	2.0	1.0	2.0	1.0	479.8	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP043	T1	512645	579030	0.0001	A - Rock (0.0m)	4.87526	Rock	4.87526	0.085089	3.5	11	0.00	1.00	37574.96	1.0	3.76	1.0	2.0	0.0	37574.96	1.0	3.76	1.0	2.0	2.0	1.0	2.0	1.0	230.3	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP044	T1	512651	579011	0.2	B - Very Shallow (0.01-0.5m)	5.95167		5.95167	0.103876	3.5	11	0.20	1.20	15.43	1.0	2.57	1.0	2.0	0.0	15.43	1.0	2.57	1.0	2.0	2.0	1.0	2.0	1.0	210.7	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP045	SITE	512655.487	578646.68	0.0001	A - Rock (0.0m)	7.72005	Rock	7.72005	0.13474	3.5	11	0.00	1.00	23902.71	1.0	2.39	1.0	2.0	0.0	23902.71	1.0	2.39	1.0	2.0	2.0	1.0	2.0	1.0	173.0	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP046	T1	512657	579131	1.4	C - Shallow (0.5-2.0m)	4.51586		4.51586	0.078817	3.5	11	1.40	2.40	2.90	1.0	1.69	1.0	2.0	0.0	2.90	1.0	1.69	1.0	2.0	2.0	1.0	2.0	1.0	315.5	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP047	T1	512657	579131	1.1	C - Shallow (0.5-2.0m)	4.51586		4.51586	0.078817	3.5	11	1.100	2.10	3.69	1.0	1.83	1.0	2.0	0.0	3.69	1.0	1.83	1.0	2.0	2.0	1.0	2.0	1.0	315.5	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP048	T1	512657.878	579097.85	1.2	C - Shallow (0.5-2.0m)	4.63283		4.63283	0.080858	3.5	11	1.20	2.20	3.29	1.0	1.80	1.0	2.0	0.0	3.29	1.0	1.80	1.0	2.0	2.0	1.0	2.0	1.0	287.7	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP049	T1	512671	578968	0.0001	A - Rock (0.0m)	8.54413	Rock	8.54413	0.149123	3.5	11	0.00	1.00	21656.48	1.0	2.17	1.0	2.0	0.0	21656.48	1.0	2.17	1.0	2.0	2.0	1.0	2.0	1.0	183.4	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP050	SITE	512686	579093	1	C - Shallow (0.5-2.0m)	6.01069		6.01069	0.104906	3.5	11	1.00	2.00	3.06	1.0	1.53	1.0	2.0	0.0	3.06	1.0	1.53	1.0	2.0	2.0	1.0	2.0	1.0	267.9	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP051	T2	512689.869	578676.941	0.3	B - Very Shallow (0.01-0.5m)	9.62354	Rocky adjacent	9.62354	0.167962	3.5	11	0.30	1.30	6.43	1.0	1.48	1.0	2.0	0.0	6.43	1.0	1.48	1.0	2.0	2.0	1.0	2.0	1.0	127.5	2.0	2.0	B - Low Risk	2.0	B - Low Risk
Depth Probe	DP052	T2	512707.055	578640.467	0.0001	A - Rock (0.0m)	8.58034		8.58034	0.149755	3.5	11	0.00	1.00	21567.82	1.0	2.16	1.0	2.0	0.0	21567.82	1.0	2.16	1.0	2.0	2.0	1.0	2.0	1.0	133.1	2.0	2.0	B - Low Risk	2.0	B - Low Risk
Depth Probe	DP053	SITE	512722	579066	0.95	C - Shallow (0.5-2.0m)	6.02249		6.02249	0.105112	3.5	11	0.95	1.95	3.21	1.0	1.56	1.0	2.0	0.0	3.21	1.0	1.56	1.0	2.0	2.0	1.0	2.0	1.0	226.5	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP054	SITE	512730	578854	0.1	B - Very Shallow (0.01-0.5m)	8.59535		8.59535	0.150017	3.5	11	0.10	1.10	21.53	1.0	1.96	1.0	2.0	0.0	21.53	1.0	1.96	1.0	2.0	2.0	1.0	2.0	1.0	35.2	4.0	4.0	C - Moderate Risk	4.0	C - Moderate Risk
Depth Probe	DP055	SITE	512757	579021	1.1	C - Shallow (0.5-2.0m)	10.02816		10.02818	0.175024	3.5	11	1.10	2.10	1.69	1.0	0.88	4.0	2.0	0.0	1.69	1.0	0.88	4.0	2.0	2.0	1.0	8.0	4.0	170.6	1.0	1.0	A - Very Low Risk	4.0	C - Moderate Risk
Depth Probe	DP056	T2	512772.851	578615.953	0.0001	A - Rock (0.0m)	9.15998	Rock	9.15998	0.159872	3.5	11	0.00	1.00	20245.52	1.0	2.02	1.0	2.0	0.0	20245.52	1.0	2.02	1.0	2.0	2.0	1.0	2.0	1.0	98.0	2.0	2.0	B - Low Risk	2.0	B - Low Risk
Depth Probe	DP057	T2	512776.85	578592.958	0.2	B - Very Shallow (0.01-0.5m)	9.60824		9.60824	0.167695	3.5	11	0.20	1.20	9.67	1.0	1.61	1.0	2.0	0.0	9.67	1.0	1.61	1.0	2.0	2.0	1.0	2.0	1.0	112.8	2.0	2.0	B - Low Risk	2.0	B - Low Risk
Depth Probe	DP058	T3	512786.851	579087.851	0.9	C - Shallow (0.5-2.0m)	8.27299		8.27299	0.144391	3.5	11	0.80	1.80	2.48	1.0	1.18	2.0	2.0	0.0	2.48	1.0	1.18	2.0	2.0	2.0	1.0	4.0	2.0	225.7	1.0	1.0	A - Very Low Risk	2.0	B - Low Risk
Depth Probe	DP059	T2	512806.844	578632.949	0.1	B - Very Shallow (0.01-0.5m)	10.32984	Rocky adjacent	10.32984	0.18029	3.5	11	0.10	1.10	18.04	1.0	1.64	1.0	2.0	0.0	18.04	1.0	1.64	1.0	2.0	2.0	1.0	2.0	1.0	62.8	2.0	2.0	B - Low Risk	2.0	B - Low Risk
Depth Probe	DP060	T3	512811	579012	1	C - Shallow (0.5-2.0m)	12.51684		12.51684	0.21846	3.5	11	1.00	2.00	1.50	1.0	0.75	4.0	2.0	0.0	1.50	1.0	0.75	4.0	2.0	2.0	1.0	8.0	4.0	157.0	1.0	1.0	A - Very Low Risk	4.0	C - Moderate Risk
Depth Probe	DP061	T2	512811.843	578615.953	0.1	B - Very Shallow (0.01-0.5m)	10.19738	Rocky adjacent	10.19738	0.177978	3.5	11	0.10	1.10	18.26	1.0	1.66	1.0	2.0	0.0	18.26	1.0	1.66	1.0	2.0	2.0	1.0	2.0	1.0	74.2	2.0	2.0	B - Low Risk	2.0	B - Low Risk
Depth Probe	DP062	T2	512815.991	578491.767	0.2	B - Very Shallow (0.01-0.5m)	11.45979		11.45979	0.200011	3.5	11	0.20	1.20	8.17	1.0	1.36	1.0	2.0	0.0	8.17	1.0	1.36	1.0	2.0	2.0	1.0	2.0	1.0	174.7	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP063	T2	512819.841	578667.942	0.1	B - Very Shallow (0.01-0.5m)	8.95796	Rocky adjacent	8.95796	0.156346	3.5	11	0.10	1.10	20.69	1.0	1.88	1.0	2.0	0.0	20.69	1.0	1.88	1.0	2.0	2.0	1.0	2.0	1.0	28.1	4.0	4.0	C - Moderate Risk	4.0	C - Moderate Risk
Depth Probe	DP064	T3	512837	579015	0.4	B - Very Shallow (0.01-0.5m)	10.70068	Deeply erdoed drain	10.70068	0.186762	3.5	11	0.40	1.40	4.36	1.0	1.25	2.0	2.0	0.0	4.36	1.0	1.25	2.0	2.0	2.0	1.0	4.0	2.0	149.3	2.0	2.0	B - Low Risk	4.0	C - Moderate Risk
Depth Probe	DP065	T2	512848.835	578655.944	0.1	B - Very Shallow (0.01-0.5m)	7.50129	Rocky adjacent	7.50129	0.130922	3.5	11	0.10	1.10	24.58	1.0	2.23	1.0	2.0	0.0	24.58	1.0	2.23	1.0	2.0	2.0	1.0	2.0	1.0	20.2	4.0	4.0	C - Moderate Risk	4.0	C - Moderate Risk
Depth Probe	DP066	T2	512857	578578	0.1	B - Very Shallow (0.01-0.5m)	7.07017		7.07017	0.123398	3.5	11	0.10	1.10	26.05	1.0	2.37	1.0	2.0	0.0	26.05	1.0	2.37	1.0	2.0	2.0	1.0	2.0	1.0	83.5	2.0	2.0	B - Low Risk	2.0	B - Low Risk
Depth Probe	DP067	T2	512896.554	578530.495	0.0001	A - Rock (0.0m)	8.89802	Rocky	8.89802	0.1553	3.5	11	0.00	1.00	20821.41	1.0	2.08	1.0	2.0	0.0	20821.41	1.0	2.08	1.0	2.0	2.0	1.0	2.0	1.0	92.0	2.0	2.0	B - Low Risk	2.0	B - Low Risk
Depth Probe	DP068	T2	512902.145	578511.339	0.3	B - Very Shallow (0.01-0.5m)	8.89802		8.89802	0.1553	3.5	11	0.30	1.30	6.94	1.0	1.60	1.0	2.0	0.0	6.94	1.0	1.60	1.0	2.0	2.0	1.0	2.0	1.0	104.3	2.0	2.0	B - Low Risk	2.0	B - Low Risk
Depth Probe	DP069	T3	512940.817	579093.849	0.9	C - Shallow (0.5-2.0m)	9.24406	Cut peat photo	9.24406	0.161339	3.5	11	0.900	1.90	2.23	1.0	1.06	2.0	2.0	0.0	2.23	1.0	1.06	2.0	2.0	2.0	1.0	4.0	2.0	254.3	1.0	1.0	A - Very Low Risk	2.0	B - Low Risk
Depth Probe	DP070	T2	512948	578538	0.5	B - Very Shallow (0.01-0.5m)	11.33164		11.33164	0.197774	3.5	11	0.60	1.50	3.30	1.0	1.10	2.0	2.0	0.0	3.30	1.0	1.10	2.0	2.0	2.0	1.0	4.0	2.0	60.0	2.0	2.0	B - Low Risk	4.0	C - Moderate Risk
Depth Probe	DP071	T3	512967	579286	0.0001	A - Rock (0.0m)	4.87812	Cut peat	4.87812	0.085139	3.5	11	0.00	1.00	37553.14	1.0	3.75	1.0	2.0	0.0	37553.14	1.0	3.75	1.0	2.0	2.0	1.0	2.0	1.0	442.5	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP072	T3	512968	579286	0.6	C - Shallow (0.5-2.0m)	4.87812	Uncut peat	4.87812	0.085139	3.5	11	0.60	1.60	6.26	1.0	2.35	1.0	2.0	0.0	6.26	1.0	2.35	1.0	2.0	2.0	1.0	2.0	1.0	442.8	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP073	T3	512980	579238	0.0001	A - Rock (0.0m)	6.08375	Cut peat	6.08375	0.106181	3.5	11	0.00	1.00	30192.28	1.0	3.02	1.0	2.0	0.0	30192.28	1.0	3.02	1.0	2.0	2.0	1.0	2.0	1.0	401.9	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP074	T3	512981	579239	0.6	C - Shallow (0.5-2.0m)	6.08375	Uncut peat	6.08375	0.106181	3.5	11	0.60	1.60	5.03	1.0	1.89	1.0	2.0	0.0	5.03	1.0	1.89	1.0	2.0	2.0	1.0	2.0	1.0	403.2	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP075	T3	512996	579176	0.1	B - Very Shallow (0.01-0.5m)	8.00388	Cut peat	8.00388	0.139694	3.5	11	0.10	1.10	23.08	1.0	2.10	1.0	2.0	0.0	23.08	1.0	2.10	1.0	2.0	2.0	1.0	2.0	1.0	352.6	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP076	T3	512997	579176	1.5	C - Shallow (0.5-2.0m)	8.00388	Uncut peat	8.00388	0.139694	3.5	11	1.60	2.50	1.54	1.0	0.92	4.0	2.0	0.0	1.54	1.0	0.92	4.0	2.0	2.0	1.0	8.0	4.0	353.1	1.0	1.0	A - Very Low Risk	4.0	C - Moderate Risk
