Scottish & Southern Electricity Networks

TRANSMISSION

Annex P - Peat Slide Risk Assessment (PSRA)

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ARCUS
An ERM Group Company

CROSSAIG SUBSTATION
ENVIRONMENTAL APPRAISAL

PEAT LANDSLIDE HAZARD AND RISK ASSESSMENT

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1 INTRODUCTION

1.1 Background

Arcus Consultancy Services Ltd (Arcus) was commissioned by SSEN Ltd (the Applicant) to carry out a Peat Landslide Hazard and Risk Assessment (PLHRA) for the proposed Crossaig Substation, Temporary Works Area (TWA), Sustainable Urban Drainage System (SUDS) attenuation pond and permanent access tracks (the Development) as part of the Argyll and Kintyre 275 kV Substations Upgrade located approximately 18 kilometres (km) south of Tarbert and 12 km north of Carradale on the eastern coast of the Kintyre peninsula (the Site).

The Development will be subject to Town and Country Planning, while the OHL Tie-In, temporary Diversion Towers and Temporary Works Area (hereby known as the Associated Development) will be submitted for Section 37 consent. The Site Layout Plan is shown on **Figure 1** in **Appendix A**.

It should be noted that the Project's construction schedules will be aligned. Therefore, peat excavation and re-use will be considered within the wider scope of the Project.

This PLHRA has been prepared to inform Argyll & Bute Council (ABC) and statutory consultees of the prevalence of peat across the Proposed Development and Associated Development as well as highlighting any potential risk of peat slide.

This PLHRA has been undertaken to Scottish Government Guidance 'Proposed electricity generation developments: peat landslide hazard best practice guide'[1].

The PLHRA is accompanied by the following appendices:

- Appendix A: Figures;
- Appendix B: Site Photographs;
- Appendix C: Hazard Rank Calculations, and;
- Appendix D: Peat Coring Records.

1.2 The Development

The Development will consist of the following key infrastructure:

- Substation (approx. 184 m x 129 m) ;
- Two Pylon Towers at least 43 m in height to make the connection into and out of the proposed substation;
- Four temporary Diversion Towers to divert the electricity transmission from the existing substation during construction phase of the Development;
- Temporary Work Area (approx 300 m x 120 m);
- A Sustainable Urban Drainage System (SUDS) Attenuation Pond (approximately 80 m x 30 m);
- Permanent access track, approximately 660 m in length to the new access track between the existing Crossaig substation and the proposed Crossaig North substations and for access to the SuDS pond; and
- An extension to the south of the substation platform at the existing Crossaig substation of (approx 17.5m x 30m) to support electrical equipment and associated access.

The Site Layout is shown on **Figure 1** in **Appendix A**.

[1] Scottish Government (2017) Proposed electricity generation developments: peat landslide hazard best practice guide Proposed electricity generation developments: peat landslide hazard best practice guide - gov.scot (www.gov.scot) (Accessed 02/08/2022)

1.3 Scope and Purpose

The scope of this PLHRA is to:

- Review available desk-based information on the Site;
- Undertake a site walkover survey and peat probe surveys to characterise the prevailing ground conditions and identify existing or potential peat instability;
- Report on the findings of the survey and assess the potential instability risk and estimate the hazard from any potential peat slide; and
- Recommend mitigation measures and specific construction methodologies that should be considered during the construction period, if required.

This PLHRA provides factual information on the peat survey results relating to the proposed infrastructure locations. The desk-based information and site surveys have been utilised to assess the potential risk of any peat slide. The methodology adopted, and details on the assessment, are outlined in **Sections 3, 4 and 5** of this PLHRA. The assessment has been undertaken in accordance with Scottish Government Guidance in assessing the likelihood, and consequence, of peat slide[2].

1.4 Project Team

Team Member	Job Title	Qualifications	No. Years Experience
Gregor Hirst	Senior Engineer	BSc (Hons)	6 Years
David Ballentyne	Principal Engineer	BSc (Hons)	18 Years
Tomos Ap Tomos	Technical Director	BEng (Hons) MCIHT	25 Years

This assessment was undertaken by Gregor Hirst (BSc Hons), a Geo-Environmental Engineer of 6 years, and was supported by David Ballentyne a Geo-Environmental Civil Engineer with for over 18 years of experience in ground condition assessment. This Chapter has been technically reviewed by Tomos Ap Tomos, Technical Director of Engineering.

[2] Scottish Government (2017): Peat Landslide Hazard and Risk Assessments: Best Practice Guide for Proposed Electricity Generation Developments; Second Edition, April 2017 [Online]. Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2017/04/peat-landslide-hazard-risk-assessments-best-practice-guide-proposed-electricity/documents/00517176-pdf/00517176-pdf/govscot%3Adocument/00517176.pdf (Accessed 02/08/2022)

2 SITE INFORMATION AND DESK STUDY

2.1 Site Description and Topography

The land within the site boundary (the Site) which contains the Development is located approximately 18 kilometres (km) south of Tarbert, covering an area of approximately 80 hectares (ha) centred on National Grid Reference (NGR) 182545, 650307. The Site is located within the administrative boundary of Argyll & Bute Council (the Council). The Site is adjacent to the existing Crossaig Substation which connects to the B842 from the east.
.

The topography of the Site and immediate vicinity is gently undulating throughout. The elevation of the Site ranges from around 80 metres (m) Above Ordnance Survey Datum (AOD) to around 96 m AOD in the area of the proposed substation.

There are a number of unnamed surface water features, mainly in the form of drainage channels associated with the forestry plantation, however no watercourses are recorded other than Allt na Buaile Salaich, which runs along the south western Project boundary and is the receptor for the proposed SUDS outfall.

The predominant land use within the Site consists of commercial forestry plantation.

2.2 Site Walkover

The purpose of the desk study and site visit was to gain a thorough understanding of site conditions including topography, geology, existing peat instability and hydrology. The outcome of this stage of the study was to determine which areas required detailed intrusive survey (by peat probing) and ultimately provide data for the assessment of PLHRA.

A site walkover was undertaken in November 2021 prior to the commencement of the peat probing exercise. The Site was examined for evidence of peatlands, presence of landslip and localised hagging. Geological mapping and areas of interest were pre-loaded to a handheld device for reference during the site walkover. Following a review of these in parallel with the initial site walkover, the desk study aimed to identify and or verify the following:

- The general condition of peat deposits;
- Evidence of any previous peat instability;
- The presence of low lying wet/peat lands; and
- Watercourses and potential other receptors.

2.2.1 Site Conditions

The entirety of the Site is utilised for forestry plantations, other than the area of the proposed temporary works area, adjacent to the south of the existing Crossaig substation. This area contains a mixture of upfilled land that has been engineered to act as a working platform with an access track running through it, while the remainder of the area has been subject to felling and currently comprises open hummocky ground. Within the plantation area there are a number of forestry rides and clearings which were noted to contain sphagnums and high groundwater levels, resulting in areas of soft ground.

Extensive felling has recently been undertaken in the area north and east of the proposed substation, associated with the ongoing infrastructure works in the area.

Neither mining or quarry activities are known to have taken place at the Site.

Site photographs taken during the site walkover are included in **Appendix B**.

2.3 Published Geology

2.3.1 Superficial Soils

Available British Geological Survey (BGS)[3] indicates an absence of superficial deposits across the majority of the Site. The exception being the presence of glacial deposits in the form of Devensian Till which are recorded at the northern extent of the Site.

Figure 2 illustrates the 'Superficial Soils' map included in **Appendix A**.

2.3.2 Solid Geology

Published bedrock geology mapping information on solid geology indicates the entirety of the Site to be underlain by Gritty Psammite and Pelite of the Beinn Bheula Schist Formation.

No geological faults or linear features are present at the Site or in the surrounding area.

Figure 3 illustrates the 'Solid Geology' included in **Appendix A**.

2.4 Hydrology and Hydrogeology

The Site is characterised by its generally low-gradient topography, but the area surrounding the Site has a more variable landscape in terms of topography. The Site lies within the Kintyre Coastal catchment that is mainly drained by a river, the Crossaig Water.

Crossaig Water passes to the north of the Site and flows in an eastern direction. This watercourse has a Scottish Environment Protection Agency (SEPA) overall classification[4] of 'Good'. There are several smaller watercourses located on the Site that drain either directly to the Firth of Clyde, or into Crossaig Water.

Initial desk-based review indicated the Site is likely to be partially underlain by peat with significant quantities of pockets of deep peat in isolated areas.

The SEPA Aquifer Classification Map of Scotland[5] reveals that the Site is situated within an area underlain by a low productivity aquifer where flow is virtually all through fractures and other discontinuities.

The SEPA River Basin Management Plan Interactive Map reveals that the Site is underlain by the Oban and Kintyre groundwater body. This groundwater body is classified by SEPA under the Water Framework Directive[6] as having a status of Good.

Figure 4 illustrates the Geomorphology of the Site and is included in **Appendix A.**

2.5 Historical Landslip and Geomorphology

No evidence of historic landslip or peat hagging was noted during the Site walkover and topsoil, where undisturbed, generally appeared to be in good condition. Due to the presence of extensive forestry plantations at the Site; it is considered that properties of the peat deposits may have been altered and may not pose the same risk of instability as undisturbed peat. Nonetheless, the possibility of instability within peat soils cannot be discounted, especially where there are significant topographic variances and the presence of watercourses.

[3] British Geological Survey (2019) Geology of Britain [Online] Available at: http://mapapps.bgs.ac.uk/geologyofbritain/home.html (Accessed 03/08/2022)

[4] SEPA Water Classification Hub (2020) [Online] Available at: Water Classification Hub (sepa.org.uk) (Accessed 03/08/2022)

[5] Scotland's Environment (2019) SEPA Aquifer Classification Map of Scotland [Online] Available at: https://map.environment.gov.scot/sewebmap/ (Accessed 03/08/2022)

[6] European Parliament (2000) Directive 2000/60/EC [Online] Available at: https://eur-lex.europa.eu/resource.html?uri=cellar:5c835afb-2ec6-4577-bdf8-756d3d694eeb.0004.02/DOC_1&format=PDF (Accessed 03/08/22)

3 SITE SURVEYS AND RESULTS

3.1 Investigations

The existing peat depths across the Site have been determined through a multi-phased peat probe survey undertaken as recommended in the NatureScot (formally Scottish Natural Heritage), Scottish Government and James Hutton Institute guidance for investigating peat[7].

The probe positions for the survey were determined by the proposed layout of the Development and provided detailed information across the various proposed infrastructure at frequencies as follows:

- Substation – 10 m x 10 m grid to the extent of the proposed footprint;
- Pylon Locations – 10 m x 10 m grid to an area of 50 m^2;
- Temporary Works Area – 25 m x 25 m grid; and
- Tracks – Every 50 m along the centreline with perpendicular offsets, 15-25 m either side.

It should be acknowledged that natural variations in peat depth/thickness could occur between probe positions, although areas of infrastructure had undergone intensely spaced probing and this would be less likely.

3.2 Summary of Peat Depths

Throughout the peat survey, a total of 714 probes were progressed. The average peat depth across the Site is 0.40 m with greater than 77% of probes recording peat depths of 0.5 m or less and 91% recording depths of 1.0 m or less. Thick peat (where the depth was greater than >1.0 m) was recorded at 9% of locations. The majority of thick peat was recorded at depths between 1.0 m – 2.0 m with only 1.3% of all probes recording depths in excess of 2.0 m.

The maximum peat depth recorded at the Site was 3.2 m within a clearing between trees not utilised within the commercial plantation. Topographically the area is relatively flat and surface vegetation in the form of sphagnum and high groundwater levels were recorded. The area is located between the proposed substation and the first proposed pylon location to the north of the proposed substation, therefore there is no proposed infrastructure in this area.

Table 1 summarises the recorded peat depths.

Table 1: Peat Depth Summary

Peat Depth Range (m)	№ of Peat Probes	Percentage of Total
0.00 - 0.50	551	77.17
0.51 - 1.00	99	13.87
1.01 - 1.50	39	5.46
1.51 - 2.00	16	2.24
2.01 - 2.50	5	<1.0
2.51 - 3.00	3	<1.0
3.01 - 3.50	1	<1.0
∑ =	714	

[7] Scottish Government, Scottish Natural Heritage, SEPA (2017) Peatland Survey. Guidance on Developments on Peatland, on-line version only. Available at: Guidance+on+developments+on+peatland+-+peatland+survey+-+2017.pdf (www.gov.scot) Accessed (03/08/2022)

The peat probe locations and depths are shown on **Figure 5** appended with this PLHRA, and details of probe records are included in **Appendix C**.

The Interpolated Peat Depths are illustrated on **Figure 6**.

4 GUIDANCE AND METHODOLOGY

4.1 Overview of Guidance and Peat Failure Mechanisms

4.1.1 Peat Depth and Slope

The Scottish Government guidance divides peat instability into two categories: 'peat slides' and 'bog bursts'. The guidance states that peat slides have a greater risk of occurrence in areas where:

- Peat is encountered at or near to ground surface level;
- The thicknesses are recorded in the region of 2.0 m (above which, in general terms, peat instability would increase with peat thickness); and
- The slope gradients are steep (between 5° and 15°).

Bog bursts are considered to have a greater risk of occurrence in areas where:

- Peat depth is greater than 1.5 m; and
- Slope gradients are shallow (between 2° and 10°).

It should be noted however that peat instability events, although uncommon, can occur out with these limits. Reports of bog bursts are generally restricted to the Republic and Northern Ireland.

Further to the general guidance above, in relation to peat depth, it is considered that the extent and depth of peat is controlled to a degree by rainfall and elevation, giving rise to three common types of peat (Boylan et al. 2008[8]):

- Upland Blanket Bog: Blanket bogs are typically about 3 m thick however, they can be up to 5 m thick. Generally thinning at greater elevations;
- Raised Bog: Raised bogs generally tend to be 3-12 m thick, averaging 7 m with their growth occurring above the water table; and
- Lowland Blanket Bog: Much the same as the upland version; however, they form around sea level in areas of very high rainfall.

Generally, the potential for peat instability increases with peat depth, however other instability indicators need to be considered, namely slope and substrate.

4.1.2 Substrate

Peat slide failures tend to occur at the interface of the peat and underlying substrate therefore, understanding the nature of the underlying substrate can provide a key factor when considering the risk stability.

Using the peat probe refusal, an estimation of the underlying materials can be determined based on:

- Gradual refusal – Clay;
- Crunching/Gritty – Weathered Rock/Sand and Gravel; or
- Abrupt Refusal/Hard – Rock.

Where sand and/or gravel is recorded, the interface is considered to be the best-case scenario with the highest friction value.

Where clay is recorded, the upper horizons of the clay are typically softened through poor drainage in this soil group with low shear strengths expected. While rock substrate provides a high strength, the surface being smooth can lead to a weak interface, with similar risk to that of a clay substrate.

[8] Boylan et al (2008) Peat Slope Failure in Ireland

The presence of slip material, or evidence of peat instability would represent the worst-case scenario for the assessment of substrate.

The substrate parameters are included in the Hazard and Exposure Assessment in **Section 5** of this PLHRA.

4.1.3 Other Considerations

Preparatory factors which effect the stability of peat slopes in the short to medium-term include:

- Loss of surface vegetation (deforestation);
- Changes in sub-surface hydrology;
- Increase in the mass of peat through accumulation, increase in water content and growth of tree planting; or
- Reduction in shear strength of peat or substrate due to chemical or physical weathering, progressive creep and tension cracking.

Triggering factors which can have immediate effect on peat stability and act on susceptible slopes include:

- Intensive rainfall or snow melt causing pressures along existing or potential peat/substrate interfaces;
- Snow melt;
- Alterations to drainage patterns, both surface and sub-surface;
- Peat extraction at the toe of the slope reducing the support of the upslope material;
- Peat loading (commonly due to stockpiling) causing an increase in shear stress; and
- Earthquakes or rapid ground accelerations such as due to blasting or mechanical movement.