Depth Probe	DP077	T3	513000	579133	0.1	B - Very Shallow (0.01-0.5m)	7.86543		7.86543	0.137278	3.5	11	0.10	1.10	23.47	1.0	2.13	1.0	2.0	0.0	23.47	1.0	2.13	1.0	2.0	2.0	1.0	2.0	1.0	317.6	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP078	T3	513000	579134	1.1	C - Shallow (0.5-2.0m)	7.86543	Uncut peat, Inferred	7.86543	0.137278	3.5	11	1.10	2.10	2.13	1.0	1.12	2.0	2.0	0.0	2.13	1.0	1.12	2.0	2.0	2.0	1.0	4.0	2.0	318.5	1.0	1.0	A - Very Low Risk	2.0	B - Low Risk
Depth Probe	DP079	T3	513001	579084	1.1	C - Shallow (0.5-2.0m)	10.71365	Cut peat on till	10.71365	0.186988	3.5	11	1.10	2.10	1.58	1.0	0.83	4.0	2.0	0.0	1.58	1.0	0.83	4.0	2.0	2.0	1.0	8.0	4.0	278.3	1.0	1.0	A - Very Low Risk	4.0	C - Moderate Risk
Depth Probe	DP080	T3	513026.799	579108.846	0.4	B - Very Shallow (0.01-0.5m)	10.70999	Cut peat photo	10.70999	0.186923	3.5	11	0.40	1.40	4.36	1.0	1.24	2.0	2.0	0.0	4.36	1.0	1.24	2.0	2.0	2.0	1.0	4.0	2.0	313.3	1.0	1.0	A - Very Low Risk	2.0	B - Low Risk
Depth Probe	DP081	T3	513028	579064	0.2	B - Very Shallow (0.01-0.5m)	10.73867	Top of steep slope	10.73867	0.187425	3.5	11	0.20	1.20	8.69	1.0	1.45	1.0	2.0	0.0	8.69	1.0	1.45	1.0	2.0	2.0	1.0	2.0	1.0	276.1	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP082	T3	513052.793	579088.85	1	C - Shallow (0.5-2.0m)	11.97277		11.97277	0.208964	3.5	11	1.00	2.00	1.57	1.0	0.78	4.0	2.0	0.0	1.57	1.0	0.78	4.0	2.0	2.0	1.0	8.0	4.0	310.5	1.0	1.0	A - Very Low Risk	4.0	C - Moderate Risk
Depth Probe	DP083	T3	513054	579101	0.5	B - Very Shallow (0.01-0.5m)	11.97277	Up out of drain	11.97277	0.208964	3.5	11	0.50	1.50	3.14	1.0	1.05	2.0	2.0	0.0	3.14	1.0	1.05	2.0	2.0	2.0	1.0	4.0	2.0	321.3	1.0	1.0	A - Very Low Risk	2.0	B - Low Risk
Depth Probe	DP084	T3	513084	579172	1.3	C - Shallow (0.5-2.0m)	5.33154		5.33154	0.093053	3.5	11	1.30	2.30	2.65	1.0	1.50	1.0	2.0	0.0	2.65	1.0	1.50	1.0	2.0	2.0	1.0	2.0	1.0	383.1	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP085	T3	513097.782	578888.833	0.1	B - Very Shallow (0.01-0.5m)	10.52563		10.52563	0.183707	3.5	11	0.10	1.10	17.72	1.0	1.61	1.0	2.0	0.0	17.72	1.0	1.61	1.0	2.0	2.0	1.0	2.0	1.0	201.5	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP086	T3	513098.783	579059.856	0.8	C - Shallow (0.5-2.0m)	7.92501		7.92501	0.138318	3.5	11	0.80	1.80	2.91	1.0	1.29	2.0	2.0	0.0	2.91	1.0	1.29	2.0	2.0	2.0	1.0	4.0	2.0	317.2	1.0	1.0	A - Very Low Risk	2.0	B - Low Risk
Depth Probe	DP087	T3	513098.783	579059.856	1.8	C - Shallow (0.5-2.0m)	7.92501		7.92501	0.138318	3.5	11	1.80	2.80	1.29	2.0	0.83	4.0	2.0	0.0	1.29	2.0	0.83	4.0	2.0	4.0	2.0	8.0	4.0	317.2	1.0	2.0	B - Low Risk	4.0	C - Moderate Risk
Depth Probe	DP088	T3	513098.784	579131.84	0.8	C - Shallow (0.5-2.0m)	9.83355		9.83355	0.171628	3.5	11	0.80	1.80	2.36	1.0	1.05	2.0	2.0	0.0	2.36	1.0	1.05	2.0	2.0	2.0	1.0	4.0	2.0	363.1	1.0	1.0	A - Very Low Risk	2.0	B - Low Risk
Depth Probe	DP089	T3	513134.775	579074.863	1.1	C - Shallow (0.5-2.0m)	8.46323		8.46323	0.147711	3.5	11	1.10	2.10	1.99	1.0	1.04	2.0	2.0	0.0	1.99	1.0	1.04	2.0	2.0	2.0	1.0	4.0	2.0	318.4	1.0	1.0	A - Very Low Risk	2.0	B - Low Risk
Depth Probe	DP090	SITE	513144.309	578641.933	0.2	B - Very Shallow (0.01-0.5m)	7.68494	INFERRED, RECENT PLANTING WORK	7.68494	0.134126	3.5	11	0.20	1.20	12.00	1.0	2.00	1.0	2.0	0.0	12.00	1.0	2.00	1.0	2.0	2.0	1.0	2.0	1.0	121.5	2.0	2.0	B - Low Risk	2.0	B - Low Risk
Depth Probe	DP091	T3	513149	579188	0.9	C - Shallow (0.5-2.0m)	7.11033		7.11033	0.124099	3.5	11	0.90	1.90	2.88	1.0	1.36	1.0	2.0	0.0	2.88	1.0	1.36	1.0	2.0	2.0	1.0	2.0	1.0	323.2	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP092	T3	513158.77	579061.855	1.1	C - Shallow (0.5-2.0m)	6.03585		6.03585	0.105345	3.5	11	1.10	2.10	2.77	1.0	1.45	1.0	2.0	0.0	2.77	1.0	1.45	1.0	2.0	2.0	1.0	2.0	1.0	303.1	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP093	SITE	513176.936	578680.824	0.2	B - Very Shallow (0.01-0.5m)	7.32049	INFERRED, RECENT PLANTING	7.32049	0.127767	3.5	11	0.20	1.20	12.59	1.0	2.10	1.0	2.0	0.0	12.59	1.0	2.10	1.0	2.0	2.0	1.0	2.0	1.0	165.2	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP094	SITE	513192.295	578506.057	0.2	B - Very Shallow (0.01-0.5m)	5.82346	INFERRED, VISIBLE	5.82346	0.101639	3.5	11	0.20	1.20	15.76	1.0	2.63	1.0	2.0	0.0	15.76	1.0	2.63	1.0	2.0	2.0	1.0	2.0	1.0	135.8	2.0	2.0	B - Low Risk	2.0	B - Low Risk
Depth Probe	DP095	SITE	513232.887	578535.466	0.2	B - Very Shallow (0.01-0.5m)	3.90552	INFERRED, VISIBLE	3.90552	0.068164	3.5	11	0.20	1.20	23.41	1.0	3.90	1.0	2.0	0.0	23.41	1.0	3.90	1.0	2.0	2.0	1.0	2.0	1.0	182.4	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP096	SITE	513280.697	578588.869	0.15	B - Very Shallow (0.01-0.5m)	7.87911		7.87911	0.137516	3.5	11	0.15	1.15	15.62	1.0	2.04	1.0	2.0	0.0	15.62	1.0	2.04	1.0	2.0	2.0	1.0	2.0	1.0	185.5	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP097	SITE	513325.691	578628.638	0.1	B - Very Shallow (0.01-0.5m)	4.13463		4.13463	0.072163	3.5	11	0.10	1.10	44.25	1.0	4.02	1.0	2.0	0.0	44.25	1.0	4.02	1.0	2.0	2.0	1.0	2.0	1.0	152.0	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP098	SITE	513338.509	578641.916	0.2	B - Very Shallow (0.01-0.5m)	4.13463	INFERRED, VISIBLE	4.13463	0.072163	3.5	11	0.20	1.20	22.12	1.0	3.69	1.0	2.0	0.0	22.12	1.0	3.69	1.0	2.0	2.0	1.0	2.0	1.0	142.4	2.0	2.0	B - Low Risk	2.0	B - Low Risk
Depth Probe	DP099	SITE	513418.002	579383.96	0.5	B - Very Shallow (0.01-0.5m)	2.83559		2.83559	0.04949	3.5	11	0.50	1.50	12.88	1.0	4.29	1.0	2.0	0.0	12.88	1.0	4.29	1.0	2.0	2.0	1.0	2.0	1.0	284.7	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP100	SITE	513451.965	579382.508	1	C - Shallow (0.5-2.0m)	2.6214		2.6214	0.045752	3.5	11	1.00	2.00	6.96	1.0	3.48	1.0	2.0	0.0	6.96	1.0	3.48	1.0	2.0	2.0	1.0	2.0	1.0	280.2	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP101	SITE	513463.004	579286.371	0.8	C - Shallow (0.5-2.0m)	6.82921		6.82921	0.119192	3.5	11	0.80	1.80	3.37	1.0	1.50	1.0	2.0	0.0	3.37	1.0	1.50	1.0	2.0	2.0	1.0	2.0	1.0	183.9	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP102	SITE	513467.931	579348.545	0.3	B - Very Shallow (0.01-0.5m)	3.24569		3.24569	0.056648	3.5	11	0.30	1.30	18.76	1.0	4.33	1.0	2.0	0.0	18.76	1.0	4.33	1.0	2.0	2.0	1.0	2.0	1.0	246.2	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk
Depth Probe	DP103	SITE	513481.275	578648.72	0.4	B - Very Shallow (0.01-0.5m)	4.8492	INFERRED, VISIBLE	4.8492	0.084635	3.5	11	0.40	1.40	9.44	1.0	2.70	1.0	2.0	0.0	9.44	1.0	2.70	1.0	2.0	2.0	1.0	2.0	1.0	13.5	4.0	4.0	C - Moderate Risk	4.0	C - Moderate Risk
Depth Probe	DP104	SITE	513492.107	578645.718	0.3	B - Very Shallow (0.01-0.5m)	4.87908	INFERRED, DRAIN	4.87908	0.085158	3.5	11	0.30	1.30	12.52	1.0	2.89	1.0	2.0	0.0	12.52	1.0	2.89	1.0	2.0	2.0	1.0	2.0	1.0	2.3	4.0	4.0	C - Moderate Risk	4.0	C - Moderate Risk
Depth Probe	DP105	SITE	513492.605	579379.605	1	C - Shallow (0.5-2.0m)	3.20987		3.20987	0.056023	3.5	11	1.00	2.00	5.69	1.0	2.85	1.0	2.0	0.0	5.69	1.0	2.85	1.0	2.0	2.0	1.0	2.0	1.0	278.9	1.0	1.0	A - Very Low Risk	1.0	A - Very Low Risk