Consideration of peat stability should form an integral part of the design and construction of infrastructure in peatland areas. While peat does not wholly provide a development constraint, areas of deep peat or peat deposits on steep slopes should be either avoided through design and micro-siting; or mitigation measures should be designed to avoid instability and movement.

4.2 Methodology

Despite being an application under the Town and Country Planning (Scotland) Act 1997[9], the PLHRA has been carried out in accordance with the Energy Consents Unit, Scottish Government guidance of 2017 titled Peat Landslide Hazard and Risk Assessments - Best Practice Guide for Proposed Electricity Generation Developments[10].

In June 2014, Scottish Planning Policy[11] (SPP) and National Planning Framework (NPF3)[12] were published. In relation to peat and the assessment of effects on resource, NPF3 references SNH Scotland's National Peatland Plan[13]. These policy, framework and guidance documents are considered in this PLHRA. The PLHRA undertaken is based on:

- Desk based assessment;
- Site Walkover;

[9] Scottish Government (1997) Town and Country Planning (Scotland) Act 1997 [Online] Available at: http://www.legislation.gov.uk/ukpga/1997/8/contents (Accessed 20/08/22)

[10] Scottish Government (2017) Peat Landslide Hazard and Risk Assessment: Best Practice Guide for Proposed Electricity Generation Development [Online] Available at: https://www.gov.scot/Publications/2017/04/8868 (Accessed 20/08/22)

[11] Scottish Government (2014) Scottish Planning Policy [Online] Available at: http://www.scotland.gov.uk/Topics/Built-Environment/planning/Policy (Accessed 20/08/22)

[12] Scottish Government (2014) National Planning Framework 3 [Online] Available at: http://scotland.gov.uk/Resource/0045/00453683.pdf (Accessed 20/08/22)

[13] SNH (2015) Scotland's National Peatland Plan [Online] Available at: https://www.nature.scot/climate-change/taking-action/carbon-management/restoring-scotlands-peatlands/scotlands-national-peatland-plan (Accessed 20/08/22)

- Infrastructure specific probing; and
- A hazard and risk ranking assessment.

The area of the Site subject to assessment was determined by the proposed development layout which considered both anticipated peat deposits as well as other physical and environmental constraints.

4.2.1 Development of Hazard Rank

The early stages of the PLHRA including the desk study, site visit and peat probing were carried out in parallel with the assessment of wider constraints to inform the layout of the Development. Following identification of peat depths within the Site, the assessment has determined the potential effects on the peat resource from construction activities which would include:

- Construction of tracks;
- Foundation construction;
- Construction of hardstanding; and
- Temporary storage of peat and soils.

An assessment of the peat probing data and a review against desk study information was undertaken and a hazard rank was calculated for different zones across the site reflecting risk of peat instability/constraint to construction.

Where practical, the Development design would be progressed to avoid areas of a risk score above 'low'. Where this has would not be achievable, areas affected would be discussed in both the EIA as having significant effect, with relative mitigation measures proposed to reduce this, and recorded on a risk register which sets out specific mitigation measures which are considered necessary to reduce the risk of inducing instability.

Details of the hazard and risk ranking assessment is included in **Sections 5 and 6** of this PLHRA.

5 HAZARD AND EXPOSURE ASSESSMENT

5.1 Background

A 'Hazard Ranking' system has been applied across the Site based on the analysis of risk of peat slide as outlined in the Scottish Government guidance. This is applied on the principle:

Hazard Ranking = Hazard x Exposure

Where 'Hazard' represents the likelihood of any peat slide event occurring and 'Exposure' being the impact or consequences that a peat slide may have on sensitive receptors that exist on and around the Site.

5.2 Methodology

The determination of Hazard and Exposure values is based on a number of variables which impact the likelihood of a peat slide (the Hazard), and the relative importance of these variables specific to the Site.

Similarly, the consequences or Exposure to receptors is dependent on variables including the particular scale of a peat slide, the distance it will travel and the sensitivity of the receptor.

In the absence of a predefined system, the approach to determining and categorising Hazard and Exposure is determined on a Site by Site basis. The particular system adopted for the Development PLHRA assessment is outlined in the following sub sections.

5.3 Hazard Assessment

The potential for a peat slide to occur during construction depends on several factors, the importance of which can vary from Site to Site. The factors requiring considerations would typically include:

- Peat depth;
- Slope gradient;
- Substrate material;
- Evidence of instability or potential instability;
- Vegetation cover; and
- Hydrology.

Of these, peat depth and slope gradient are considered to be principal factors. Without a sufficient peat depth and a prevailing slope, peat slide hazard would be negligible.

The Slope Gradient has been established using a Digital Terrain Model (DTM) to a resolution of 5 m, which is illustrated on **Figure 7**. For the Development and Associated Development, the substrate material is also considered a relevant factor in relation to slide.

Vegetation cover and evidence of instability or potential instability were assessed during site surveys and, alongside satellite photography, informed the Geomorphology Map presented in **Figure 4**. This information was also considered during the adoption of hazard zones across the Site, which are presented in **Figure 9: Hazard Rank Zonation Plan.**

Due to the nature of the assessment and number of data points used to establish hazard ranking, gathering hydrological data at each probe point through the use of groundwater boreholes and a subsequent monitoring period is considered impractical. Therefore, an assumption on groundwater levels has been adopted for the assessment that 90% of the

peat at each probe location is below the water table. As such, it is assumed that the water table across the Site is relatively high.

5.4 Hazard Rating

When several factors may impact on the Hazard potential, a relative ranking process is applied attributing different weighting to each factor as shown below.

Table 2: Coefficients for Slope Gradients

Slope Angle (degrees)	Slope Angle Coefficients
Slope < 2°	1
2° < Slope < 4°	2
4° < Slope < 8°	4
8° < Slope < 15°	6
Slope >15°	8

Table 3: Coefficients for Peat Thickness and ground conditions

Peat Thickness	Ground Conditions Coefficients
Peaty or organic soil (<0.5 m)	1
Thin Peat (0.5 – 1.0 m)	2
Deep Peat (>1.0 m)	3*
Deep Peat (>3.0 m)	8

* - Note that thicker peat generally occurs in areas of shallow gradient and records and research indicate that thick peat does not generally occur on the steeper gradients.

Table 4: Coefficients for Substrate

Substrate Material	Substrate Coefficients
Sand/gravel	1
Rock	1.5
Clay	2
Not proven	2
Slip material (Existing materials)	5

The Hazard Rating Coefficient for a particular location is calculated using the following equation:

Hazard Rating Coefficient = Slope Gradient x Peat Thickness x Substrate

From the Hazard Rating Coefficient, the risk to stability can be ranked as set out in **Table 5**.

Table 5: Hazard Rating

Hazard Rating Co-efficient	Potential Stability Risk (Pre-Mitigation)
<5	Negligible
5 to 15	Low
16 to 30	Medium
31 to 50	High

> 50	Very High

5.5 Peat Stability Assessment

The likelihood of a particular slope or hillside failing can be expressed as a Factor of Safety. For any potential failure surface, there is a balance between the weight of the potential landslide (driving force or shear force) and the inherent strength of the soil or rock within the hillside (shear resistance).

The guidance states that the 'Infinite Slope' method of analysis, after Skempton and DeLory (1957), is the most well established and commonly applied method for the assessment of peat slope stability. The stability of a slope can be assessed by calculating the factor of safety F, which is the ratio of the sum of resisting forces (shear strength) and the sum of the destabilising forces (shear stress):

$$F = \frac{c' + (\gamma - m\gamma_w) z \cos^2 \beta \tan \phi'}{\gamma z \sin \beta \cos \beta}$$

Where *c'* is the effective cohesion, *γ* is the bulk unit weight of saturated peat, γ_w is the unit weight of water, *m* is the height of the water table as a fraction of the peat depth, *z* is the peat depth in the direction of normal stress, *β* is the angle of the slope to the horizontal and ϕ' is the effective angle of internal friction. Values of F < 1 indicate a slope would have undergone failure under the conditions modelled; values of F > 1 suggest conditions of stability.

Assumed geotechnical parameters have been utilised in the formula to inform the stability assessment, based on literature values to inform the stability analysis, as included in **Table 6**.

Table 6: Literature for Geotechnical Parameters of Peat

Reference	Effective Cohesion C' (kPa)	Effective Angle of Friction ϕ (°)	Unit Weight Y' (kN/m2)	Comments
Hanrahan et al (1967)[14]	5.5 – 6.1	36.6 - 43.5	-	Remoulded H4 Sphagnum peat
Hollingshead and Raymond (1972)[15]	4.0	34	-	-
Hollingshead and Raymond (1972)	2.4 – 4.7	27.1 – 35.4	-	Sphagnum peat (H3, mainly fibrous)
Carling (1986)[16]	6.52	0	10	-
Kirk (2001)[17]	2.7 – 8.2	26.1 – 30.4		Ombrotrophic blanket peat

[14] Hanrahan et al (1967) - Hanrahan, E.T., Dunne, J.M., and Sodha, V.G. 1967. Shear strength of peat. Proceedings Geotechnical Conference, Oslo, Vol. 1, pp. 193–198.

[15] Hollingshead and Raymond (1972) - Hollingshead, G.W., and Raymond, G.P. 1972. Field loading tests on Muskeg, Canadian Geotechnical Journal, 9(3): 278–289.

[16] Carling (1986) - Peat slides in Teesdale and Weardale, northern pennines, july 1983: Description and failure mechanisms

[17] Kirk (2001) - Initiation of a multiple peat slide on Cuilcagh Mountain, Northern Ireland

Warburton et al (2003)[18]	5.0	23	9.68	Basal Peat
Warburton et al (2003)	8.74	21.6	9.68	Fibrous Peat
Dykes and Kirk (2006)	3.2	30.4	9.61	Acrotelm
Dykes and Kirk (2006)	4.0	28.8	9.71	Catotelm

C' – effective cohesion (kPa), typically ranging from 2.5 to 8.5 therefore 5.0 has been adopted for the purposes of the assessment.

ϕ – effective angle of friction (°), typically ranging from 21.6 to 43.5 therefore 29.6 has been adopted for the purposes of the assessment.

Ɣ – unit weight (kN/m2), typically ranging from 9.61 to 10, therefore 10 has been adopted for the purposes of the assessment.

In accordance with the best practice method, F values of <1.0 indicate slopes that would experience failure under the modelled conditions and as such are considered areas of high risk. However, Boylan et al (2008) indicate that a relatively high value of F=1.4 should be used to identify slopes with the potential for instability. Adopting this approach, high risk areas area indicated where F is <1.0, medium risk areas are indicated as 1.01 to 1.50 and >1.5 are low risk.

Using digital terrain modelling and GPS co-ordinates of each peat probe, a factor of Safety, F has been calculated for each probe locations which has been interpolated through ArcGIS Spatial Analyst tools. The Factor of Safety Assessment provides a sense check of the ranking based system, providing an absolute approach to the 'Factor of Safety Plan' is shown on **Figure 8**.

The results of the Factor of Safety calculations indicated all points on the Site as low risk. This was primarily due to the light undulating topography and generally flat-lying conditions on the Site combined with generally shallow peat depths across the Site.

5.6 Exposure Assessment

The main exposure receptors identified at the Site and in the surrounding areas which could potentially be affected in the event of a peat slide are the existing Crossaig Substation, located adjacent to the Site to the east, the proposed development, private dwellings located approximately 200 m north east of the northernmost temporary tower and various unnamed watercourses that flow within the Site boundary before joining the Firth of Clyde to the east.

The impact of a peat slide on receptors can be assessed on a relative scale based on the potential for loss of habitat, a historical feature or disruption/danger to the public. To effectively assess the impact, the assessment of Exposure effect must also consider the distance between the hazard and the receptor, and the relative elevation between the two.

5.7 Exposure Rating

Similar to the Hazard Rating, the Exposure Ratings were determined using relative ranking process by attributing the different weighting systems to each factor as shown below:

[18] Warburton et al (2003) - Anatomy of a Pennine peat slide, Northern England

Table 7: Coefficients for Receptor Type

Receptor	Receptor Coefficients
Road, path or track	3
Minor water feature	6
Site infrastructure	6
Dwelling	8
Major water feature	8
Blanket bog	8

Table 8: Coefficients for Distance from Receptor

Distance from Receptor	Distance Coefficients
> 1 km	1
100 m to 1 km	2
10 m to 100 m	3
<10 m	4

Table 9: Coefficients for Receptor Elevation

Receptor Elevation	Elevation Coefficients
< 10 m	1
10 m to 50 m	2
50 m to 100 m	3
> 100 m	4

The Exposure Rating Coefficient for a particular location is calculated using the following equation:

Exposure Rating Coefficient = Receptor x Distance x Elevation

From the Exposure Rating Coefficient, the risk to stability can be ranked as set out in **Table 10**.

Table 10: Exposure Rating

Exposure Rating Co-efficient	Potential Stability Risk (Pre-Mitigation)
<6	Very Low
6 to12	Low
13 to 24	High
24 to 30	Very High
>30	Extremely High

5.8 Rating Normalisation

In order to achieve an overall Hazard Ranking in accordance with the Scottish Government Guidance, the Hazard and Exposure Rating Coefficient derived from the coefficient tables are normalised as shown in **Table 11**.

Table 11: Rating Normalisation

Hazard Rating		**Exposure Rating**	
Current Scale	**Normalised Scale**	**Current Scale**	**Normalised Scale**
< 5 Negligible	1	<6 Very Low	1
5 to 15 Low	2	6 to 12 Low	2
15 to 30 Medium	3	13 to 24 High	3
30 to 50 High	4	25 to 30 Very High	4
>50 Very high	5	>30 Extremely High	5

The record of the Hazard Rank Assessment is included in **Appendix C** of this PLHRA.

6 HAZARD RANKING

Having identified the rating coefficients in **Section 5** of this PLHRA, it is possible to categorise areas of the Site with a Hazard Ranking by multiplying the Hazard and Exposure Rating. Hazard Ranking and associated suggested actions matrix are shown in **Tables 12 and 13** below:

Table 12: Hazard Ranking and Suggested Actions

Hazard Ranking		Action Suggested in the Scottish Executive Guidance
17-25	High	Avoid project development at these locations.
11-16	Medium	Project should not proceed unless hazard can be avoided or mitigated at these locations, without significant environmental impact, in order to reduce hazard ranking to low or less
5-10	Low	Project may proceed pending further investigation to refine assessment. Mitigation of hazards maybe required through micro-siting or re-design at these locations.
1-4	Negligible	Project should proceed with monitoring and mitigation of peat landslide hazards at these locations as appropriate.

Table 13: Hazard Ranking Matrix

Hazard Rating						
	5	Low	Low	Medium	High	High
	4	Negligible	Low	Medium	Medium	High
	3	Negligible	Low	Low	Medium	Medium
	2	Negligible	Negligible	Low	Low	Low
	1	Negligible	Negligible	Negligible	Negligible	Low
		1	2	3	4	5
		Exposure Rating				

Receptor exposure was assessed for each of the seven hazard zones using the approach in **Section 5**. A summary of the Hazard Ranking result for each identified area is summarised in **Table 14** and is presented in **Figure.9** - Hazard Ranking Zonation Plan. The zonation is based on a combination of considerations including calculated hazard result, peat depth, topography and receptors and land uses.

7 SLIDE RISK AND MITIGATION

7.1 General

The PLHRA has shown the Site to be generally of 'negligible' hazard ranking, with isolated areas of 'low' hazard ranking. No Medium or High risk areas have been identified within the Proposed Development or Associated Development and therefore a significant risk of peat slide is not considered to be present based on the Hazard Ranking assessment. Nonetheless, a risk from peat slide may still exist and mitigation measures as outlined in **Section 7.3** of this PLHRA should be applied to minimise any risk.

Where the hazard ranking has been lowered through mitigation measures, the original ranking will remain in the overall hazard zoning plan. It should be acknowledged that the hazard zonation plan is based on the pre-mitigation status.

While specific recommended mitigation in 'low' ranked areas are proposed, other mitigation is embedded in the design. It is also necessary for detailed design and construction of the Proposed Development and Associated Development to be undertaken in a competent and controlled manner and in line with best practice measures, specifically relating to the management and reuse of excavated peat.

The embedded mitigation and good practice measures are set out in **Section 7.2** and **Section 7.3** of this PLHRA. It should be noted that the mitigation measures defined are not exclusive and other forms of mitigation may well be required and should be implemented during construction of the Proposed Development and Associated Development.

Table 14: Hazard Ranking

Hazard Area and Infrastructure		**Unmitigated Hazard**		**Mitigated Hazard**	
Hazard Area	**Infrastructure Affected**	**Ranking**	**Key Aspects**	**Specific Actions**	**Ranking**
H1	Proposed temporary works area, SUDS attenuation pond and proposed permanent access track	Negligible	Location and topography: Southern and eastern sectors of the Proposed Development. Indicated by the Indicative Town & Country Planning Boundary in Figure 9 within **Appendix A**. Hydrology: None Peat Depth: 0.0 m – 3.0 m. Generally, <1.0 m Slope Gradient: 0° to >10° Exposure: Proposed infrastructure	Micro-siting in to areas of thinner peat where required. Best practice measures in relation to drainage prior to and during construction will be implemented as outlined in **Annex N: Water Construction Environmental Management Plan (WCEMP)** and management of peat and peaty soils as outlined in **Annex O: Peat Management Plan (PMP).**	Negligible
H2	Proposed Substation	Negligible	Location and topography: Western and north western	Micro-siting in to areas of thinner	Negligible

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
			sectors of the Proposed Development comprising the southern two thirds of the proposed substation. Hydrology: None Peat Depth: 0.0 m – 2.1 m. Generally, <0.5 m Slope Gradient: 0° to <5° Exposure: Proposed Infrastructure	peat where required. Best practice measures in relation to drainage prior to and during construction will be implemented as outlined in **Annex N: WCEMP** and management of peat and peaty soils as outlined in **Annex O: PMP.**	
H3	Proposed Substation	Low	Location and topography: Small zone to the north of the Proposed Development containing the northern third of the proposed substation. Hydrology: None Peat Depth: 0.0 m – 3.0 m. Generally, <1.0 m Slope Gradient: 0° to <10° Exposure: Proposed Infrastructure	Micro-siting in to areas of thinner peat where required. Best practice measures in relation to drainage prior to and during construction will be implemented as outlined in **Annex N: WCEMP** and management of peat and peaty soils as outlined in **Annex O: PMP.** During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place.	Negligible
H4	Proposed indicative tower location, proposed OHL alignment and proposed permanent access track	Negligible	Location and topography: Southern sector of the Associated Development, adjacent to the north of the Proposed Development. Hydrology: None	Micro-siting in to areas of thinner peat where required. Best practice measures in relation to drainage prior to and during construction will be implemented as outlined in **Annex N: WCEMP** and management of	Negligible

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
			Peat Depth: 0.1 m – 3.2 m. Generally, <1.0 m Slope Gradient: 0° to <15° Exposure: Proposed infrastructure	peat and peaty soils as outlined in **Annex O: PMP.**	
H5	Proposed OHL alignment	Low	Location and topography: Central western sector of the Associated Development Hydrology: An unnamed watercourse runs from west to east through the zone Peat Depth: 0.1 m – 1.7 m. Generally, <1.0 m Slope Gradient: 0° to <10° Exposure: Proposed infrastructure	Micro-siting in to areas of thinner peat where required. Best practice measures in relation to drainage prior to and during construction will be implemented as outlined in **Annex N: WCEMP** and management of peat and peaty soils as outlined in **Annex O: PMP.** During construction visual inspections and monitoring in areas with the potential for peat slide risk should take place.	Negligible
H6	Proposed indicative tower location, proposed OHL alignment and proposed permanent access track	Negligible	Location and topography: Central eastern sector of the Associated Development Hydrology: An unnamed watercourse runs from west to east through the zone Peat Depth: 0.0 m - 0.3 m. Generally, <0.2 m Slope Gradient: 0° to <10° Exposure: Proposed infrastructure	Micro-siting in to areas of thinner peat where required. Best practice measures in relation to drainage prior to and during construction will be implemented as outlined in **Annex N: WCEMP** and management of peat and peaty soils as outlined in **Annex O: PMP**.	Negligible

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
H7	Proposed temporary towers	Negligible	Location and topography: Eastern sector of the Associated Development Hydrology: An unnamed watercourse runs from south west to north east through the zone Peat Depth: 0.0 m - 1.5 m. Generally, <0.5 m Slope Gradient: 0° to <10° Exposure: Proposed infrastructure	Micro-siting in to areas of thinner peat where required. Best practice measures in relation to drainage prior to and during construction will be implemented as outlined in **Annex N: WCEMP** and management of peat and peaty soils as outlined in **Annex O: PMP**.	Negligible

7.2 Embedded Mitigation

Embedded mitigation includes measures taken during design of the Development to reduce the potential for peat slide risk. In summary the principal measures that have been taken are:

- Locating infrastructure on shallower slopes, where possible; and
- Locating infrastructure on areas of shallow peat (or no peat) where possible.

7.3 Peat Slide Mitigation Recommendations

The following mitigation measures should be adopted post consent stage to validate the PLHRA and influence the detailed design of the Development, including:

- Ground investigations prior to detailed design;
- Identification of areas sensitive to changes in drainage regime prior to detailed design;
- Update the PLHRA as necessary following detailed ground investigations;
- Development of a drainage strategy that will not create areas of concentrated flow and will not affect the current peatland hydrology;
- Design of a Development drainage system for tracks and hardstanding that will require minimal ongoing maintenance during the operation of the windfarm;
- Inspection and maintenance of the drainage systems during construction and operation;
- Identification of suitable areas for stockpiling material during construction prior to commencement of works; and
- Consideration of specific construction methods appropriate for infrastructure in peat land (i.e. geogrids) as part of design Development.

8 CONCLUSIONS

This PLHRA has been undertaken for the Development in accordance with best practice, as detailed in **Section 4.2** of the PLHRA. The assessment included a desk study followed by completion of an intensive probing exercise across the proposed infrastructure and surrounding areas at the Proposed Development and Associated Development. The information gathered during this investigation was used to develop a Hazard Ranking across the Site.

The findings of the probing indicate that deep peat is present at the Site, however a vast majority of the Development is underlain by peat less than 1.0 m in thickness. Pockets of deep peat were recorded at up to 3.0 m in the southern area of the Proposed Development and up to 3.2 m in the southern area of the Associated Development.

Based on the scope of the study, the PLHRA has indicated that the majority of the Site is generally of 'negligible hazard ranking with two areas highlighted as 'low' hazard ranking.

Notwithstanding the findings of the PLHRA, the final design of infrastructure should be carefully sited and micro-siting adopted if required in order to maintain the design objective of avoiding any potential peat slide risk.

9 SOURCES OF INFORMATION

The following sources of information were used as part of the desk study investigations:

- British Geological Survey - Online GeoIndex;
- Ordnance Survey (OS) topographical information;
- Aerial and Satellite photography.
- Soil Survey of Scotland - MacAulay Institute for Soil Research (1984);
- Soil Survey of Scotland - Scottish Peat Surveys (1964);
- Scottish Government - Peat Landslide Hazard and Risk Assessments (2017);
- Scottish Government, Scottish Natural Heritage, SEPA (2017) Peatland Survey, Guidance on Developments on Peatland;
- The Scottish Government - Scotland's Third National Planning Framework (2014);
- The Scottish Government - Scottish Planning Policy (2014);
- Assessments by other EIA specialists (specifically hydrology and ecology for data on sensitive receptors); and
- Scotland's Environment Interactive Map.

APPENDIX A - FIGURES

Y:\GIS\Engineering\Projects\4534 Argyll Substations\4534 Crossaig Reports.aprx\4534-REP-041 Fig01 Site Layout Plan

Scottish & Southern Electricity Networks

TRANSMISSION

ARCUS

- Existing Substation Platform
- Existing Inveraray to Crossaig Overhead Line
- Existing Access Track

Proposed Development:

- Indicative Town & Country Planning Boundary
- Proposed Permanent Access Track
- SUDs Inlet Pipeline
- SUDs Outfall Pipeline
- SUDs Pond
- Proposed Platform Extention
- Proposed Substation Temporary Works Area
- Proposed Substation Layout
- Crossaig Temporary Peat Storage Areas

Permitted Development:

- 132 kV Interconnector Cable Route

Associated Development:

- Existing Tower - Proposed to be Removed
- Proposed Temporary Tower Location
- Proposed Indicative Tower Location
- Proposed OHL Alignment
- Proposed Temporary OHL Bypass
- Proposed Permanent Access Track
- Temporary Access Track

1:5,000 Scale @ A3

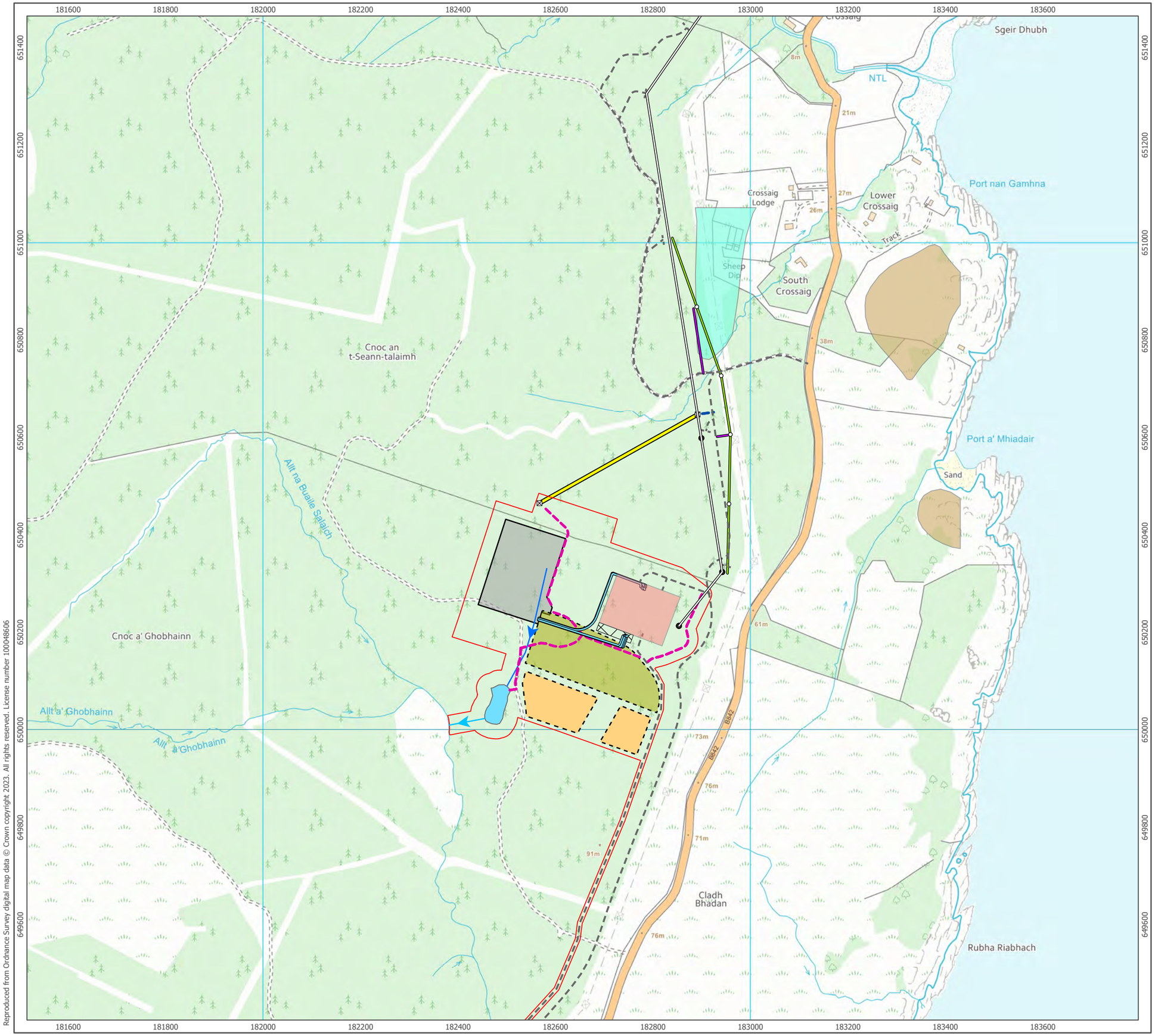
0 0.1 0.2 km

NORTH

Produced By: CS	Ref: 4534-REP-041
Checked By: DB	Date: 16/02/2023

Site Layout Plan
Figure 1

Crossaig
Annex P: Peat Landslide Hazard and Risk Assessment



Scottish & Southern Electricity Networks
TRANSMISSION

ARCUS

- Existing Substation Platform
- Existing Inveraray to Crossaig Overhead Line
- Existing Access Track

Proposed Development:

- Indicative Town & Country Planning Boundary
- Proposed Permanent Access Track
- SUDs Inlet Pipeline
- SUDs Outfall Pipeline
- SUDs Pond
- Proposed Platform Extention
- Proposed Substation Temporary Works Area
- Proposed Substation Layout
- Crossaig Temporary Peat Storage Areas

Permitted Development:

- 132 kV Interconnector Cable Route

Associated Development:

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- Proposed Temporary Tower Location
- Proposed Indicative Tower Location
- Proposed OHL Alignment
- Proposed Temporary OHL Bypass
- Proposed Permanent Access Track
- Temporary Access Track

Superficial Soils

- Till, Devensian - Diamicton
- Raised Marine Deposits - Sand and gravel

1:7,500 Scale @ A3

0 0.1 0.2 km

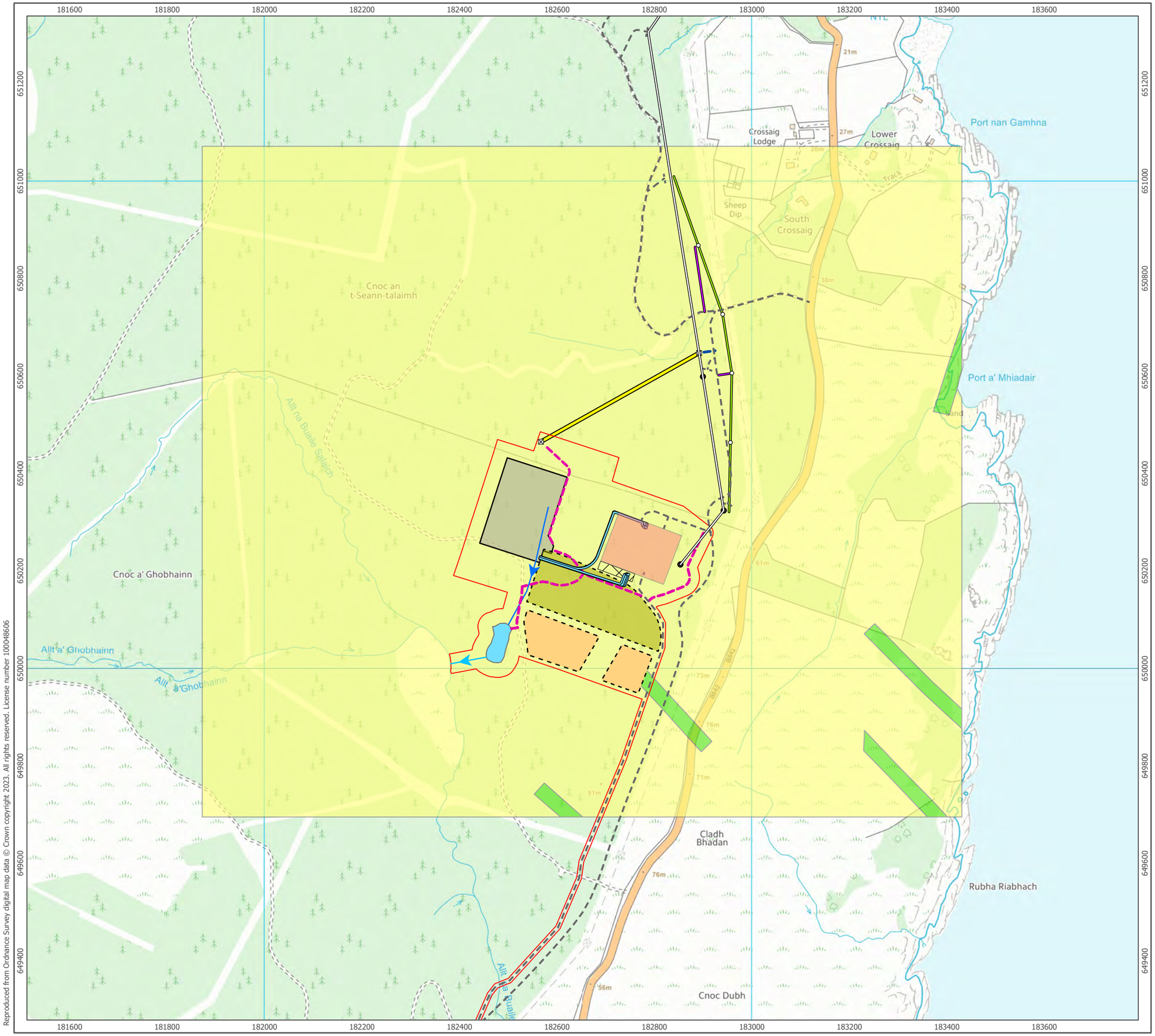
NORTH

Produced By: CS	Ref: 4534-REP-042
Checked By: DB	Date: 16/02/2023

Superficial Soils
Figure 2

Crossaig
Annex P: Peat Landslide Hazard and Risk Assessment

Y:\GIS\Engineering\Projects\4534 Argyll Substations\4534 Crossaig Reports.aprx\4534-REP-042 Fig02 Superficial Soils