FoS RAW: $FoS = \frac{c_u}{\gamma z \sin\alpha \cos\alpha}$

FoS ADJ: $FoS = \frac{c_u}{\gamma z \sin\alpha \cos\alpha}$ + Adjustment Value

Appendix C

Inchamore Wind Farm
Inchamore, Co. Cork / Co. Kerry

App 8.1 - App C- 3188-A2 (01) IWF SI - TP BH Locations

Legend

Development Layout

WF
- Red Line 23
- 230313 Site Layout
- Turbine Locations
- Site_Entrances
- Proposed Met Mast
- Watercourse Crossings
- Proposed Borrow Pits
- Borrow Pit
- Proposed Temporary Construction Compound
- Proposed On-Site Substation

UGC
- Inchamore Grid Connection Route
- HDD Crossings

Delivery
- Redline-250 Haul Road - 256-Polyline
- Turbine Delivery Route
- Redline-250 Haul Road - 256-Polyline
- urbine Delivery Route

Geology

3188-A2-IWF SI Trial Pit Data
- Yes, Iron Pan Present

Base Maps

Bing Aerial

OpenStreetMap

Project ID:604162 Inchamore Wind Farm
Projection:ITM
Drawn by: Sven K.
Reviewed by: Sven K.
Version: 21/09/2022

References/Sources:
Environmental Protection Agency (EPA)
Geological Services Ireland (GSI)
Bing Aerial / GeoHive / Open Street Map / Google Roads
GDEM Elevation Contours
Phase 1 (250m Grid Peat Depth - Greensource

Note: Data points presented are georeferenced using open source data and/or a handheld GPS. This drawing / map is considered a conceptual model with reasonable accuracy for the purposes of environmental assessment. This drawing should not be relied upon for detailed design puporses.

Scale: 0 0.27 0.54 km

RSK

N

N22 Crossing

Site Entrance

6 JUN 2023 6:15

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Temporary Compound

TP007

T3

T4

T1

Borrow Pit

TP002

TP011

Substation

WC2

WC3

T5

WC1

T2

Met Mast

T1 T5
T2 T4

Appendix D

Inchamore WF, Co. Cork

SI Trial Pit Logs

Borehole/ Trial Pit Design & Completion	Soil (S) / Water (W) / Vapour (V) Sampling					Depth in metres below ground level, also (maODM) & [Thickness]	Geology (graphical log)	INVESTIGATION POINT LOG NUMBER	TP002
								Client, Project, Location	JOD (Coillte), Inchamore WF , Cork
								Minerex work item	A2
								Page No.	1 of 1
								Date & time drilled / formed:	02/06/2021
								Logged by (drawn by) [checked by]:	SK
								Drilling / Trial pitting co. & equipment	Excavator
								Doc. Ref.	(File Ref. 3188-A2-024; 603679 App D)
								Irish Transverse Mercator (ITM)**	513978, 578679
	Sample number & interval (mbGL) *(Sample 10 kg minimum)* Red line = Single discrete sample (grab type). Blue line = Composite sample (generated in office or lab). Green line = Core recovery run.	Non-Natural Ground Percentage (see * below)	PID (ppm) Bagged sample (BS); Trial Pit Wall (TPW); Soil Core (SC); BH Arisings (BHA); Trial Pit Clumps (TPC)	Odour strength & description (none, weak, moderate, strong)	Groundwater occurrence (See legend for symbols used for dry, damp and wet)			Geological description	Natural / Made
N/A		N/A	N/A			0.5		CLAY. Grey Brown	N
						1.0		PEAT/PEATY SOIL. Medium Brown	N
						1.5		Sandy Gravelly CLAY. Grey Brown	N
						2.0		Sandy Gravelly Cobbly CLAY w/ Boulders. Purplish Grey	N
						2.5		Bigger Boulders	
						3.0		EOH – Obstruction (Boulders)	
						3.5			
						4.0			

* **Non-natural material %s with total % in ( )**

NON-DEGRADABLE % (ND): 1 = **Brick**, 2 = **Concrete**, 3 = **Glass**, 4 = **Ceramic tiles**, 5 = **ACMs** (asbestos containing materials such as roof tiles, piping). 6 = **Blue Bangor slate.**

DEGRADABLE % (D): 7 = **Plastic**, 8 = **Metal**, 9 = **Wood / Organic / Leaves / Twigs / Peat**, 10 = **Ash & Clinker**, 11 = **Charcoal**, 12 = **Tarmacadam**, 13 = **Leather**, 14 = **Coal Tar**

** 1-From hand held GPS, 2-Estimated from google maps or 3-Surveyed with theodolite.

A	B	C	D	E	F
DOMINANT GEOLOGICAL COMPONENT: Clay, Silt, Sand, Gravel, Cobble, Boulder deposit	NON-DOMINANT GEOLOGICAL COMPONENT: Clay - Silt - Sand Gravel - Cobble - Boulder	COLOUR (LB, MB, DB): - Brown (LG, MG, DG): - Grey - Mustard - Beige (tan) - Olive - Mottled - Orange	STIFFNESS: VST - V. Soft; ST = Soft; F = Firm; S = Stiff; VS = V. Stiff)	E LAYER ID, RECOVERY & STONE: % recovery; % >10mm stone	F NN or N

FSK

Write additional help notes on macropores, mottling etc as space allows

F Interpretation: NN = Non-natural ground (fill / made ground / disturbed natural); N = Natural ground

Borehole/ Trial Pit Design & Completion	Soil (S) / Water (W) / Vapour (V) Sampling: Sample number & interval (mbGL) (Sample 10 kg minimum)	Non-Natural Ground Percentage	PID (ppm) Bagged sample (BS); Trial Pit Wall (TPW); Soil Core (SC); BH Arisings (BHA); Trial Pit Clumps (TPC)	Odour strength & description (none, weak, moderate, strong)	Groundwater occurrence (See legend for symbols used for dry, damp and wet)	Depth in metres below ground level, also (maODM) & (Thickness)	Geology (graphical log)	Geological description	Natural / Made
N/A		N/A	N/A					**PEAT/PEATY SOIL.** Dark Brown	N
								Sandy **CLAY.** Medium Brown	N
						0.5		Sandy **CLAY.** Grey	
						1.0			N
						1.5			
						2.0			
						2.5		**EOH – Big Boulders**	
						3.0			
						3.5			
						4.0			

Red line = Soils sample (from Eplus)
Blue line = Composite sample (generated in office or lab)
Green line = Water sample collected by Eplus

INVESTIGATION POINT LOG NUMBER	TP004
Client, Project, Location	JOD (Coillte), Inchamore WF , Cork
Minerex work item	A2
Page No.	1 of 1
Date & time drilled / formed:	02/06/2021
Logged by (drawn by) [checked by]:	SK
Drilling / Trial pitting co. & equipment	Excavator
Doc. Ref.	(File Ref. 3188-A2-024; 603679 App D)
Irish Transverse Mercator (ITM)**	0513750, 0578906

PLANNING & DEVELOPMENT SECTION
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* Unreliable data. Indication only.