Y:\GIS\Engineering\Projects\4534 Argyll Substations\4534 Crossaig Reports.aprx\4534-REP-043 Fig03 Solid Geology

Scottish & Southern Electricity Networks
TRANSMISSION

ARCUS

- Existing Substation Platform
- Existing Inveraray to Crossaig Overhead Line
- Existing Access Track

Proposed Development:

- Indicative Town & Country Planning Boundary
- Proposed Permanent Access Track
- SUDs Inlet Pipeline
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- SUDs Pond
- Proposed Platform Extention
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- Proposed Substation Layout
- Crossaig Temporary Peat Storage Areas

Permitted Development:

- 132 kV Interconnector Cable Route

Associated Development:

- Existing Tower - Proposed to be Removed
- Proposed Temporary Tower Location
- Proposed Indicative Tower Location
- Proposed OHL Alignment
- Proposed Temporary OHL Bypass
- Proposed Permanent Access Track
- Temporary Access Track

Solid Geology

- Beinn Bheula Schist Formation
- North Britain Palaeogene Dyke Suite

1:7,500 Scale @ A3

0 0.1 0.2 km

NORTH

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Checked By: DB	Date: 16/02/2023

Solid Geology
Figure 3

Crossaig
Annex P: Peat Landslide Hazard and Risk Assessment

Scottish & Southern Electricity Networks

TRANSMISSION

ARCUS

- Existing Substation Platform
- Existing Inveraray to Crossaig Overhead Line
- Existing Access Track

Proposed Development:

- Indicative Town & Country Planning Boundary
- Proposed Permanent Access Track
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- SUDs Outfall Pipeline
- SUDs Pond
- Proposed Platform Extention
- Proposed Substation Temporary Works Area
- Proposed Substation Layout
- Crossaig Temporary Peat Storage Areas

Permitted Development:

- 132 kV Interconnector Cable Route

Associated Development:

- Existing Tower - Proposed to be Removed
- Proposed Temporary Tower Location
- Proposed Indicative Tower Location
- Proposed OHL Alignment
- Proposed Temporary OHL Bypass
- Proposed Permanent Access Track
- Temporary Access Track

Geomorphology

- Deforested Area
- Mature Forestry
- Bottom of Slope
- Artificial Drainage
- Top of Slope
- Minor Watercourse

1:5,000 Scale @ A3

0 0.1 0.2 km

NORTH

Produced By: CS	Ref: 4534-REP-044
Checked By: DB	Date: 16/02/2023

Geomorphology Map
Figure 4

Crossaig
Annex P: Peat Landslide Hazard and Risk Assessment

Y:\GIS\Engineering\Projects\4534 Argyll Substations\4534 Crossaig Reports.aprx\4534-REP-044 Fig04 Geomorphology Map

Y:\GIS\Engineering\Projects\4534 Argyll Substations\4534 Crossaig Reports.aprx\4534-REP-045 Fig05 Recorded Peat Depths

Scottish & Southern Electricity Networks

TRANSMISSION

ARCUS

- Existing Substation Platform
- Existing Inveraray to Crossaig Overhead Line
- Existing Access Track

Proposed Development:

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- Proposed Permanent Access Track
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- Proposed Substation Layout
- Crossaig Temporary Peat Storage Areas

Permitted Development:

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Associated Development:

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- Proposed Indicative Tower Location
- Proposed OHL Alignment
- Proposed Temporary OHL Bypass
- Proposed Permanent Access Track
- Temporary Access Track

Peat Depth (m)

- 0.00 - 0.50
- 0.51 - 1.00
- 1.01 - 1.50
- 1.51 - 2.00
- 2.01 - 2.50
- 2.51 - 3.00
- 3.01 - 3.50
- 3.51 - 4.00

1:5,000 Scale @ A3

0 0.1 0.2 km

NORTH

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Checked By: DB	Date: 16/02/2023

Recorded Peat Depths
Figure 5

Crossaig
Annex P: Peat Landslide Hazard and Risk Assessment

Y:\GIS\Engineering\Projects\4534 Argyll Substations\4534 Crossaig Reports.aprx\4534-REP-046 Fig06 Interpolated Peat Depths

Scottish & Southern Electricity Networks

TRANSMISSION

ARCUS

- Existing Substation Platform
- Existing Inveraray to Crossaig Overhead Line
- Existing Access Track

Proposed Development:

- Indicative Town & Country Planning Boundary
- Proposed Permanent Access Track
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- SUDs Outfall Pipeline
- SUDs Pond
- Proposed Platform Extention
- Proposed Substation Temporary Works Area
- Proposed Substation Layout
- Crossaig Temporary Peat Storage Areas

Permitted Development:

- 132 kV Interconnector Cable Route

Associated Development:

- Existing Tower - Proposed to be Removed
- Proposed Temporary Tower Location
- Proposed Indicative Tower Location
- Proposed OHL Alignment
- Proposed Temporary OHL Bypass
- Proposed Permanent Access Track
- Temporary Access Track
- Peat Probe Locations

Peat Depth (m)

- 0.00 - 0.50
- 0.51 - 1.00
- 1.01 - 1.50
- 1.51 - 2.00
- 2.01 - 2.50
- 2.51 - 3.00
- 3.01 - 3.50
- 3.51 - 4.00
- 4.01 - 4.50

1:5,000 Scale @ A3

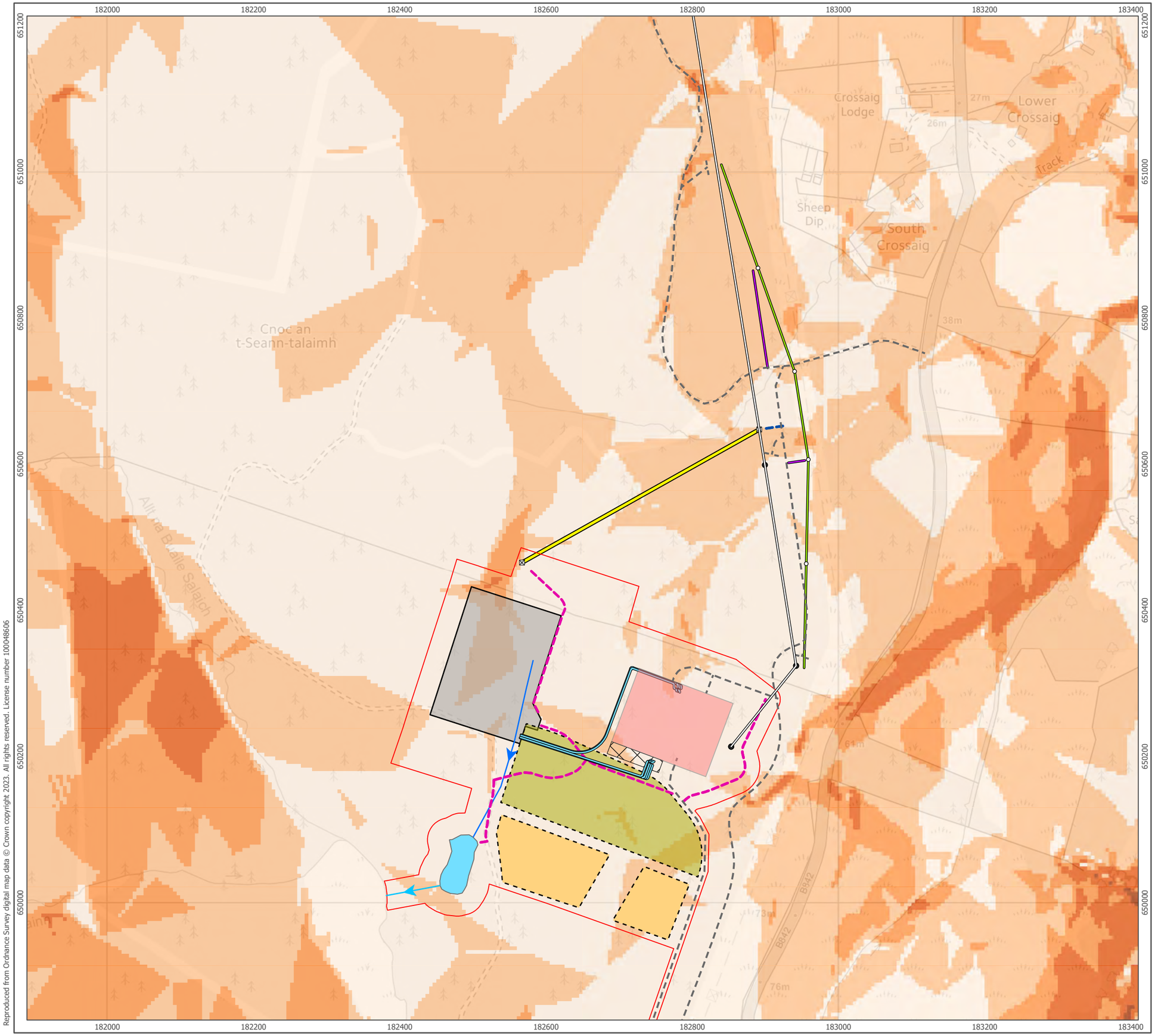
0 0.1 0.2 km

NORTH

Produced By: CS	Ref: 4534-REP-046
Checked By: DB	Date: 16/02/2023

Interpolated Peat Depths
Figure 6

Crossaig
Annex P: Peat Landslide Hazard and Risk Assessment



Scottish & Southern Electricity Networks

TRANSMISSION

ARCUS

- Existing Substation Platform
- Existing Inveraray to Crossaig Overhead Line
- Existing Access Track

Proposed Development:

- Indicative Town & Country Planning Boundary
- Proposed Permanent Access Track
- SUDs Inlet Pipeline
- SUDs Outfall Pipeline
- SUDs Pond
- Proposed Platform Extention
- Proposed Substation Temporary Works Area
- Proposed Substation Layout
- Crossaig Temporary Peat Storage Areas

Permitted Development:

- 132 kV Interconnector Cable Route

Associated Development:

- Existing Tower - Proposed to be Removed
- Proposed Temporary Tower Location
- Proposed Indicative Tower Location
- Proposed OHL Alignment
- Proposed Temporary OHL Bypass
- Proposed Permanent Access Track
- Temporary Access Track

Slope Gradient (deg)

- 0.00 - 5.00
- 5.01- 10.00
- 10.01 - 15.00
- 15.01 - 30.00
- 30.00 +

1:5,000 Scale @ A3

0 0.1 0.2 km

NORTH

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Checked By: DB	Date: 16/02/2023

Slope Map
Figure 7

Crossaig
Annex P: Peat Landslide Hazard and Risk Assessment

Y:\GIS\Engineering\Projects\4534 Argyll Substations\4534 Crossaig Reports.aprx\4534-REP-047 Fig07 Slope Map

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Scottish & Southern Electricity Networks

TRANSMISSION

ARCUS

- Existing Substation Platform
- Existing Inveraray to Crossaig Overhead Line
- Existing Access Track

Proposed Development:

- Indicative Town & Country Planning Boundary
- Proposed Permanent Access Track
- SUDs Inlet Pipeline
- SUDs Outfall Pipeline
- SUDs Pond
- Proposed Platform Extention
- Proposed Substation Temporary Works Area
- Proposed Substation Layout
- Crossaig Temporary Peat Storage Areas

Permitted Development:

- 132 kV Interconnector Cable Route

Associated Development:

- Existing Tower - Proposed to be Removed
- Proposed Temporary Tower Location
- Proposed Indicative Tower Location
- Proposed OHL Alignment
- Proposed Temporary OHL Bypass
- Proposed Permanent Access Track
- Temporary Access Track

Factor of Safety

- Low Risk

1:5,000 Scale @ A3

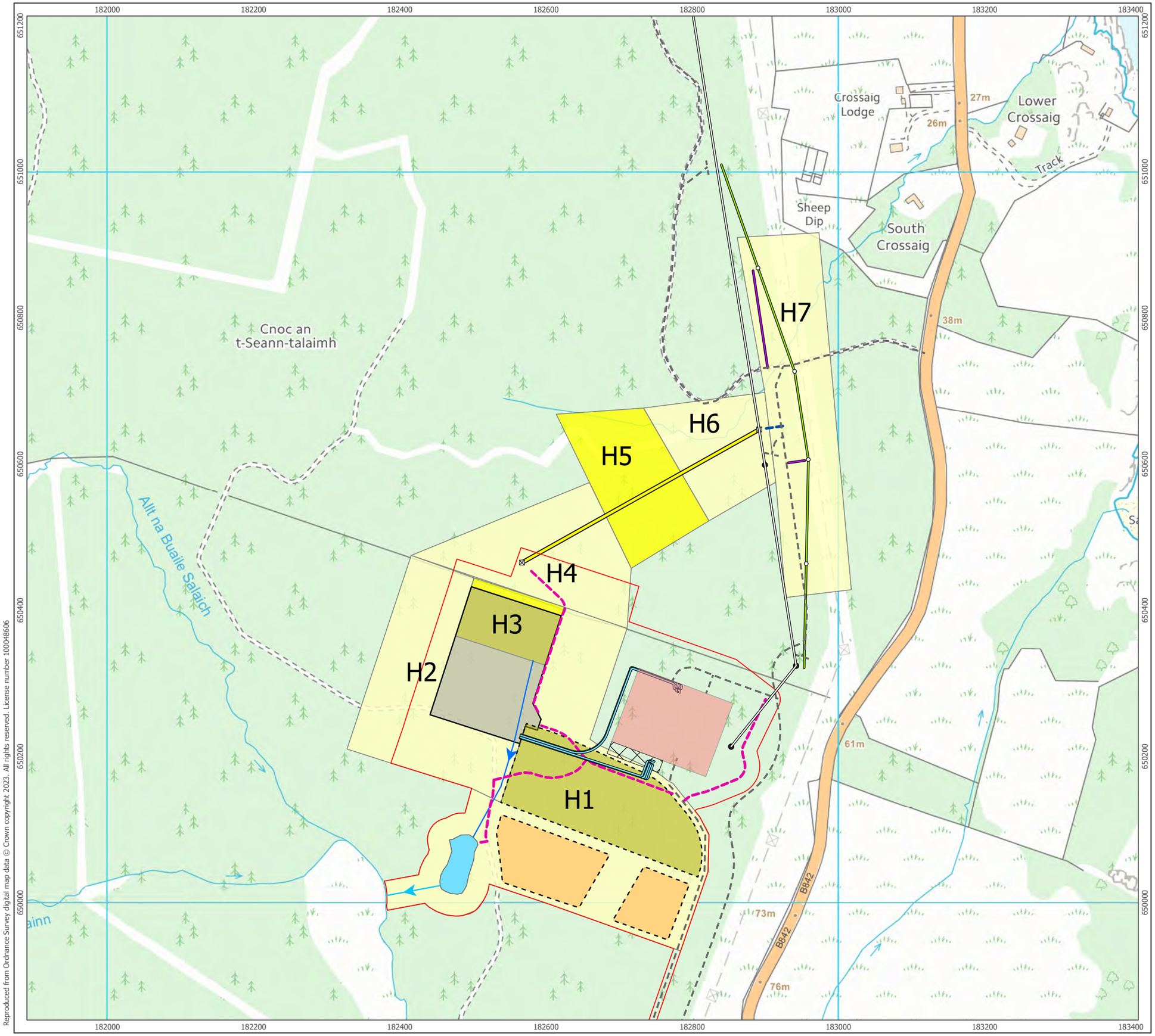
0 0.1 0.2 km

NORTH

Produced By: CS	Ref: 4534-REP-048
Checked By: DB	Date: 16/02/2023

Factor of Safety Plan
Figure 8

Crossaig
Annex P: Peat Landslide Hazard and Risk Assessment



Y:\GIS\Engineering\Projects\4534 Argyll Substations\4534 Crossaig Reports.aprx\4534-REP-049 Fig09 Hazard Rank Zonation Plan