** From hand held GPS

A	B	C	D	E	F
DOMINANT GEOLOGICAL COMPONENT: Clay, Silt, Sand, Gravel, Cobble, Boulder deposit	NON-DOMINANT GEOLOGICAL COMPONENT: Clay - Silt - Sand Gravel - Cobble - Boulder	COLOUR: - Brown (LB, MB, DB) - Grey (LG, MG, DG) - Mustard - Beige (tan) - Olive - Mottled - Orange	STIFFNESS: VST - V. Soft ST = Soft F = Firm S = Stiff VS = V. Stiff	LAYER ID, RECOVERY & STONE: % recovery % >10mm stone	NN or N

FSK

Write additional help notes on macropores, mottling etc as space allows

F Interpretation: NN = Non-natural ground (fill / made up ground / disturbed natural); N = Natural ground

Borehole/ Trial Pit Design & Completion	Soil (S) / Water (W) / Vapour (V) Sampling					Depth in metres below ground level, also (mAODM) & [Thickness]	Geology (graphical log)	INVESTIGATION POINT LOG NUMBER	TP006
	Sample number & interval (mbGL) (Sample 10 kg minimum) Red line = Single discrete sample (from GI) Blue line = Composite sample (generated in office or lab) Green box = Soils suitable for lab testing	Non-Natural Ground Percentage	PID (ppm) Bagged sample (BS); Trial Pit Wall (TPW); Soil Core (SC); BH Arisings (BHA); Trial Pit Clumps (TPC)	Odour strength & description (none, weak, moderate, strong)	Groundwater occurrence (See legend for symbols used for dry, damp and wet)			Client, Project, Location	JOD (Coillte), Inchamore WF , Cork
								Minerex work item	A2
								Page No.	1 of 1
								Date & time drilled / formed:	02/06/2021
								Logged by (drawn by) [checked by]:	SK
								Drilling / Trial pitting co. & equipment	Excavator
								Doc. Ref.	(File Ref. 3188-A2-024; 603679 App D)
								Irish Transverse Mercator (ITM)**	513543, 579269
								Geological description	Natural / Made
N/A		N/A	N/A			0.0		**PEAT/PEATY SOIL.** Dark Brown	N
						0.5		Clayey, Sandy **GRAVEL / TILL** w/ Cobbles	N
						1.0			
						1.5			
						2.0			
						2.5		**EOH** End of turning point, ground level below baseline. Cut side +2m. Peat 0.2mbGL, Brown till 0.3, grey as logged to existing GL.	
						3.0			
						3.5			
						4.0			

PLANNING & DEVELOPMENT SECTION
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* Unreliable data. Indication only.

** From hand held GPS

A	B	C	D	E	F
DOMINANT GEOLOGICAL COMPONENT: Clay, Silt, Sand, Gravel, Cobble, Boulder deposit	NON-DOMINANT GEOLOGICAL COMPONENT: Clay - Silt - Sand Gravel - Cobble - Boulder	COLOUR: - Brown (LB, MB, DB) - Grey (LG, MG, DG) - Mustard - Beige (tan) - Olive - Mottled - Orange	STIFFNESS: VST - V. Soft, ST = Soft, F = Firm, S = Stiff, VS = V. Stiff)	LAYER ID, RECOVERY & STONE: % recovery, % >10mm stone	F Interpretation: NN or N; NN = non-natural ground (fill / made up ground / disturbed natural); N = Natural ground

Write additional help notes on macropores, mottling etc as space allows

Borehole/ Trial Pit Design & Completion	Soil (S) / Water (W) / Vapour (V) Sampling					Depth in metres below ground level, also (maODM) & (Thickness)	Geology (graphical log)	INVESTIGATION POINT LOG NUMBER	TP008
								Client, Project, Location	JOD (Coillte), Inchamore WF , Cork
								Minerex work item	A2
								Page No.	1 of 1
								Date & time drilled / formed:	03/06/2021
								Logged by (drawn by) [checked by]	SK
								Drilling / Trial pitting co. & equipment	Excavator
								Doc. Ref.	(File Ref. 3188-A2-024; 603679 App D)
								Irish Transverse Mercator (ITM)**	512974, 579057

Borehole/ Trial Pit Design & Completion	Sample number & interval (mbGL) (Sample 10 kg minimum) Red line = Single discrete sample (bulk & jar) Blue line = Composite sample (generated in office or lab) Green line = Grab sample (collected on site)	Non-Natural Ground Percentage	PID (ppm) Bagged sample (BS); Trial Pit Wall (TPW); Soil Core (SC); BH Arisings (BHA); Trial Pit Clumps (TPC)	Odour strength & description (none, weak, moderate, strong)	Groundwater occurrence (See legend for symbols used for dry, damp and wet)	Geological description	Natural / Made
N/A		N/A	N/A			**PEAT/PEATY SOIL.** Dark Brown	N
						Sandy Gravelly **CLAY** w/ cobbles.	N
							N
							N
						EOH – Weathered Bedrock / Boulders	

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0

PLANNING & DEVELOPMENT SECTION
6 JUN 2023 643
KERRY COUNTY COUNCIL

* Unreliable data. Indication only.

** From hand held GPS

A DOMINANT GEOLOGICAL COMPONENT	B NON-DOMINANT GEOLOGICAL COMPONENT	C COLOUR	D STIFFNESS	E LAYER ID, RECOVERY & STONE	F NN or N
Clay, Silt, Sand, Gravel, Cobble, Boulder deposit	Clay - Silt - Sand Gravel - Cobble - Boulder	- Brown (LB, MB, DB) - Grey (LG, MG, DG) - Mustard - Beige (tan) - Olive - Mottled - Orange	VST - V. Soft ST = Soft F = Firm S = Stiff VS = V. Stiff)	% recovery % >10mm stone	

RSK

Write additional help notes on macropores, mottling etc as space allows

F Interpretation
NN = Non-natural ground (fill / made up ground / disturbed natural)
N = Natural ground

Borehole/ Trial Pit Design & Completion	Soil (S) / Water (W) / Vapour (V) Sampling: Sample number & interval (mbGL) (Sample 10 kg minimum)	Non-Natural Ground Percentage	PID (ppm) Bagged sample (BS); Trial Pit Wall (TPW); Soil Core (SC); BH Arisings (BHA); Trial Pit Clamps (TPC)	Odour strength & description (none, weak, moderate, strong)	Groundwater occurrence (See legend for symbols used for dry, damp and wet)	Depth in metres below ground level, also (mOD(M) & [Thickness]	Geology (graphical log)	Geological description	Natural / Made
N/A		N/A	N/A					TOPSOIL	N
								Sandy Gravelly **CLAY**. Brown	
								PEAT/PEATY SOIL. Dark Brown	N
						0.5		Sandy Gravelly **CLAY**. Brown	
								Sandy Gravelly **CLAY**. Blue Grey	
						1.0			
						1.5			
						2.0		Big Boulder	
						2.5		EOH	
						3.0			
						3.5			
						4.0			

INVESTIGATION POINT LOG NUMBER	TP010
Client, Project, Location	JOD (Coillte), Inchamore WF , Cork
Minerex work item	A2
Page No.	1 of 1
Date & time drilled / formed	03/06/2021
Logged by (drawn by) [checked by]:	SK
Drilling / Trial pitting co. & equipment	Excavator
Doc. Ref.	(File Ref. 3188-A2-024; 603679 App D)
Irish Transverse Mercator (ITM)**	0513253, 0578571

* Unreliable data. Indication only.

** From hand held GPS

A DOMINANT GEOLOGICAL COMPONENT	B NON-DOMINANT GEOLOGICAL COMPONENT	C COLOUR	D STIFFNESS	E LAYER ID, RECOVERY & STONE	F
Clay, Silt, Sand, Gravel, Cobble, Boulder deposit	Clay - Silt - Sand Gravel - Cobble - Boulder	- Brown (LB, MB, DB) - Grey (LG, MG, DG) - Mustard - Beige (tan) - Olive - Mottled - Orange	VST - V. Soft ST = Soft F = Firm S = Stiff VS = V. Stiff)	% recovery % >10mm stone	NN or N

RSK

Write additional help notes on macropores, mottling etc as space allows

F Interpretation: NN = Non-natural ground (fill / made up ground / disturbed natural); N = Natural ground

Borehole/ Trial Pit Design & Completion	Soil (S) / Water (W) / Vapour (V) Sampling: Sample number & interval (mbGL) *(Sample 10 kg minimum)* — Red line = Grab sample (from face); Blue line = Composite sample (generated in office or lab); Green line = Core sample (recovered on site)	Non-Natural Ground Percentage	PID (ppm) Bagged sample (BS); Trial Pit Wall (TPW); Soil Core (SC); BH Arisings (BHA); Trial Pit Clumps (TPC)	Odour strength & description (none, weak, moderate, strong)	Groundwater occurrence (See legend for symbols used for dry, damp and wet)	Depth in metres below ground level, also (maODM) & (Thickness)	Geology (graphical log)	Geological description	Natural / Made
N/A		N/A	N/A			0.0		PEAT/PEATY SOIL. Dark Brown	N
						0.5		Weathered Bedrock	N
						1.0		EOH – Weathered Bedrock	
						1.5			
						2.0			
						2.5			
						3.0			
						3.5			
						4.0			

INVESTIGATION POINT LOG NUMBER	TP012
Client, Project, Location	JOD (Coillte), Inchamore WF , Cork
Minerex work item	A2
Page No.	1 of 1
Date & time drilled / formed:	03/06/2021
Logged by (drawn by) [checked by]:	SK
Drilling / Trial pitting co. & equipment	Excavator
Doc. Ref.	(File Ref. 3185-A2-024; 803679 App D)
Irish Transverse Mercator (ITM)**	512867, 578632

* Unreliable data. Indication only.

** From hand held GPS

A	B	C	D	E	F
DOMINANT GEOLOGICAL COMPONENT: Clay, Silt, Sand, Gravel, Cobble, Boulder deposit	NON-DOMINANT GEOLOGICAL COMPONENT: Clay - Silt - Sand Gravel - Cobble - Boulder	COLOUR: - Brown (LB, MB, DB); - Grey (LG, MG, DG); - Mustard - Beige (tan) - Olive - Mottled - Orange	STIFFNESS: VST - V. Soft; ST = Soft; F = Firm; S = Stiff; VS = V. Stiff)	LAYER ID, RECOVERY & STONE: % recovery; % >10mm stone	NN or N

Write additional help notes on macroperes, mottling etc as space allows

F Interpretation: NN = Non-natural ground (fill / made up ground / disturbed natural); N = Natural ground)

INVESTIGATION POINT LOG NUMBER	TP014
Client, Project, Location	JOD (Coillte), Inchamore WF , Cork
Minerex work item	A2
Page No.	1 of 1
Date & time drilled / formed	03/06/2021
Logged by (drawn by) [checked by]:	SK
Drilling / Trial pitting co. & equipment	Excavator
Doc. Ref.	(File Ref. 3188-A2-024; 603679 App D)
Irish Transverse Mercator (ITM)**	512554, 579045

Borehole/ Trial Pit Design & Completion	Soil (S) / Water (W) / Vapour (V) Sampling: Sample number & interval (mbGL) (Sample 10 kg minimum)	Non-Natural Ground Percentage	PID (ppm) Bagged sample (BS), Trial Pit Wall (TPW); Soil Core (SC); BH Airstrip (BHA); Trial Pit Clumps (TPC)	Odour strength & description (none, weak, moderate, strong)	Groundwater occurrence (See legend for symbols used for dry, damp and wet)	Depth in metres below ground level, also (maODM) & [Thickness]	Geology (graphical log)	Geological description	Natural / Made
N/A		N/A	N/A			0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0		**PEAT/PEATY SOIL.** Dark Brown TP abandoned, deep peat encountered, probe point <5m from TP = 2.0mbGL. See peat probing data for area.	N

* Unreliable data. Indication only.

** From hand held GPS

A DOMINANT GEOLOGICAL COMPONENT: Clay, Silt, Sand, Gravel, Cobble, Boulder deposit

B NON-DOMINANT GEOLOGICAL COMPONENT: Clay - Silt - Sand Gravel - Cobble - Boulder

C COLOUR: - Brown (LB, MB, DB) - Grey (LG, MG, DG) - Mustard - Beige (tan) - Olive - Mottled - Orange

D STIFFNESS: VST - V. Soft; ST = Soft; F = Firm; S = Stiff; VS = V. Stiff)

E LAYER ID, RECOVERY & STONE: % recovery; % >10mm stone

F NN or N

RSK

Write additional help notes on macropores, mottling etc as space allows

F Interpretation

NN = Non-natural ground (fill / made up ground / disturbed natural)

N = Natural ground

Borehole/ Trial Pit Design & Completion	Soil (S) / Water (W) / Vapour (V) Sampling: Sample number & interval (mbGL) *(Sample 10 kg minimum)* — Red line = Single sample (from bag); Blue line = Composite sample (generated in office or lab); Green line = Duplicate sample (e.g. water split)	Non-Natural Ground Percentage	PID (ppm) Bagged sample (BS); Trial Pit Wall (TPW); Soil Core (SC); BH Auktings (BHA); Trial Pit Clumps (TPC)	Odour strength & description (none, weak, moderate, strong)	Groundwater occurrence (See legend for symbols used for dry, damp and wet)	Depth in metres below ground level, also (maODM) & *[Thickness]*	Geology (graphical log)	Geological description	Natural / Made
N/A		N/A	N/A			0.0		**PEAT/PEATY SOIL.** Dark Brown	N
						0.5		Sandy Gravelly Cobbly **CLAY.** Brown	N
						1.0		**EOH.** Bedrock.	
						1.5			
						2.0			
						2.5			
						3.0			
						3.5			
						4.0			

INVESTIGATION POINT LOG NUMBER	TP016
Client, Project, Location	JOD (Coillte), Inchamore WF , Cork
Minerex work item	A2
Page No.	1 of 1
Date & time drilled / formed:	03/06/2021
Logged by (drawn by) [checked by]:	SK
Drilling / Trial pitting co. & equipment	Excavator
Doc. Ref.	(File Ref. 3188-A2-024; 603679 App D)
Irish Transverse Mercator (ITM)**	512293, 576980

* Unreliable data. Indication only.

** From hand held GPS

A DOMINANT GEOLOGICAL COMPONENT: Clay, Silt, Sand, Gravel, Cobble, Boulder deposit

B NON-DOMINANT GEOLOGICAL COMPONENT: Clay - Silt - Sand Gravel - Cobble - Boulder

C COLOUR: - Brown (LB, MB, DB); - Grey (LG, MG, DG); - Mustard; - Beige (tan); - Olive; - Mottled; - Orange

D STIFFNESS: VST - V. Soft; ST = Soft; F = Firm; S = Stiff; VS = V. Stiff)

E LAYER ID, RECOVERY & STONE: % recovery; % >10mm stone

F NN or N

RSK

Write additional help notes on macropores, mottling etc as space allows

F Interpretation

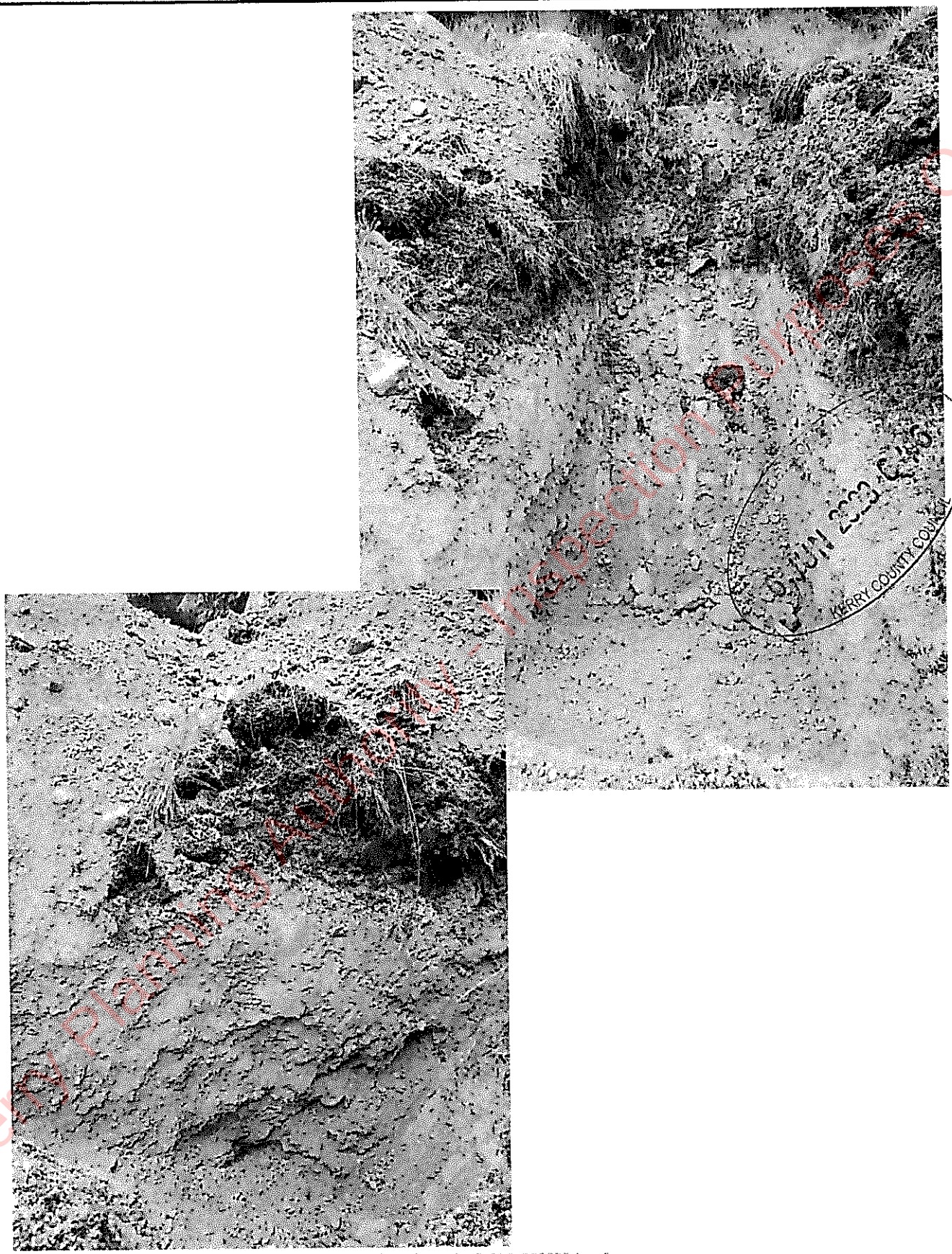
NN = Non-natural ground (fill / made up ground / disturbed natural); N = Natural ground)

Appendix E

Inchamore WF, Co. Cork

SI Trial Pit Photos

Appendix E – IWF Trial Pit and Site Photos
TP002
(File Ref. 3188-A2-008; 603679 App E)

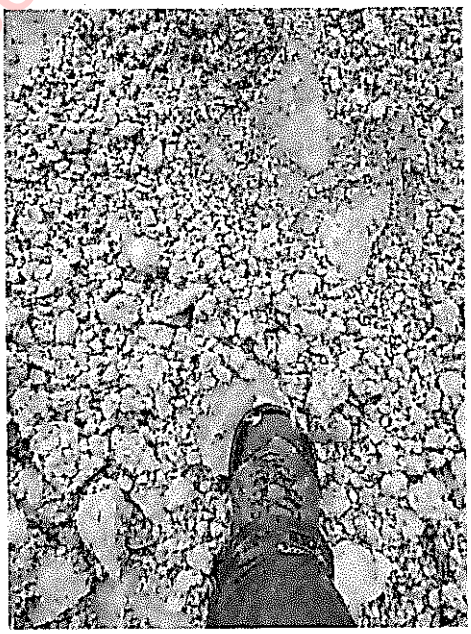


Appendix E – IWF Trial Pit and Site Photos
TP004
(File Ref. 3188-A2-008; 603679 App E)