Scottish & Southern Electricity Networks

TRANSMISSION

ARCUS

- Existing Substation Platform
- Existing Inveraray to Crossaig Overhead Line
- Existing Access Track

Proposed Development:

- Indicative Town & Country Planning Boundary
- Proposed Permanent Access Track

SUDs Outfall Pipeline

- SUDs Inlet Pipeline
- SUDs Outfall Pipeline
- SUDs Pond
- Proposed Platform Extention
- Proposed Substation Temporary Works Area
- Proposed Substation Layout
- Crossaig Temporary Peat Storage Areas

Permitted Development:

- 132 kV Interconnector Cable Route

Associated Development:

- Existing Tower - Proposed to be Removed
- Proposed Temporary Tower Location
- Proposed Indicative Tower Location
- Proposed OHL Alignment
- Proposed Temporary OHL Bypass
- Proposed Permanent Access Track
- Temporary Access Track

Hazard Rank

- Low
- Negligible

1:5,000 Scale @ A3

0 0.1 0.2 km

NORTH

Produced By: CS	Ref: 4534-REP-049
Checked By: DB	Date: 16/02/2023

Hazard Rank Zonation Plan
Figure 9

Crossaig
Annex P: Peat Landslide Hazard and Risk Assessment

APPENDIX B - SITE PHOTOGRAPHS

Photograph 1: View north west from existing access track showing existing Crossaig Substation.

Photograph 2: Cutting for installation of drainage ditch showing ground conditions at existing access track.

Photograph 3: View east showing current conditions of proposed Temporary Works Area

Photograph 4: Windblown tree at eastern edge of proposed substation area

Photograph 5: Current conditions at proposed substation in area of forestry plantation

Photograph 6: Windblown trees in at proposed substation location

Photograph 7: View north west of recently felled area north of the proposed substation

Photograph 8: View south east from northernmost temporary tower across felled area

Photograph 9: View north from northernmost permanent tower across felled area

Photograph 10: View west from southernmost temporary tower of log piles and recently constructed track

APPENDIX C – HAZARD RANK ASSESSMENT RECORDS

4534 - Argyll Substations - PLHRA - Tabulated Peat Probe Data - Crossaig

ID	X	Y	Z	SLOPE	Slope Co-efficient	PEAT DEPTH	Peat Level	Peat Co-efficient	Gen Substrate	Substrate Co-eff.	Risk Rating Coefficient	Risk Rating Normalisation	Receptor	Receptor Co-eff.	Z Receptor	Distance	Receptor Dist Co-eff.	Z Difference (remove =/-)	Receptor elevation Co-eff	Impact Rating	Impact Rating Normalisation	Hazard Ranking
1	182808	650035	80.274499	3.442082	2	0.01	80.264499	1	G	1	2	1	Site Infrastructure	3	80.161298	0	4	0.113201	1	12	2	2
2	182797	650038	79.594204	3.483088	2	0.01	79.584204	1	G	1	2	1	Site Infrastructure	3	79.54744	1.495255	4	0.046764	1	12	2	2
3	182825	650030	81.319384	2.854728	2	0.2	81.119384	1	G	1	2	1	Roads and Tracks	3	80.933442	6.389245	4	0.385942	1	12	2	2
4	182837	650092	78.208765	5.752233	4	0.2	78.008765	1	G	1	4	1	Roads and Tracks	3	78.313435	15.976199	3	-0.10467	1	9	1	1
5	182802	650087	76.493803	7.346636	4	0.3	76.193803	1	G	1	4	1	Site Infrastructure	3	76.529624	0	4	-0.035821	1	12	2	2
6	182814	650088	77.353674	7.349225	4	0.01	77.343674	1	G	1	4	1	Roads and Tracks	3	77.639626	2.875036	4	-0.285952	1	12	2	2
7	182810	650137	74.621644	2.473116	2	0.5	74.121644	1	G	1	2	1	Roads and Tracks	3	74.066825	10.477288	3	0.554819	1	9	1	1
8	182790	650122	74.544615	1.448394	1	2.7	71.844615	3	G	1	3	1	Site Infrastructure	3	74.552259	0	4	-0.007644	1	12	2	2
9	182772	650100	74.468993	1.42645	1	1.2	73.268993	3	G	1	3	1	Site Infrastructure	3	74.493381	0	4	-0.024388	1	12	2	2
10	182757	650085	74.386569	1.432718	1	0.7	73.686569	2	G	1	2	1	Site Infrastructure	3	74.36822	0	4	0.018349	1	12	2	2
11	182745	650069	74.371794	2.528519	2	0.4	73.971794	1	G	1	2	1	Site Infrastructure	3	74.347391	0	4	0.024403	1	12	2	2
12	182714	650085	72.051018	4.92011	4	0.4	71.651018	1	G	1	4	1	Site Infrastructure	3	72.101048	0	4	-0.05003	1	12	2	2
13	182734	650102	73.326617	2.903196	2	0.4	72.926617	1	G	1	2	1	Site Infrastructure	3	73.337211	0	4	-0.010594	1	12	2	2
14	182750	650121	73.690883	2.248737	2	0.6	73.090883	2	G	1	4	1	Site Infrastructure	3	73.687237	0	4	0.003646	1	12	2	2
15	182771	650143	73.837279	1.43606	1	0.3	73.537279	1	G	1	1	1	Site Infrastructure	3	73.826648	0	4	0.010631	1	12	2	2
16	182765	650177	73.456143	2.085929	2	0.01	73.446143	1	G	1	2	1	Roads and Tracks	3	73.490369	1.002574	4	-0.034226	1	12	2	2
17	182755	650160	73.17532	2.292666	2	0.01	73.16532	1	G	1	2	1	Site Infrastructure	3	73.170372	0	4	0.004948	1	12	2	2
18	182733	650144	72.483726	2.134081	2	0.01	72.473726	1	G	1	2	1	Site Infrastructure	3	72.452089	0	4	0.031637	1	12	2	2
19	182715	650128	71.948648	2.597448	2	1.2	70.748648	3	G	1	6	2	Site Infrastructure	3	71.929248	0	4	0.0194	1	12	2	4
20	182698	650113	70.543411	5.28134	4	0.9	69.643411	2	G	1	8	2	Site Infrastructure	3	70.488735	0	4	0.054676	1	12	2	4
21	182680	650093	70.827582	1.366475	1	1.7	69.127582	3	G	1	3	1	Site Infrastructure	3	70.823879	0	4	0.003703	1	12	2	2
22	182651	650107	70.17833	1.579188	1	1	69.17833	2	G	1	2	1	Site Infrastructure	3	70.200695	0	4	-0.022365	1	12	2	2
23	182672	650129	71.147498	2.336846	2	3	68.147498	3	G	1	6	2	Site Infrastructure	3	71.170224	0	4	-0.022726	1	12	2	4
24	182693	650145	71.698514	2.063882	2	1.6	70.098514	3	G	1	6	2	Site Infrastructure	3	71.718003	0	4	-0.019489	1	12	2	4
25	182707	650163	71.637456	0.825452	1	0.1	71.537456	1	G	1	1	1	Site Infrastructure	3	71.647876	0	4	-0.01042	1	12	2	2
26	182724	650178	72.846313	3.917573	2	0.01	72.836313	1	G	1	2	1	Site Infrastructure	3	72.825909	0	4	0.020404	1	12	2	2
27	182734	650194	73.604595	2.226678	2	0.01	73.594595	1	G	1	2	1	Roads and Tracks	3	73.917052	8.211862	4	-0.312457	1	12	2	2
28	182692	650192	72.619634	2.251287	2	0.1	72.519634	1	G	1	2	1	Site Infrastructure	3	72.628901	0	4	-0.009267	1	12	2	2
29	182682	650174	72.648121	2.255689	2	0.1	72.548121	1	G	1	2	1	Site Infrastructure	3	72.628001	0	4	0.02012	1	12	2	2
30	182666	650154	72.199108	2.327157	2	1.9	70.299108	3	G	1	6	2	Site Infrastructure	3	72.158405	0	4	0.040703	1	12	2	4
31	182648	650137	71.513887	2.334099	2	1	70.513887	2	G	1	4	1	Site Infrastructure	3	71.534261	0	4	-0.020374	1	12	2	2
32	182629	650117	70.694622	2.287221	2	0.8	69.894622	2	G	1	4	1	Site Infrastructure	3	70.720441	0	4	-0.025819	1	12	2	2
33	182600	650130	71.050551	2.261375	2	0.3	70.750551	1	G	1	2	1	Site Infrastructure	3	71.046918	0	4	0.003633	1	12	2	2
34	182568	650143	71.166678	2.083035	2	0.3	70.866678	1	G	1	2	1	Site Infrastructure	3	71.193028	0	4	-0.02635	1	12	2	2
35	182541	650149	71.29789	1.64992	1	0.1	71.19789	1	G	1	1	1	Site Infrastructure	3	71.30944	0	4	-0.01155	1	12	2	2
36	182552	650173	71.990421	2.060105	2	0.5	71.490421	1	G	1	2	1	Site Infrastructure	3	72.01103	0	4	-0.020609	1	12	2	2
37	182579	650162	71.939319	2.084684	2	0.01	71.929319	1	G	1	2	1	Site Infrastructure	3	71.927036	0	4	0.012283	1	12	2	2
38	182615	650148	71.855748	2.27471	2	0.01	71.845748	1	G	1	2	1	Site Infrastructure	3	71.828559	0	4	0.027189	1	12	2	2
39	182634	650168	72.760275	2.286549	2	0.01	72.750275	1	G	1	2	1	Site Infrastructure	3	72.72444	0	4	0.035835	1	12	2	2
40	182602	650182	72.917495	2.065268	2	0.01	72.907495	1	G	1	2	1	Site Infrastructure	3	72.913024	0	4	0.004471	1	12	2	2
41	182646	650192	73.740049	2.300212	2	0.01	73.730049	1	G	1	2	1	Site Infrastructure	3	73.730694	0	4	0.009355	1	12	2	2
42	182659	650206	74.115989	3.328563	2	0.01	74.105989	1	G	1	2	1	Site Infrastructure	3	74.098582	0	4	0.017407	1	12	2	2
43	182625	650220	74.339138	1.16564	1	0.01	74.329138	1	G	1	1	1	Site Infrastructure	3	74.324518	0	4	0.01462	1	12	2	2
44	182612	650202	73.747567	2.084688	2	0.01	73.737567	1	G	1	2	1	Site Infrastructure	3	73.723028	0	4	0.024539	1	12	2	2
45	182588	650213	73.787209	1.798176	1	0.01	73.777209	1	G	1	1	1	Site Infrastructure	3	73.815568	0	4	-0.028359	1	12	2	2
46	182593	650233	74.151736	0.934103	1	0.01	74.141736	1	G	1	1	1	Site Infrastructure	3	74.150997	0	4	0.000739	1	12	2	2
47	182563	650210	73.387478	2.05054	2	0.1	73.287478	1	G	1	2	1	Site Infrastructure	3	73.365029	0	4	0.022449	1	12	2	2
48	182566	650244	73.993929	0.945201	1	0.2	73.793929	1	G	1	1	1	Site Infrastructure	3	73.992443	0	4	0.001486	1	12	2	2
49	182572	650191	72.856016	2.082598	2	0.1	72.756016	1	G	1	2	1	Site Infrastructure	3	72.873041	0	4	-0.017025	1	12	2	2
50	182548	650212	73.280416	2.068705	2	0.3	72.980416	1	G	1	2	1	Site Infrastructure	3	73.255025	0	4	0.025391	1	12	2	2
51	182539	650216	73.287557	1.817235	1	0.2	73.087557	1	G	1	1	1	Site Infrastructure	3	73.263039	0	4	0.024518	1	12	2	2
52	182528	650219	73.629811	6.399948	4	0.1	73.529811	1	G	1	4	1	Site Infrastructure	3	73.603231	0	4	0.02658	1	12	2	2
53	182520	650226	74.819112	6.007652	4	0.2	74.619112	1	G	1	4	1	Site Infrastructure	3	74.70563	0	4	0.113482	1	12	2	2
54	182529	650235	74.37988	6.256231	4	0.3	74.07988	1	G	1	4	1	Site Infrastructure	3	74.44169	0	4	-0.06181	1	12	2	2
55	182519	650236	75.306987	5.288048	4	0.3	75.006987	1	G	1	4	1	Site Infrastructure	3	75.371691	0	4	-0.064704	1	12	2	2
56	182509	650236	75.86192	2.354529	2	0.3	75.56192	1	G	1	2	1	Site Infrastructure	3	75.893257	0	4	-0.031337	1	12	2	2
57	182499	650236	76.012999	3.44562	2	0.1	75.912999	1	R	1.5	3	1	Site Infrastructure	3	75.971051	0	4	0.041948	1	12	2	2
58	182499	650245	76.259168	1.893194	1	0.1	76.159168	1	R	1.5	1.5	1	Site Infrastructure	3	76.293252	0	4	-0.034084	1	12	2	2
59	182491	650237	75.900213	4.761181	4	0.1	75.800213	1	R	1.5	6	2	Site Infrastructure	3	75.960701	0	4	-0.060488	1	12	2	4
60	182480	650236	75.543803	5.035845	4	0.6	74.943803	2	G	1	8	2	Site Infrastructure	3	75.546619	0	4	-0.002816	1	12	2	4
61	182470	650237	75.419021	4.999892	4	1.4	74.019021	3	G	1	12	2	Site Infrastructure	3	75.474621	0	4	-0.0556	1	12	2	4
62	182460	650246	75.835795	4.784462	4	1	74.835795	2	G	1	8	2	Site Infrastructure	3	75.859124	0	4	-0.023329	1	12	2	4
63	182470	650246	76.140124	4.935982	4	0.01	76.130124	1	G	1	4	1	Site Infrastructure	3	76.144299	0	4	-0.004175	1	12	2	2
64	182480	650256	76.967902	2.257784	2	0.01	76.957902	1	G	1	2	1	Site Infrastructure	3	76.941924	0	4	0.025978	1	12	2	2
65	182480	650246	76.383802	4.566987	4	0.1	76.283802	1	G	1	4	1	Site Infrastructure	3	76.38662	0	4	-0.002818	1	12	2	2
66	182490	650246	76.516735	2.674941	2	0.01	76.506735	1	G	1	2	1	Site Infrastructure	3	76.496029	0	4	0.020706	1	12	2	2
67	182479	650266	77.199383	3.968912	2	0.01	77.189383	1	G	1	2	1	Site Infrastructure	3	77.240696	0	4	-0.041313	1	12	2	2
68	182470	650266	77.511239	3.606616	2	0.1	77.411239	1	G	1	2	1	Site Infrastructure	3	77.527802	0	4	-0.016563	1	12	2	2
69	182470	650256	76.96277	4.039678	4	0.4	76.56277	1	G	1	4	1	Site Infrastructure	3	76.969656	0	4	-0.006886	1	12	2	2
70	182460	650255	76.47625	4.711371	4	0.6	75.87625	2	G	1	8	2	Site Infrastructure	3	76.512478	0	4	-0.036228	1	12	2	4
71	182450	650246	75.329392	4.187316	4	0.2	75.129392	1	G	1	4	1	Site Infrastructure	3	75.353202	0	4	-0.02381	1	12	2	2
72	182436	650250	75.582018	5.056934	4	0.2	75.382018	1	G	1	4	1	Site Infrastructure	3	75.519981	0	4	0.062037	1	12	2	2
73	182440	650256	76.039902	5.02589	4	0.1	75.939902	1	G	1	4	1	Site Infrastructure	3	75.965992	0	4	0.07391	1	12	2	2
74	182450	650256	75.948884	4.266357	4	0.2	75.748884	1	G	1	4	1	Site Infrastructure	3	75.967653	0	4	-0.018769	1	12	2	2
75	182450	650266	76.637098	4.108956	4	0.01	76.627098	1	G	1	4	1	Site Infrastructure	3	76.605504	0	4	0.031594	1	12	2	2
76	182442	650266	76.792031	4.854788	4	0.01	76.782031	1	G	1	4	1	Site Infrastructure	3	76.782678	0	4	0.009353	1	12	2	2
77	182450	650276	77.403351	4.547221	4	0.01	77.393351	1	G	1	4	1	Site Infrastructure	3	77.358662	0	4	0.044689	1	12	2	2
78	182450	650286	78.187065	4.725157	4	0.3	77.887065	1	G	1	4	1	Site Infrastructure	3	78.14284	0	4	0.044225	1	12	2	2
79	182460	650286	77.974594	3.846993	2	0.4	77.574594	1	G	1	2	1	Site Infrastructure	3	77.970215	0	4	0.004379	1	12	2	2
80	182460	650276	77.400161	3.815528	2	0.2	77.200161	1	G	1	2	1	Site Infrastructure	3	77.444925	0	4	-0.044764	1	12	2	2
81	182460	650266	76.974943	4.171287	4	0.3	76.674943	1	G	1	4	1	Site Infrastructure	3	77.020092	0	4	-0.045149	1	12	2	2
82	182470	650276	77.99233	3.749071	2	0.3	77.69233	1	G	1	2	1	Site Infrastructure	3	78.036588	0	4	-0.044258	1	12	2	2
83	182480	650276	77.891473	5.150876	4	1	76.891473	2	G	1	8	2	Site Infrastructure	3	77.809097	0	4	0.082376	1	12	2	4
84	182490	650276	77.223205	5.014487	4	0.01	77.213205	1	G	1	4	1	Site Infrastructure	3	77.151903	0	4	0.071302	1	12	2	2
85	182489	650266	76.783174	2.828837	2	0.3	76.483174	1	G	1	2	1	Site Infrastructure	3	76.8026	0	4	-0.019426	1	12	2	2
86	182490	650256	76.658321	1.936274	1	0.3	76.358321	1	G	1	1	1	Site Infrastructure	3	76.625254	0	4	0.033067	1	12	2	2
87	182499	650266	76.394109	2.378766	2	0.1	76.294109	1	G	1	2	1	Site Infrastructure	3	76.423023	0	4	-0.028914	1	12	2	2
88	182499	650255	76.322422	2.005716	2	0.3	76.022422	1	G	1	2	1	Site Infrastructure	3	76.346594	0	4	-0.024172	1	12	2	2
89	182509	650246	75.929567	1.993913	1	0.3	75.629567	1	G	1	1	1	Site Infrastructure	3	75.952084	0	4	-0.022517	1	12	2	2
90	182510	650256	75.968321	1.980732	1	0.4	75.568321	1	G	1	1	1	Site Infrastructure	3	75.935254	0	4	0.033067	1	12	2	2
91	182520	650266	75.680494	2.082422	2	0.7	74.980494	2	G	1	4	1	Site Infrastructure	3	75.64692	0	4	0.033574	1	12	2	2
92	182510	650266	76.025715	2.182919	2	0.01	76.015715	1	G	1	2	1	Site Infrastructure	3	75.991757	0	4	0.033958	1	12	2	2
93	182520	650256	75.628322	1.983517	1	0.3	75.328322	1	G	1	1	1	Site Infrastructure	3	75.595256	0	4	0.033066	1	12	2	2
94	182520	650246	75.564246	2.581505	2	0.4	75.164246	1	G	1	2	1	Site Infrastructure	3	75.536922	0	4	0.027324	1	12	2	2
95	182530	650246	75.027022	5.206643	4	0.3	74.727022	1	G	1	4	1	Site Infrastructure	3	74.899703	0	4	0.127319	1	12	2	2
96	182530	650226	73.736172	5.117649	4	0.2	73.536172	1	G	1	4	1	Site Infrastructure	3	73.646356	0	4	0.089816	1	12	2	2
97	182510	650226	75.391518	4.183315	4	0.1	75.291518	1	G	1	4	1	Site Infrastructure	3	75.391545	0	4	-2.7E-05	1	12	2	2
98	182540	650225	73.48664	1.120443	1	0.1	73.38664	1	G	1	1	1	Site Infrastructure	3	73.494987	0	4	-0.008347	1	12	2	2
99	182550	650226	73.596288	0.977292	1	0.2	73.396288	1	G	1	1	1	Site Infrastructure	3	73.603318	0	4	-0.00703	1	12	2	2
100	182560	650236	73.826289	0.940687	1	0.1	73.726289	1	G	1	1	1	Site Infrastructure	3	73.833319	0	4	-0.00703	1	12	2	2
101	182540	650236	73.656274	2.495786	2	0.1	73.556274	1	G	1	2	1	Site Infrastructure	3	73.645163	0	4	0.011111	1	12	2	2
102	182540	650246	74.09032	4.864349	4	0.1	73.99032	1	G	1	4	1	Site Infrastructure	3	74.002368	0	4	0.087952	1	12	2	2
103	182550	650246	73.838461	1.084682	1	0.1	73.738461	1	G	1	1	1	Site Infrastructure	3	73.844985	0	4	-0.006524	1	12	2	2
104	182540	650256	74.710286	5.081712	4	0.2	74.510286	1	G	1	4	1	Site Infrastructure	3	74.609702	0	4	0.100584	1	12	2	2
105	182530	650256	75.287244	2.537759	2	0.3	74.987244	1	G	1	2	1	Site Infrastructure	3	75.251756	0	4	0.035488	1	12	2	2
106	182530	650266	75.338321	1.995989	1	0.2	75.138321	1	G	1	1	1	Site Infrastructure	3	75.305255	0	4	0.033066	1	12	2	2
107	182530	650276	75.472215	2.694202	2	0.3	75.172215	1	G	1	2	1	Site Infrastructure	3	75.430427	0	4	0.041788	1	12	2	2
108	182520	650275	75.864145	2.89738	2	0.3	75.564145	1	G	1	2	1	Site Infrastructure	3	75.826196	0	4	0.037949	1	12	2	2
109	182539	650276	75.090417	2.504994	2	0.1	74.990417	1	G	1	2	1	Site Infrastructure	3	75.125135	0	4	-0.034718	1	12	2	2
110	182539	650266	75.003145	2.499427	2	0.5	74.503145	1	G	1	2	1	Site Infrastructure	3	75.033257	0	4	-0.030112	1	12	2	2
111	182539	650285	75.414981	3.069266	2	0.3	75.114981	1	G	1	2	1	Site Infrastructure	3	75.443357	0	4	-0.028376	1	12	2	2
112	182530	650286	75.811196	3.076328	2	0.3	75.511196	1	G	1	2	1	Site Infrastructure	3	75.766198	0	4	0.044998	1	12	2	2
113	182530	650296	76.157247	3.652703	2	0.3	75.857247	1	G	1	2	1	Site Infrastructure	3	76.116197	0	4	0.04105	1	12	2	2
114	182530	650306	76.761474	5.556186	4	0.2	76.561474	1	G	1	4	1	Site Infrastructure	3	76.679097	0	4	0.082377	1	12	2	2
115	182520	650306	77.423175	5.86219	4	0.2	77.223175	1	G	1	4	1	Site Infrastructure	3	77.366776	0	4	0.056399	1	12	2	2
116	182520	650296	76.696884	5.045239	4	0.2	76.496884	1	G	1	4	1	Site Infrastructure	3	76.624224	0	4	0.07266	1	12	2	2
117	182520	650286	76.22784	3.265554	2	0.2	76.02784	1	G	1	2	1	Site Infrastructure	3	76.176196	0	4	0.051644	1	12	2	2
118	182510	650276	76.279461	3.040879	2	0.1	76.179461	1	G	1	2	1	Site Infrastructure	3	76.236199	0	4	0.043262	1	12	2	2
119	182500	650275	76.681116	3.623546	2	0.3	76.381116	1	G	1	2	1	Site Infrastructure	3	76.64453	0	4	0.036586	1	12	2	2
120	182510	650286	76.68211	4.386345	4	0.2	76.48211	1	G	1	4	1	Site Infrastructure	3	76.611731	0	4	0.070379	1	12	2	2
121	182510	650296	77.355749	5.79511	4	0.3	77.055749	1	G	1	4	1	Site Infrastructure	3	77.286775	0	4	0.068974	1	12	2	2
122	182510	650306	78.136255	5.875601	4	0.4	77.736255	1	G	1	4	1	Site Infrastructure	3	78.054264	0	4	0.081991	1	12	2	2
123	182500	650316	79.582599	5.873362	4	0.8	78.782599	2	G	1	8	2	Site Infrastructure	3	79.506776	0	4	0.075823	1	12	2	4
124	182500	650306	78.821474	5.879881	4	0.3	78.521474	1	G	1	4	1	Site Infrastructure	3	78.739097	0	4	0.082377	1	12	2	2
125	182500	650296	78.056253	5.875598	4	0.3	77.756253	1	G	1	4	1	Site Infrastructure	3	77.974262	0	4	0.081991	1	12	2	2
126	182500	650286	77.29867	5.554653	4	0.1	77.19867	1	G	1	4	1	Site Infrastructure	3	77.206777	0	4	0.091893	1	12	2	2
127	182490	650286	77.974082	5.864408	4	0.1	77.874082	1	G	1	4	1	Site Infrastructure	3	77.892596	0	4	0.081486	1	12	2	2
128	182480	650286	78.656277	4.521293	4	1.1	77.556277	3	G	1	12	2	Site Infrastructure	3	78.576776	0	4	0.079501	1	12	2	4
129	182469	650286	78.409539	4.075762	4	0.4	78.009539	1	G	1	4	1	Site Infrastructure	3	78.347252	0	4	0.062287	1	12	2	2
130	182450	650296	78.954768	4.759698	4	0.2	78.754768	1	G	1	4	1	Site Infrastructure	3	78.922839	0	4	0.031929	1	12	2	2
131	182460	650296	78.677889	4.342659	4	0.2	78.477889	1	G	1	4	1	Site Infrastructure	3	78.626827	0	4	0.051062	1	12	2	2
132	182460	650306	79.456593	4.740178	4	0.1	79.356593	1	G	1	4	1	Site Infrastructure	3	79.40915	0	4	0.047443	1	12	2	2
133	182460	650316	80.242916	4.794414	4	0.1	80.142916	1	G	1	4	1	Site Infrastructure	3	80.196829	0	4	0.046087	1	12	2	2
134	182470	650316	79.957343	4.07954	4	0.1	79.857343	1	G	1	4	1	Site Infrastructure	3	79.924325	0	4	0.033018	1	12	2	2
135	182470	650306	79.317971	3.827641	2	0.5	78.817971	1	G	1	2	1	Site Infrastructure	3	79.345099	0	4	-0.027128	1	12	2	2
136	182469	650296	78.820208	3.899414	2	0.3	78.520208	1	G	1	2	1	Site Infrastructure	3	78.771762	0	4	0.048446	1	12	2	2
137	182480	650296	79.269862	3.848375	2	0.7	78.569862	2	G	1	4	1	Site Infrastructure	3	79.244987	0	4	0.024875	1	12	2	2
138	182490	650296	78.747078	5.876797	4	0.2	78.547078	1	G	1	4	1	Site Infrastructure	3	78.659097	0	4	0.087981	1	12	2	2
139	182490	650306	79.515011	5.69646	4	0.2	79.315011	1	G	1	4	1	Site Infrastructure	3	79.426775	0	4	0.088236	1	12	2	2
140	182490	650316	80.282493	5.117588	4	0.1	80.182493	1	G	1	4	1	Site Infrastructure	3	80.194263	0	4	0.08823	1	12	2	2
141	182489	650325	80.99999	4.263953	4	0.2	80.79999	1	G	1	4	1	Site Infrastructure	3	81.06488	0	4	-0.06489	1	12	2	2
142	182480	650305	79.837105	3.824068	2	0.7	79.137105	2	G	1	4	1	Site Infrastructure	3	79.868902	0	4	-0.031797	1	12	2	2
143	182480	650316	80.286481	3.745844	2	0.1	80.186481	1	G	1	2	1	Site Infrastructure	3	80.332603	0	4	-0.046122	1	12	2	2
144	182479	650326	80.701751	3.730707	2	0.4	80.301751	1	G	1	2	1	Site Infrastructure	3	80.641761	0	4	0.05999	1	12	2	2
145	182470	650336	81.502915	4.794914	4	0.3	81.202915	1	G	1	4	1	Site Infrastructure	3	81.456827	0	4	0.046088	1	12	2	2
146	182470	650326	80.722916	4.550351	4	0.2	80.522916	1	G	1	4	1	Site Infrastructure	3	80.676828	0	4	0.046088	1	12	2	2
147	182460	650326	81.022917	4.806222	4	0.1	80.922917	1	G	1	4	1	Site Infrastructure	3	80.97683	0	4	0.046087	1	12	2	2
148	182470	650346	82.291374	4.818793	4	0.2	82.091374	1	G	1	4	1	Site Infrastructure	3	82.244314	0	4	0.04706	1	12	2	2
149	182470	650356	83.072914	4.786724	4	0.2	82.872914	1	G	1	4	1	Site Infrastructure	3	83.026826	0	4	0.046088	1	12	2	2
150	182477	650365	83.586614	4.787597	4	0.1	83.486614	1	G	1	4	1	Site Infrastructure	3	83.62683	0	4	-0.040216	1	12	2	2
151	182480	650376	84.336595	4.826659	4	0.4	83.936595	1	G	1	4	1	Site Infrastructure	3	84.28915	0	4	0.047445	1	12	2	2
152	182480	650386	85.122917	4.794432	4	0.1	85.022917	1	G	1	4	1	Site Infrastructure	3	85.076829	0	4	0.046088	1	12	2	2
153	182490	650386	84.816594	4.815329	4	0.2	84.616594	1	G	1	4	1	Site Infrastructure	3	84.76915	0	4	0.047444	1	12	2	2
154	182490	650396	85.602915	4.794426	4	0.2	85.402915	1	G	1	4	1	Site Infrastructure	3	85.556828	0	4	0.046087	1	12	2	2
155	182490	650406	86.382915	4.806213	4	0.2	86.182915	1	G	1	4	1	Site Infrastructure	3	86.336828	0	4	0.046087	1	12	2	2
156	182500	650406	86.082917	4.7359	4	0.2	85.882917	1	G	1	4	1	Site Infrastructure	3	86.036828	0	4	0.046089	1	12	2	2
157	182490	650416	87.179199	5.156109	4	0.2	86.979199	1	G	1	4	1	Site Infrastructure	3	87.134815	0	4	0.044384	1	12	2	2
158	182500	650416	86.908456	5.639814	4	0.5	86.408456	1	G	1	4	1	Site Infrastructure	3	86.862252	0	4	0.046204	1	12	2	2
159	182500	650426	88.216461	9.763758	6	0.6	87.616461	2	R	1.5	18	3	Site Infrastructure	3	88.164774	0	4	0.051687	1	12	2	6
160	182493	650434	89.75579	9.270759	6	0.2	89.55579	1	G	1	6	2	Site Infrastructure	3	89.340409	2.489247	4	0.415381	1	12	2	4