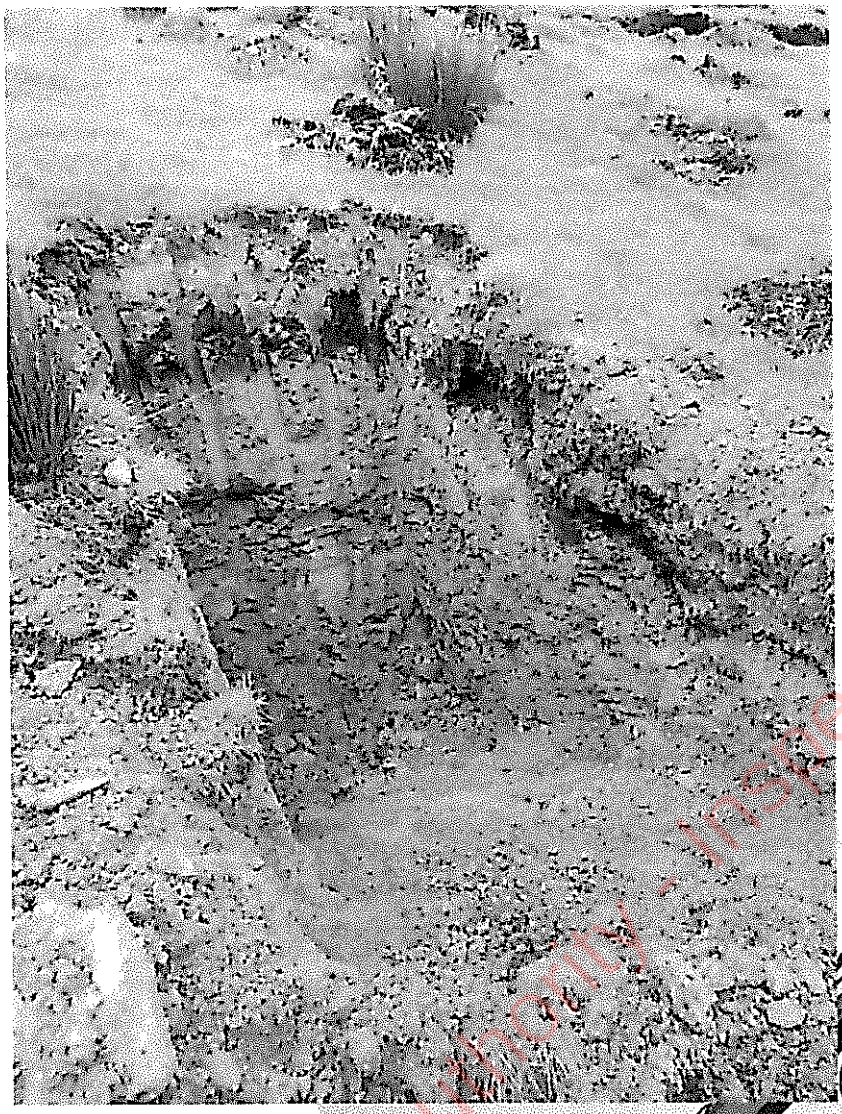
Appendix E – IWF Trial Pit and Site Photos
TP005
(File Ref. 3188-A2-008; 603679 App E)

Appendix E – IWF Trial Pit and Site Photos
TP007
(File Ref. 3188-A2-008; 603679 App E)

Appendix E – IWF Trial Pit and Site Photos
TP008
(File Ref. 3188-A2-008; 603679 App E)



Appendix E – IWF Trial Pit and Site Photos
TP010
(File Ref. 3188-A2-008; 603679 App E)



Appendix E – IWF Trial Pit and Site Photos
TP012
(File Ref. 3188-A2-008; 603679 App E)

Appendix E – IWF Trial Pit and Site Photos
TP016
(File Ref. 3188-A2-008; 603679 App E)

Appendix F

KEY TO SYMBOLS ON EXPLORATORY HOLE RECORDS

All linear dimensions are in metres or millimetres

DESCRIPTIONS

**	Drillers Description
Friable	Easily crumbled

SAMPLES

U( )	Undisturbed 102mm diameter sample, ( ) denotes number of blows to drive sampler
U( )F, U( )P	F- not recovered, P-partially recovered
U38	Undisturbed 38mm diameter sample
P(F), (P)	Piston sample - disturbed
B	Bulk sample - disturbed
D	Jar Sample - disturbed
W	Water Sample
CBR	California Bearing Ratio mould sample
ES	Chemical Sample for Contamination Analysis
SPTLS	Standard Penetration Test S lump sample from split sampler

CORE RECOVERY AND ROCK QUALITY

TCR	Total Core Recovery (% of Core Run)
SCR	Solid Core Recovery (length of core having at least one full diameter as % of core run)
RQD	Rock Quality Designation (length of solid core greater than 100mm as % of core run)

Where there is insufficient space for the TCR, SCR and RQD, the results may be found in the remarks column

If	Fracture Spacing in mm (Minimum/Average/Maximum) NI - non intact, NR - no recovery
AZCL	Assumed Zone of Core Loss
NI	Non intact

GROUNDWATER

▽	Groundwater strike
▼	Groundwater level after standing period
Date/Water	Date of shift (day/month)/Depth to water at end of previous shift shown above the date and depth to water at beginning of shift given below the date

INSITU TESTING

S	Standard Penetration Test - split barrel sampler
C	Standard Penetration Test - solid 60° cone
SW	Self Weight Penetration
Ivp, HVp (R)	In Situ Vane Test, Hand Vane Test (R) demonstrates remoulded strength
K(F), (C), (R), (P)	Permeability Test
HP	Hand Penetrometer Test

MEASURED PROPERTIES

N	Standard Penetration Test - blows required to drive 300mm after seating drive
x/y	Denotes x blows for y mm within the Standard Penetration Test
x*/y	Denotes x blows for y mm within the seating drive
c_u	Undrained Shear Strength (kN/m^2)
CBR	California Bearing Ratio

ROTARY DRILLING SIZES

Index Letter	Nominal Diameter (mm)	
	Borehole	Core
N	75	54
H	99	76
P	120	92
S	146	113

Priority Geotechnical Ltd. Tel: 021 4631600 Fax: 021 4638690 www.prioritygeotechnical.ie	Drilled By: GW Logged By: EK	Borehole No. **BH01I** Sheet 2 of 2

Project Name:	Gortyrahily and Inchamore Wind Farms	**Project No.** P21139	**Co-ords:**		**Hole Type** RC
Location:	Gortyrahily, Co.Cork. Inchamore, Co.Cork		**Level:**	m OD	**Scale** 1:50
Client:	Minerex Environmental		**Dates:**	04/06/2021	04/06/2021

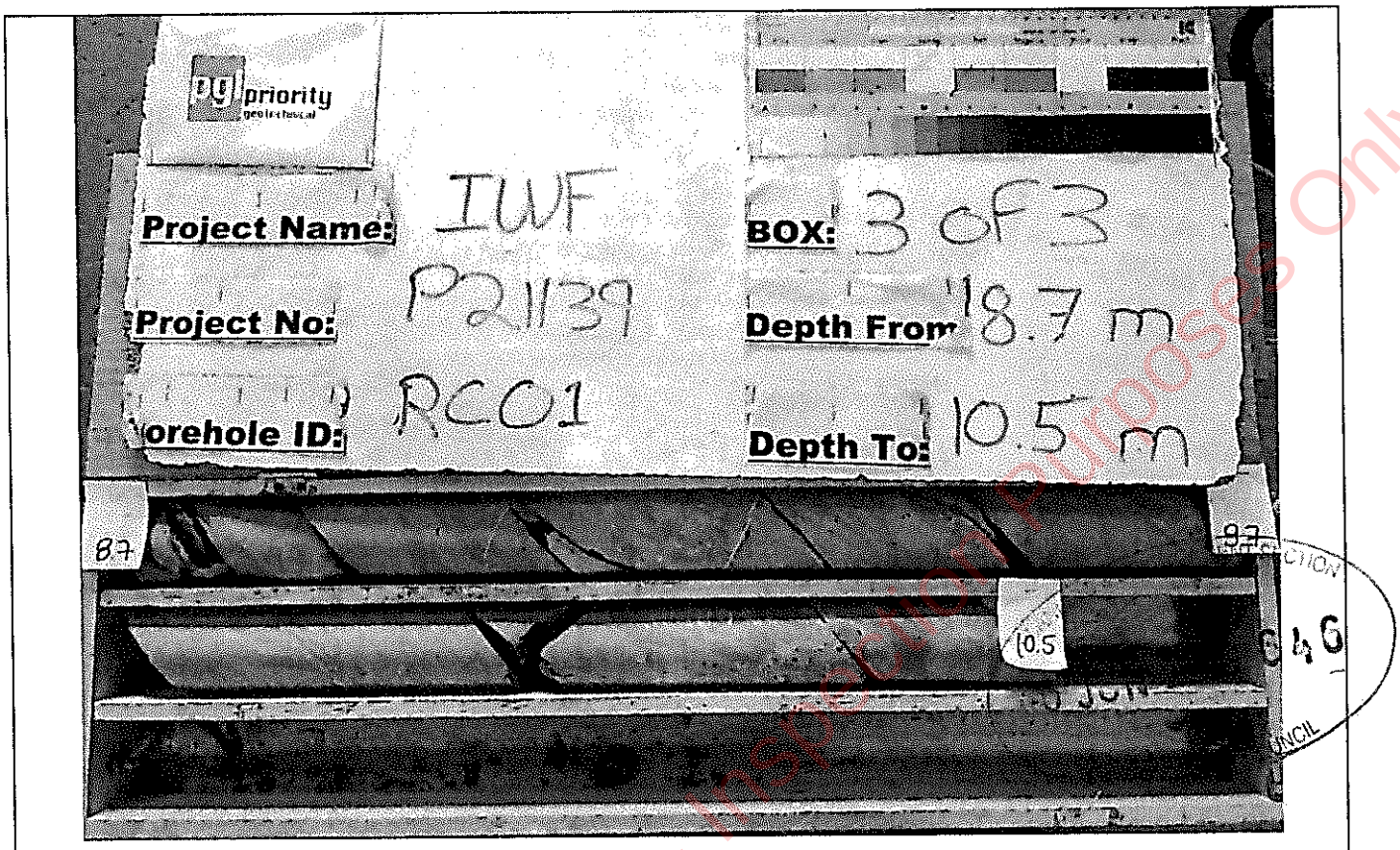
Well	Water Strike (m)	Depth (m)	Type /Fs (min, max, avg)	Coring (%) TCR	SCR	RQD	Depth (m) / FI (/m)	Level (mOD)	Legend	Stratum Description
		8.70 - 9.70	10mm 180mm 150mm	100	76	24	8/m			Lithology: Red moderately weak SILTSTONE. Weathering: Core is showing minor signs of weathering. Sections 2.8m-3.5m and 5.7m-6.4m are highly fragmented. Fractures: One set identified. Set one has a dip of 60-70 degrees, an undulating rough fracture surface and close to medium spacing. Details: No obvious oxidation discolouration marks. Clay smearing present. Quartz veins present measuring between 2mm-20mm in thickness thickest between 3.5m-5.5m End of Borehole at 10.500m
		9.70 - 10.50	60mm 290mm 160mm	100	81	54	3/m 10.50			

Groundwater:					Hole Information:			Equipment:	Soilmec PSM
Struck (m bgl)	Level (m bgl)	After (min)	Sealed	Comment	Hole Depth (m bgl)	Hole Dia (mm)	Casing Dia (mm)	Method:	Compressed air mist.
2.50				See shift data for detail.	10.50	76	131		

Remarks:
Borehole terminated at 10.5m bgl.

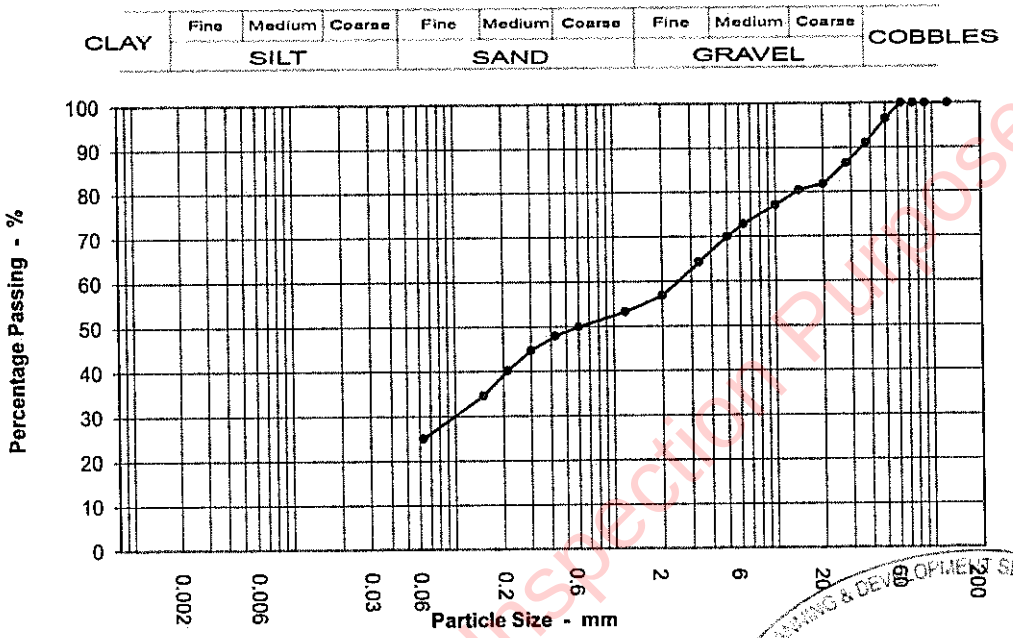
Shift Data:	Groundwater (m bgl)	Shift	Hole Depth (m bgl)	Remarks
	1.85	04/06/2021 08:00	0.00	Start of shift.
		04/06/2021 18:00	10.50	End of borehole.

Photographic Record



Number:	**RC01**	**Project**	Inchamore Wind Farm
		Project No	P21139
		Engineer	Minerex

pg priority geotechnical	**PARTICLE SIZE DISTRIBUTION** **BS 1377 : Part 2 : 1990 : Clause 9**	**Job Ref**	**P21139**
		Borehole / Pit No	TP03A2
Location	**Gortyrahilly and Inchamore W.F**	Sample No	
		Depth	0.00 m
Soil Description	Very clayey very sandy GRAVEL	Sample type	B



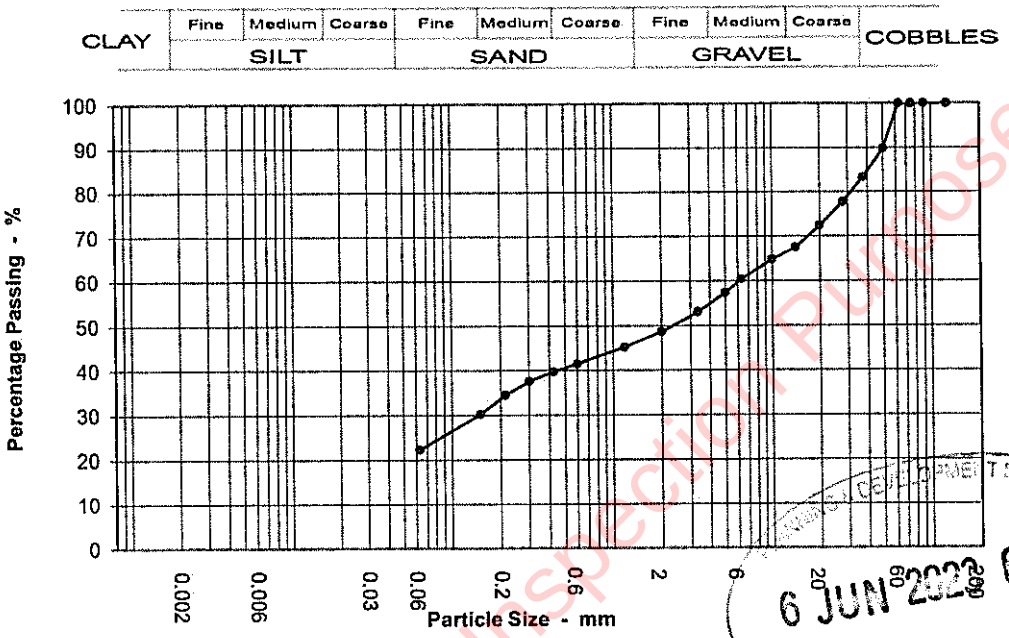
Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	97		
37.5	91		
28	87		
20	82		
14	80		
10	77		
6.3	73		
5	70		
3.35	64		
2	57		
1.18	53		
0.6	50		
0.425	48		
0.3	45		
0.212	40		
0.15	35		
0.063	25		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9
Sedimentation	N/A

Sample Proportions	
Cobbles	0.0
Gravel	43.0
Sand	32.0
Silt & Clay	25.0

Grading Analysis	
D100	63.00
D60	2.49
D10	
Uniformity Coefficient	

pg priority geotechnical	**PARTICLE SIZE DISTRIBUTION** **BS 1377 : Part 2 : 1990 : Clause 9**	**Job Ref**	**P21139**
		Borehole / Pit No	TP11A2
Location	**Gortyrahilly and Inchamore W.F**	Sample No	
		Depth	0.00 m
Soil Description	Very clayey very sandy GRAVEL	Sample type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	90		
37.5	83		
28	78		
20	72		
14	67		
10	65		
6.3	60		
5	57		
3.35	53		
2	49		
1.18	45		
0.6	41		
0.425	40		
0.3	38		
0.212	34		
0.15	30		
0.063	22		

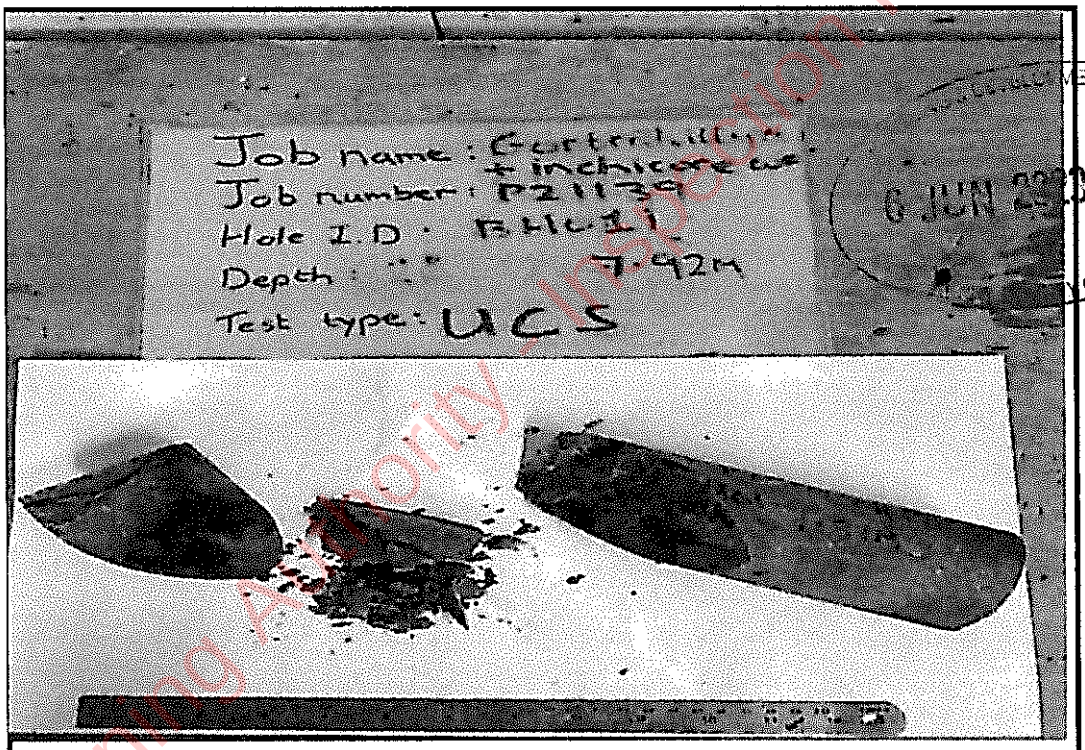
Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	0.0
Gravel	51.0
Sand	26.0
Silt & Clay	22.0

Grading Analysis	
D100	63.00
D60	6.08
D10	
Uniformity Coefficient	

Unconfined Compressive Strength, UCS

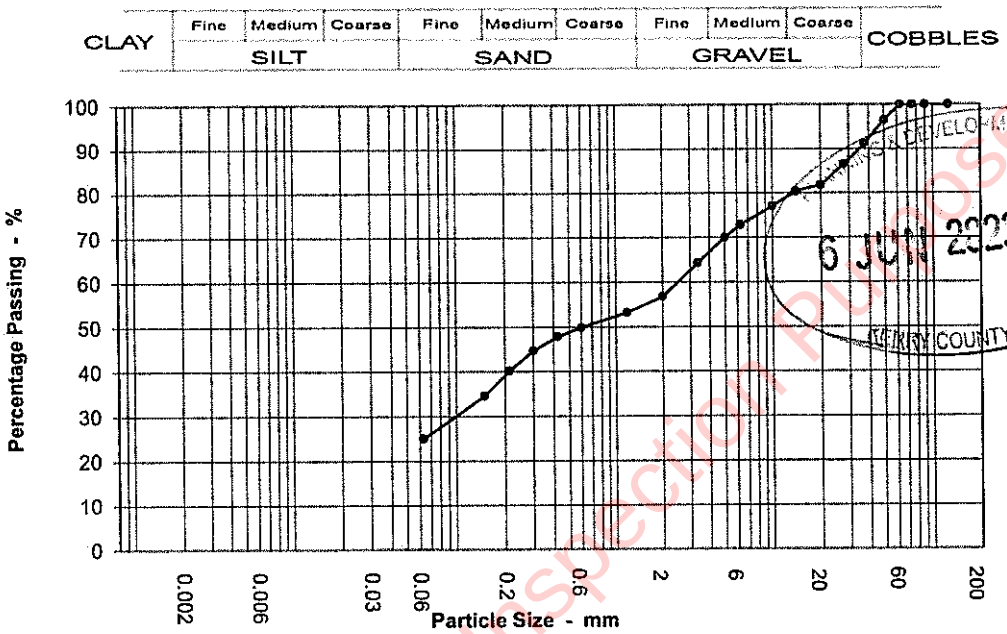
Job Name	Inchamore W.F
Job Number	P21139
Borehole:	BH01I
Depth:	7.92 m
Rock Type	PURPLE SILTSTONE
Bulk Density	2.73 Mg/m^3
Load at Failure, P	23.3 kN
Stress at Failure	5.17 MPa