1 TO 4	Negligible
5 TO10	Low
11 TO 16	Medium
17 TO 25	High

161	182510	650426	87.875248	11.1294	6	0.3	87.575248	1	G	1	6	2	Site Infrastructure	3	87.71846	0	4	0.156788	1	12	2	4
162	182510	650416	86.595551	6.626411	4	0.4	86.195551	1	G	1	4	1	Site Infrastructure	3	86.521057	0	4	0.074494	1	12	2	2
163	182510	650406	85.730792	5.631876	4	0.2	85.530792	1	G	1	4	1	Site Infrastructure	3	85.657889	0	4	0.072903	1	12	2	2
164	182510	650396	85.036255	5.218139	4	0.2	84.836255	1	G	1	4	1	Site Infrastructure	3	84.954264	0	4	0.081991	1	12	2	2
165	182500	650396	85.296594	4.607984	4	0.2	85.096594	1	G	1	4	1	Site Infrastructure	3	85.249149	0	4	0.047445	1	12	2	2
166	182510	650386	84.267796	5.413129	4	0.1	84.167796	1	G	1	4	1	Site Infrastructure	3	84.186776	0	4	0.08102	1	12	2	2
167	182500	650386	84.594594	3.963624	2	0.3	84.294594	1	G	1	2	1	Site Infrastructure	3	84.590213	0	4	0.004381	1	12	2	2
168	182490	650376	84.032913	4.546326	4	0.1	83.932913	1	G	1	4	1	Site Infrastructure	3	83.986825	0	4	0.046088	1	12	2	2
169	182490	650366	83.272949	4.076675	4	0.1	83.172949	1	G	1	4	1	Site Infrastructure	3	83.239492	0	4	0.033457	1	12	2	2
170	182480	650356	82.771376	4.726049	4	0.1	82.671376	1	G	1	4	1	Site Infrastructure	3	82.724316	0	4	0.04706	1	12	2	2
171	182490	650347	82.24559	3.420725	2	0.2	82.04559	1	R	1.5	3	1	Site Infrastructure	3	82.285851	0	4	-0.040261	1	12	2	2
172	182480	650346	81.982918	4.369433	4	0.1	81.882918	1	G	1	4	1	Site Infrastructure	3	81.93683	0	4	0.046088	1	12	2	2
173	182480	650336	81.284594	3.840656	2	0.2	81.084594	1	G	1	2	1	Site Infrastructure	3	81.280214	0	4	0.00438	1	12	2	2
174	182490	650336	81.608533	3.81834	2	0.01	81.598533	1	G	1	2	1	Site Infrastructure	3	81.59393	0	4	0.014603	1	12	2	2
175	182490	650356	82.632752	3.657716	2	0.3	82.332752	1	G	1	2	1	Site Infrastructure	3	82.660265	0	4	-0.027513	1	12	2	2
176	182500	650326	80.356256	5.875595	4	0.4	79.956256	1	G	1	4	1	Site Infrastructure	3	80.274265	0	4	0.081991	1	12	2	2
177	182500	650336	81.121473	5.879885	4	0.6	80.521473	2	G	1	8	2	Site Infrastructure	3	81.039096	0	4	0.082377	1	12	2	4
178	182500	650346	81.887795	5.545061	4	0.6	81.287795	2	G	1	8	2	Site Infrastructure	3	81.806775	0	4	0.08102	1	12	2	4
179	182500	650356	82.656254	4.949722	4	0.4	82.256254	1	G	1	4	1	Site Infrastructure	3	82.574262	0	4	0.081992	1	12	2	2
180	182500	650366	83.366306	4.149635	4	0.1	83.266306	1	G	1	4	1	Site Infrastructure	3	83.304279	0	4	0.062027	1	12	2	2
181	182499	650376	83.970949	3.890085	2	0.1	83.870949	1	G	1	2	1	Site Infrastructure	3	83.908124	0	4	0.062825	1	12	2	2
182	182510	650376	83.501474	5.865155	4	0.2	83.301474	1	G	1	4	1	Site Infrastructure	3	83.419098	0	4	0.082376	1	12	2	2
183	182510	650366	82.736253	5.875598	4	0.5	82.236253	1	G	1	4	1	Site Infrastructure	3	82.654262	0	4	0.081991	1	12	2	2
184	182520	650356	81.281473	5.879886	4	0.9	80.381473	2	G	1	8	2	Site Infrastructure	3	81.199096	0	4	0.082377	1	12	2	4
185	182510	650356	81.967797	5.873394	4	0.6	81.367797	2	G	1	8	2	Site Infrastructure	3	81.886777	0	4	0.08102	1	12	2	4
186	182510	650346	81.201472	5.879879	4	0.6	80.601472	2	G	1	8	2	Site Infrastructure	3	81.119096	0	4	0.082376	1	12	2	4
187	182510	650336	80.436253	5.875606	4	0.9	79.536253	2	G	1	8	2	Site Infrastructure	3	80.354261	0	4	0.081992	1	12	2	4
188	182510	650326	79.667795	5.873389	4	0.6	79.067795	2	G	1	8	2	Site Infrastructure	3	79.586776	0	4	0.081019	1	12	2	4
189	182510	650316	78.901473	5.879883	4	0.3	78.601473	1	G	1	4	1	Site Infrastructure	3	78.819096	0	4	0.082377	1	12	2	2
190	182519	650315	78.221861	5.875413	4	0.1	78.121861	1	G	1	4	1	Site Infrastructure	3	78.271936	0	4	-0.050075	1	12	2	2
191	182520	650326	78.981471	5.879876	4	0.4	78.581471	1	G	1	4	1	Site Infrastructure	3	78.899095	0	4	0.082376	1	12	2	2
192	182520	650336	79.747795	5.873394	4	1.3	78.447795	3	G	1	12	2	Site Infrastructure	3	79.666776	0	4	0.081019	1	12	2	4
193	182521	650345	80.404148	5.879207	4	1.1	79.304148	3	G	1	12	2	Site Infrastructure	3	80.434263	0	4	-0.030115	1	12	2	4
194	182520	650366	82.047795	5.873397	4	0.4	81.647795	1	G	1	4	1	Site Infrastructure	3	81.966775	0	4	0.08102	1	12	2	2
195	182520	650376	82.816255	5.873312	4	0.7	82.116255	2	G	1	8	2	Site Infrastructure	3	82.734264	0	4	0.081991	1	12	2	4
196	182520	650386	83.581474	6.19082	4	0.4	83.181474	1	R	1.5	6	2	Site Infrastructure	3	83.499097	0	4	0.082377	1	12	2	4
197	182520	650396	84.191178	7.274456	4	0.3	83.891178	1	G	1	4	1	Site Infrastructure	3	84.057743	0	4	0.133435	1	12	2	2
198	182520	650406	84.652217	8.352255	6	0.1	84.552217	1	G	1	6	2	Site Infrastructure	3	84.535051	0	4	0.117166	1	12	2	4
199	182520	650416	85.68635	7.557128	4	0.3	85.38635	1	G	1	4	1	Site Infrastructure	3	85.568021	0	4	0.118329	1	12	2	2
200	182520	650426	86.104728	11.929178	6	0.2	85.904728	1	G	1	6	2	Site Infrastructure	3	86.278991	1.093524	4	-0.174263	1	12	2	4
201	182530	650426	84.402065	10.650164	6	0.2	84.202065	1	G	1	6	2	Site Infrastructure	3	84.229902	4.333889	4	0.172163	1	12	2	4
202	182530	650416	84.36989	9.277375	6	0.2	84.16989	1	G	1	6	2	Site Infrastructure	3	84.210604	0	4	0.159286	1	12	2	4
203	182530	650406	83.568344	9.84806	6	0.2	83.368344	1	G	1	6	2	Site Infrastructure	3	83.425169	0	4	0.143175	1	12	2	4
204	182530	650396	82.788121	8.355026	6	1.1	81.688121	3	R	1.5	27	3	Site Infrastructure	3	82.646077	0	4	0.142044	1	12	2	6
205	182530	650386	82.438121	8.15127	6	0.8	81.638121	2	G	1	12	2	Site Infrastructure	3	82.296077	0	4	0.142044	1	12	2	4
206	182530	650376	82.019085	7.042154	4	1.3	80.719085	3	G	1	12	2	Site Infrastructure	3	81.895127	0	4	0.123958	1	12	2	4
207	182530	650366	81.361475	6.08097	4	1	80.361475	2	G	1	8	2	Site Infrastructure	3	81.279098	0	4	0.082377	1	12	2	4
208	182530	650356	80.596254	5.873743	4	1.3	79.296254	3	G	1	12	2	Site Infrastructure	3	80.514263	0	4	0.081991	1	12	2	4
209	182530	650346	79.827795	5.873391	4	0.3	79.527795	1	G	1	4	1	Site Infrastructure	3	79.746775	0	4	0.08102	1	12	2	2
210	182530	650336	79.061473	5.879879	4	0.4	78.661473	1	G	1	4	1	Site Infrastructure	3	78.979097	0	4	0.082376	1	12	2	2
211	182530	650326	78.296253	5.875606	4	0.1	78.196253	1	G	1	4	1	Site Infrastructure	3	78.214262	0	4	0.081991	1	12	2	2
212	182530	650316	77.527794	5.873399	4	0.3	77.227794	1	G	1	4	1	Site Infrastructure	3	77.446775	0	4	0.081019	1	12	2	2
213	182540	650296	75.757557	3.102645	2	0.5	75.257557	1	G	1	2	1	Site Infrastructure	3	75.711031	0	4	0.046526	1	12	2	2
214	182540	650306	76.144335	4.318731	4	0.5	75.644335	1	G	1	4	1	Site Infrastructure	3	76.084244	0	4	0.060091	1	12	2	2
215	182540	650316	76.841471	5.801514	4	0.5	76.341471	1	G	1	4	1	Site Infrastructure	3	76.759096	0	4	0.082375	1	12	2	2
216	182540	650326	77.607796	5.873394	4	0.3	77.307796	1	G	1	4	1	Site Infrastructure	3	77.526776	0	4	0.08102	1	12	2	2
217	182540	650336	78.376255	5.875608	4	0.4	77.976255	1	G	1	4	1	Site Infrastructure	3	78.294264	0	4	0.081991	1	12	2	2
218	182540	650346	79.141473	5.981071	4	1	78.141473	2	R	1.5	12	2	Site Infrastructure	3	79.059097	0	4	0.082376	1	12	2	4
219	182540	650356	79.834885	6.763997	4	0.9	78.934885	2	R	1.5	12	2	Site Infrastructure	3	79.726722	0	4	0.108163	1	12	2	4
220	182540	650366	80.304403	7.93865	4	1.2	79.104403	3	R	1.5	18	3	Site Infrastructure	3	80.161893	0	4	0.14251	1	12	2	6
221	182540	650376	80.64812	8.170426	6	1.2	79.44812	3	R	1.5	27	3	Site Infrastructure	3	80.506076	0	4	0.142044	1	12	2	6
222	182540	650396	81.391233	7.679898	4	0.3	81.091233	1	G	1	4	1	Site Infrastructure	3	81.266952	0	4	0.124281	1	12	2	2
223	182540	650386	80.99812	7.750014	4	0.6	80.39812	2	G	1	8	2	Site Infrastructure	3	80.856076	0	4	0.142044	1	12	2	4
224	182540	650406	82.008779	11.041999	6	0.4	81.608779	1	G	1	6	2	Site Infrastructure	3	81.795023	0	4	0.213756	1	12	2	4
225	182540	650416	82.398446	11.681549	6	0.3	82.098446	1	G	1	6	2	Site Infrastructure	3	82.202872	0	4	0.195574	1	12	2	4
226	182550	650416	80.51691	7.739468	4	1.8	78.71691	3	G	1	12	2	Site Infrastructure	3	80.651121	1.093524	4	-0.134211	1	12	2	4
227	182550	650406	80.285193	7.094434	4	1	79.285193	2	G	1	8	2	Site Infrastructure	3	80.179612	0	4	0.105581	1	12	2	4
228	182550	650396	80.290614	6.319539	4	0.2	80.090614	1	G	1	4	1	Site Infrastructure	3	80.177436	0	4	0.113178	1	12	2	2
229	182550	650386	80.036946	5.20056	4	1.5	78.536946	3	G	1	12	2	Site Infrastructure	3	79.964769	0	4	0.072177	1	12	2	4
230	182550	650376	79.489556	5.4859	4	1.7	77.789556	3	G	1	12	2	Site Infrastructure	3	79.418271	0	4	0.071285	1	12	2	4
231	182550	650366	78.990541	6.117413	4	0.1	78.890541	1	G	1	4	1	Site Infrastructure	3	78.904877	0	4	0.085664	1	12	2	2
232	182549	650357	78.704689	7.256363	4	0.2	78.504689	1	G	1	4	1	Site Infrastructure	3	78.761716	0	4	-0.057027	1	12	2	2
233	182550	650346	78.168119	7.071894	4	0.6	77.568119	2	R	1.5	12	2	Site Infrastructure	3	78.026074	0	4	0.142045	1	12	2	4
234	182550	650336	77.643455	6.363213	4	0.4	77.243455	1	G	1	4	1	Site Infrastructure	3	77.547282	0	4	0.096173	1	12	2	2
235	182550	650326	76.921473	5.937194	4	0.6	76.321473	2	G	1	8	2	Site Infrastructure	3	76.839098	0	4	0.082375	1	12	2	4
236	182550	650316	76.173205	5.014497	4	0.1	76.073205	1	G	1	4	1	Site Infrastructure	3	76.101901	0	4	0.071304	1	12	2	2
237	182550	650306	75.697555	3.260475	2	0.1	75.597555	1	G	1	2	1	Site Infrastructure	3	75.65103	0	4	0.046525	1	12	2	2
238	182560	650306	75.381447	2.369396	2	0.5	74.881447	1	G	1	2	1	Site Infrastructure	3	75.376799	0	4	0.004648	1	12	2	2
239	182560	650296	75.031446	2.369395	2	0.9	74.131446	2	G	1	4	1	Site Infrastructure	3	75.026799	0	4	0.004647	1	12	2	2
240	182570	650296	75.38905	3.445962	2	0.3	75.08905	1	G	1	2	1	Site Infrastructure	3	75.426745	0	4	-0.037695	1	12	2	2
241	182570	650306	75.739048	3.445982	2	0.1	75.639048	1	G	1	2	1	Site Infrastructure	3	75.776743	0	4	-0.037695	1	12	2	2
242	182570	650286	75.039051	3.420595	2	0.3	74.739051	1	G	1	2	1	Site Infrastructure	3	75.076746	0	4	-0.037695	1	12	2	2
243	182550	650284	74.931397	3.009151	2	0.2	74.731397	1	G	1	2	1	Site Infrastructure	3	74.881435	0	4	0.049962	1	12	2	2
244	182560	650286	74.681446	2.341612	2	0.2	74.481446	1	G	1	2	1	Site Infrastructure	3	74.676799	0	4	0.004647	1	12	2	2
245	182550	650296	75.347556	3.08566	2	0.6	74.747556	2	G	1	4	1	Site Infrastructure	3	75.301032	0	4	0.046524	1	12	2	2
246	182560	650276	74.366273	2.035209	2	0.2	74.166273	1	G	1	2	1	Site Infrastructure	3	74.355162	0	4	0.011111	1	12	2	2
247	182550	650276	74.712001	2.628877	2	0.3	74.412001	1	G	1	2	1	Site Infrastructure	3	74.677577	0	4	0.034424	1	12	2	2
248	182560	650316	75.731446	2.586405	2	0.3	75.431446	1	G	1	2	1	Site Infrastructure	3	75.726798	0	4	0.004648	1	12	2	2
249	182560	650326	76.152401	4.229405	4	0.5	75.652401	1	R	1.5	6	2	Site Infrastructure	3	76.076617	0	4	0.075784	1	12	2	4
250	182560	650346	77.206949	4.973589	4	0.2	77.006949	1	R	1.5	6	2	Site Infrastructure	3	77.134772	0	4	0.072177	1	12	2	4
251	182560	650336	76.656948	5.312085	4	0.3	76.356948	1	R	1.5	6	2	Site Infrastructure	3	76.584772	0	4	0.072176	1	12	2	4
252	182560	650356	77.756947	4.797563	4	0.4	77.356947	1	G	1	4	1	Site Infrastructure	3	77.684771	0	4	0.072176	1	12	2	2
253	182560	650366	78.304775	4.802002	4	0.4	77.904775	1	G	1	4	1	Site Infrastructure	3	78.233105	0	4	0.07167	1	12	2	2
254	182560	650376	78.854772	4.995818	4	0.3	78.554772	1	G	1	4	1	Site Infrastructure	3	78.783102	0	4	0.07167	1	12	2	2
255	182560	650386	79.104762	5.817491	4	0.3	78.804762	1	G	1	4	1	Site Infrastructure	3	78.993447	0	4	0.111315	1	12	2	2
256	182560	650396	79.193474	4.835947	4	0.2	78.993474	1	G	1	4	1	Site Infrastructure	3	79.125097	0	4	0.068377	1	12	2	2
257	182560	650406	79.524801	3.793413	2	0.5	79.024801	1	G	1	2	1	Site Infrastructure	3	79.462602	0	4	0.062199	1	12	2	2
258	182570	650406	78.950833	3.525406	2	0.8	78.150833	2	G	1	4	1	Site Infrastructure	3	78.893712	0	4	0.057121	1	12	2	2
259	182580	650406	78.353203	3.575772	2	0.8	77.553203	2	G	1	4	1	Site Infrastructure	3	78.2927	0	4	0.060503	1	12	2	2
260	182580	650396	78.100012	3.685322	2	0.7	77.400012	2	G	1	4	1	Site Infrastructure	3	78.041763	0	4	0.058249	1	12	2	2
261	182570	650386	78.237841	4.06151	4	0.9	77.337841	2	G	1	8	2	Site Infrastructure	3	78.1801	0	4	0.057741	1	12	2	4
262	182579	650385	77.709106	3.734793	2	1.2	76.509106	3	G	1	6	2	Site Infrastructure	3	77.758277	0	4	-0.049171	1	12	2	4
263	182570	650396	78.621556	3.731535	2	0.9	77.721556	2	G	1	4	1	Site Infrastructure	3	78.564279	0	4	0.057277	1	12	2	2
264	182580	650376	77.325233	3.754224	2	0.4	76.925233	1	G	1	2	1	Site Infrastructure	3	77.266599	0	4	0.058634	1	12	2	2
265	182570	650376	77.975383	4.991156	4	0.2	77.775383	1	G	1	4	1	Site Infrastructure	3	77.880925	0	4	0.094458	1	12	2	2
266	182570	650366	77.669554	4.8386	4	0.2	77.469554	1	G	1	4	1	Site Infrastructure	3	77.598269	0	4	0.071285	1	12	2	2
267	182580	650366	76.953053	3.737163	2	0.1	76.853053	1	G	1	2	1	Site Infrastructure	3	76.891766	0	4	0.061287	1	12	2	2
268	182570	650357	77.17584	4.715417	4	0.2	76.97584	1	G	1	4	1	Site Infrastructure	3	77.158676	0	4	0.017164	1	12	2	2
269	182580	650356	76.597313	2.812236	2	0.2	76.397313	1	G	1	2	1	Site Infrastructure	3	76.569154	0	4	0.028159	1	12	2	2
270	182580	650346	76.279396	1.945115	1	0.6	75.679396	2	G	1	2	1	Site Infrastructure	3	76.26124	0	4	0.018156	1	12	2	2
271	182570	650346	76.584019	4.037341	4	0.3	76.284019	1	G	1	4	1	Site Infrastructure	3	76.518179	0	4	0.06584	1	12	2	2
272	182570	650337	76.163818	2.699623	2	0.5	75.663818	1	G	1	2	1	Site Infrastructure	3	76.178724	0	4	-0.014906	1	12	2	2
273	182580	650336	76.051428	0.9508	1	2.1	73.951428	3	G	1	3	1	Site Infrastructure	3	76.057743	0	4	-0.006315	1	12	2	2
274	182580	650326	76.198941	1.930478	1	0.7	75.498941	2	G	1	2	1	Site Infrastructure	3	76.23014	0	4	-0.031199	1	12	2	2
275	182570	650326	75.948366	1.156816	1	1	74.948366	2	G	1	2	1	Site Infrastructure	3	75.968712	0	4	-0.020346	1	12	2	2
276	182570	650316	76.051466	2.400118	2	0.4	75.651466	1	G	1	2	1	Site Infrastructure	3	76.07893	0	4	-0.027464	1	12	2	2
277	182580	650316	76.398076	2.116578	2	0.3	76.098076	1	G	1	2	1	Site Infrastructure	3	76.431807	0	4	-0.033731	1	12	2	2
278	182550	650236	73.718462	0.930606	1	0.1	73.618462	1	G	1	1	1	Site Infrastructure	3	73.724985	0	4	-0.006523	1	12	2	2
279	182590	650346	76.177134	1.043157	1	0.3	75.877134	1	G	1	1	1	Site Infrastructure	3	76.176466	0	4	0.000668	1	12	2	2
280	182590	650356	76.446785	1.552465	1	0.3	76.146785	1	G	1	1	1	Site Infrastructure	3	76.427738	0	4	0.019047	1	12	2	2
281	182589	650365	76.571817	1.487892	1	0.4	76.171817	1	G	1	1	1	Site Infrastructure	3	76.581263	0	4	-0.009446	1	12	2	2
282	182589	650376	76.81471	3.344499	2	0.3	76.51471	1	G	1	2	1	Site Infrastructure	3	76.847439	0	4	-0.032729	1	12	2	2
283	182589	650386	77.201593	3.742308	2	0.2	77.001593	1	G	1	2	1	Site Infrastructure	3	77.232928	0	4	-0.031335	1	12	2	2
284	182590	650396	77.545692	3.645261	2	0.6	76.945692	2	G	1	4	1	Site Infrastructure	3	77.500279	0	4	0.045413	1	12	2	2
285	182599	650376	76.43116	1.401373	1	0.2	76.23116	1	G	1	1	1	Site Infrastructure	3	76.442104	0	4	-0.010944	1	12	2	2
286	182600	650386	76.646544	3.238367	2	0.4	76.246544	1	G	1	2	1	Site Infrastructure	3	76.604278	0	4	0.042266	1	12	2	2
287	182600	650396	76.990808	3.538762	2	1.9	75.090808	3	G	1	6	2	Site Infrastructure	3	76.926033	0	4	0.064775	1	12	2	4
288	182605	650395	76.63156	3.122194	2	1.9	74.73156	3	G	1	6	2	Site Infrastructure	3	76.690378	0	4	-0.058818	1	12	2	4
289	182600	650411	77.17789	3.410258	2	1.8	75.37789	3	G	1	6	2	Site Infrastructure	3	76.82808	11.170127	3	0.34981	1	9	1	2
290	182599	650420	77.332106	3.200317	2	2	75.332106	3	G	1	6	2	Site Infrastructure	3	77.000083	7.21099	4	0.332023	1	12	2	4
291	182590	650411	77.81172	3.658501	2	3	74.81172	3	C	2	12	2	Site Infrastructure	3	77.90238	8.415778	4	-0.09066	1	12	2	4
292	182590	650420	77.916435	3.631177	2	3.2	74.716435	8	G	1	16	3	Site Infrastructure	3	77.166264	15.878152	3	0.750171	1	9	1	3
293	182580	650411	78.433822	3.587606	2	2.5	75.933822	3	R	1.5	9	2	Site Infrastructure	3	78.2927	5.8429	4	0.141122	1	12	2	4
294	182580	650421	78.54479	3.657848	2	2.3	76.24479	3	G	1	6	2	Site Infrastructure	3	78.808377	15.210659	3	-0.263587	1	9	1	2
295	182580	650431	78.665572	3.666901	2	1.5	77.165572	3	G	1	6	2	Site Infrastructure	3	77.84226	20.012849	3	0.823312	1	9	1	2
296	182590	650431	78.047646	3.479123	2	0.9	77.147646	2	G	1	4	1	Site Infrastructure	3	77.678085	10.936	3	0.369561	1	9	1	1
297	182600	650431	77.502099	3.059843	2	0.7	76.802099	2	G	1	4	1	Site Infrastructure	3	77.506082	2.762992	4	-0.003983	1	12	2	2
298	182610	650431	76.998608	3.040305	2	1	75.998608	2	R	1.5	6	2	Site Infrastructure	3	77.098264	4.397568	4	-0.099656	1	12	2	4
299	182610	650421	76.832467	3.040572	2	1.3	75.532467	3	G	1	6	2	Site Infrastructure	3	76.900083	1.356023	4	-0.067616	1	12	2	4
300	182610	650411	76.657329	3.041952	2	1.1	75.557329	3	R	1.5	9	2	Site Infrastructure	3	76.656082	2.684742	4	0.001247	1	12	2	4
301	182620	650411	76.181944	1.899352	1	0.4	75.781944	1	R	1.5	1.5	1	Site Infrastructure	3	76.258081	4.945056	4	-0.076137	1	12	2	2
302	182630	650411	76.240764	2.435687	2	1.8	74.440764	3	G	1	6	2	Site Infrastructure	3	76.258081	13.494696	3	-0.017317	1	9	1	2
303	182630	650421	75.980039	1.455961	1	0.1	75.880039	1	G	1	1	1	Site Infrastructure	3	76.422262	17.94243	3	-0.442223	1	9	1	1
304	182629	650431	76.03593	2.490481	2	0.7	75.33593	2	G	1	4	1	Site Infrastructure	3	76.764081	21.584392	3	-0.728151	1	9	1	1
305	182619	650420	76.326549	2.867598	2	1	75.326549	2	G	1	4	1	Site Infrastructure	3	76.592081	8.439504	4	-0.265532	1	12	2	2
306	182620	650431	76.500217	3.031509	2	1.1	75.400217	3	G	1	6	2	Site Infrastructure	3	76.934263	13.331446	3	-0.434046	1	9	1	2
307	182605	650435	77.288327	3.042996	2	1.3	75.988327	3	G	1	6	2	Site Infrastructure	3	77.442084	2.932697	4	-0.153757	1	12	2	4
308	182599	650441	77.68388	3.023035	2	1.4	76.28388	3	R	1.5	9	2	Site Infrastructure	3	77.74226	1.136791	4	-0.05838	1	12	2	4
309	182589	650441	78.198875	3.234606	2	1.5	76.698875	3	G	1	6	2	Site Infrastructure	3	78.012082	6.484278	4	0.186793	1	12	2	4
310	182580	650441	78.785513	3.641316	2	1.3	77.485513	3	G	1	6	2	Site Infrastructure	3	78.148084	14.412766	3	0.637429	1	9	1	2
311	182580	650451	78.886648	3.522774	2	0.8	78.086648	2	G	1	4	1	Site Infrastructure	3	78.48626	10.0299	3	0.400388	1	9	1	1
312	182590	650450	78.34681	3.0706	2	1.5	76.84681	3	G	1	6	2	Site Infrastructure	3	78.320081	1.263119	4	0.026729	1	12	2	4
313	182600	650451	77.856226	3.049324	2	1.6	76.256226	3	G	1	6	2	Site Infrastructure	3	77.948084	5.199002	4	-0.091858	1	12	2	4
314	182610	650441	77.168775	3.046841	2	0.8	76.368775	2	G	1	4	1	Site Infrastructure	3	77.442084	9.314365	4	-0.273309	1	12	2	2
315	182610	650451	77.356745	3.023038	2	1.1	76.256745	3	G	1	6	2	Site Infrastructure	3	77.948084	13.756353	3	-0.591339	1	9	1	2
316	182620	650451	76.849274	3.046736	2	1.1	75.749274	3	G	1	6	2	Site Infrastructure	3	77.610263	22.199639	3	-0.760989	1	9	1	2
317	182620	650441	76.671875	3.038519	2	1.3	75.371875	3	G	1	6	2	Site Infrastructure	3	77.270082	17.814664	3	-0.598207	1	9	1	2
318	182630	650441	76.16769	2.981315	2	0.8	75.36769	2	G	1	4	1	Site Infrastructure	3	77.098264	26.655554	3	-0.930574	1	9	1	1
319	182630	650451	76.327404	3.036927	2	0.7	75.627404	2	G	1	4	1	Site Infrastructure	3	77.442084	31.237409	3	-1.11468	1	9	1	1
320	182650	650411	76.971991	2.969757	2	0.3	76.671991	1	G	1	2	1	Site Infrastructure	3	76.258081	33.171875	3	0.71391	1	9	1	1
321	182700	650393	79.220762	2.178316	2	1	78.220762	2	G	1	4	1	Roads and Tracks	3	79.331096	76.084947	3	-0.110334	1	9	1	1
322	182630	650460	76.510353	3.032354	2	0.4	76.110353	1	G	1	2	1	Site Infrastructure	3	77.77608	35.492323	3	-1.265727	1	9	1	1
323	182620	650461	77.009062	3.036227	2	0.3	76.709062	1	G	1	2	1	Site Infrastructure	3	77.948084	26.712797	3	-0.939022	1	9	1	1
324	182610	650461	77.522707	3.0384	2	1	76.522707	2	G	1	4	1	Site Infrastructure	3	78.120081	17.728861	3	-0.597374	1	9	1	1
325	182600	650461	78.023559	3.037743	2	0.4	77.623559	1	G	1	2	1	Site Infrastructure	3	78.28626	8.835628	4	-0.262701	1	12	2	2