Failure mode

Appendix G

pg priority geotechnical	**PARTICLE SIZE DISTRIBUTION** **BS 1377 : Part 2 : 1990 : Clause 9**	**Job Ref**	**P21139**
		Borehole / Pit No	TP03A2
Location	**Gortyrahilly and Inchamore W.F**	Sample No	
		Depth	0.00 m
Soil Description	Very clayey very sandy GRAVEL	Sample type	B



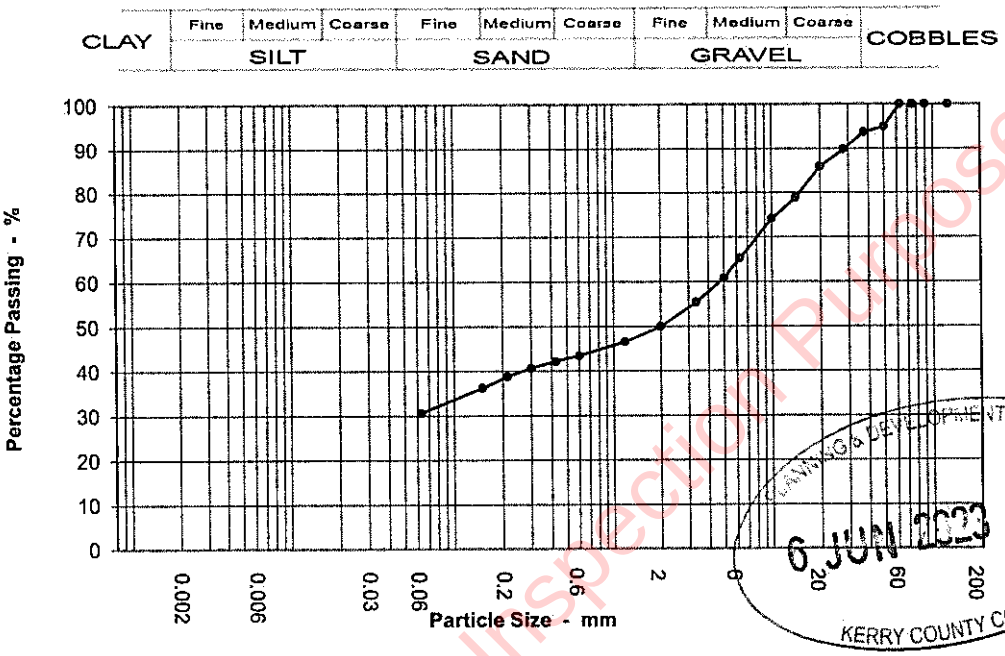
Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	97		
37.5	91		
28	87		
20	82		
14	80		
10	77		
6.3	73		
5	70		
3.35	64		
2	57		
1.18	53		
0.6	50		
0.425	48		
0.3	45		
0.212	40		
0.15	35		
0.063	25		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	0.0
Gravel	43.0
Sand	32.0
Silt & Clay	25.0

Grading Analysis	
D100	63.00
D60	2.49
D10	
Uniformity Coefficient	

priority geotechnical	**PARTICLE SIZE DISTRIBUTION** **BS 1377 : Part 2 : 1990 : Clause 9**	**Job Ref**	**P21139**
		Borehole / Pit No	TP08A2
Location	**Gortyrahilly and Inchamore W.F**	Sample No	
		Depth	0.00 m
Soil Description	Slightly sandy gravelly CLAY	Sample type	B



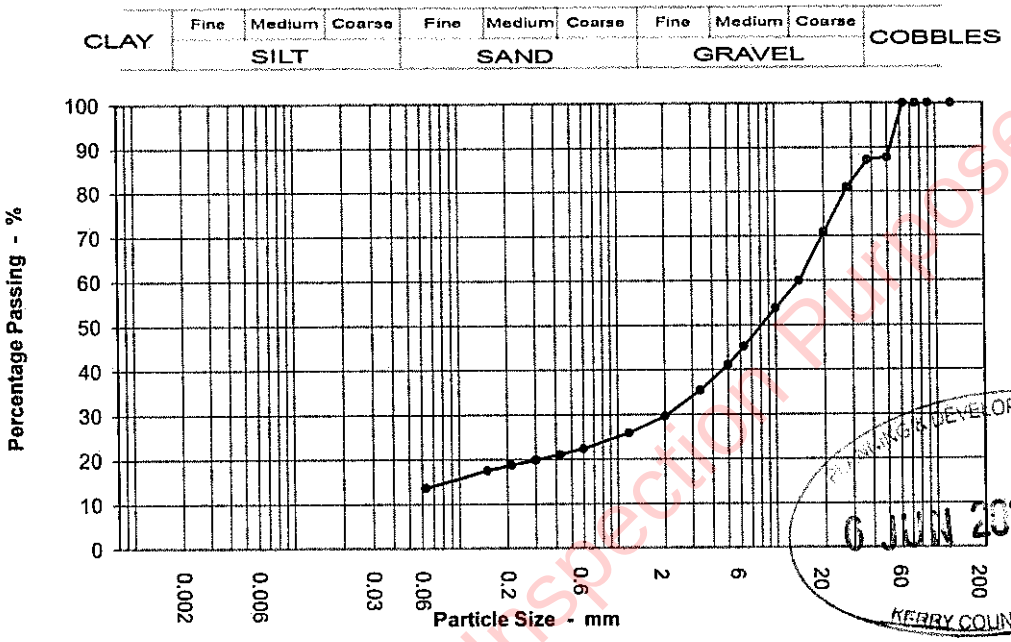
Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	95		
37.5	94		
28	90		
20	86		
14	79		
10	74		
6.3	65		
5	61		
3.35	55		
2	50		
1.18	47		
0.6	43		
0.425	42		
0.3	41		
0.212	39		
0.15	36		
0.063	31		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	0.0
Gravel	50.0
Sand	19.0
Silt & Clay	31.0

Grading Analysis	
D100	63.00
D60	4.68
D10	
Uniformity Coefficient	

pg priority geotechnical	PARTICLE SIZE DISTRIBUTION BS 1377 : Part 2 : 1990 : Clause 9	Job Ref	P21139
		Borehole / Pit No	TP13A1
Location	Gortyrahilly and Inchamore W.F	Sample No	
		Depth	0.00 m
Soil Description	Clayey sandy GRAVEL	Sample type	B



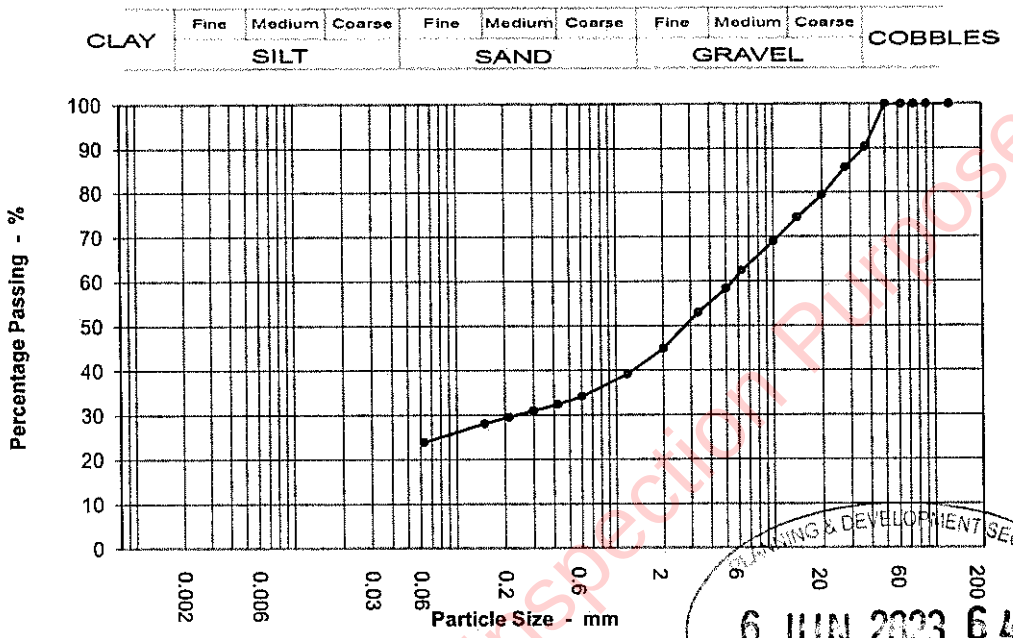
Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	88		
37.5	87		
28	81		
20	71		
14	60		
10	54		
6.3	45		
5	41		
3.35	35		
2	30		
1.18	26		
0.6	22		
0.425	21		
0.3	20		
0.212	19		
0.15	18		
0.063	14		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	0.0
Gravel	70.0
Sand	16.0
Silt & Clay	14.0

Grading Analysis	
D100	63.00
D60	14.00
D10	
Uniformity Coefficient	

pg priority geotechnical	**PARTICLE SIZE DISTRIBUTION** **BS 1377 : Part 2 : 1990 : Clause 9**	**Job Ref**	**P21139**
		Borehole / Pit No	TP30A1
Location	**Gortyrahilly and Inchamore W.F**	Sample No	
		Depth	0.00 m
Soil Description	Very clayey very sandy GRAVEL	Sample type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	90		
28	86		
20	79		
14	74		
10	69		
6.3	62		
5	58		
3.35	53		
2	45		
1.18	39		
0.6	34		
0.425	32		
0.3	31		
0.212	30		
0.15	28		
0.063	24		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause 9.3
Sedimentation	N/A

Sample Proportions	
Cobbles	0.0
Gravel	55.0
Sand	21.0
Silt & Clay	24.0

Grading Analysis	
D100	50.00
D60	5.51
D10	
Uniformity Coefficient	

Appendix H