326	182590	650461	78.524639	3.036615	2	0.9	77.624639	2	G	1	4	1	Site Infrastructure	3	78.590085	1.323209	4	-0.065446	1	12	2	2
327	182579	650461	79.056905	3.298329	2	0.3	78.756905	1	G	1	2	1	Site Infrastructure	3	78.826085	5.539516	4	0.23082	1	12	2	2
328	182554	650459	81.524429	12.417987	6	0.1	81.424429	1	G	1	6	2	Site Infrastructure	3	80.15146	9.958141	4	1.372969	1	12	2	4
329	182503	650477	89.88935	2.425541	2	0.6	89.28935	2	G	1	4	1	Site Infrastructure	3	89.305531	45.742419	3	0.583819	1	9	1	1
330	182643	650522	75.969627	4.038519	4	0.5	75.469627	1	G	1	4	1	Site Infrastructure	3	78.762084	80.153479	3	-2.792457	1	9	1	1
331	182660	650568	73.832216	4.159982	4	0.2	73.632216	1	G	1	4	1	Minor Water Feature	6	68.672505	95.600001	3	5.159711	1	18	2	2
332	182664	650611	71.471179	5.726591	4	1.2	70.271179	3	G	1	12	2	Minor Water Feature	6	69.151347	53.208522	3	2.319832	1	18	2	4
333	182665	650621	70.967249	5.697264	4	0.3	70.667249	1	G	1	4	1	Minor Water Feature	6	69.151347	42.62162	3	1.815902	1	18	2	2
334	182665	650632	70.777337	5.701785	4	0.2	70.577337	1	G	1	4	1	Minor Water Feature	6	69.151347	32.788632	3	1.62599	1	18	2	2
335	182665	650642	70.55579	5.574978	4	0.1	70.45579	1	R	1.5	6	2	Minor Water Feature	6	69.151347	23.083787	3	1.404443	1	18	2	4
336	182664	650661	69.952825	6.5501	4	0.3	69.652825	1	G	1	4	1	Minor Water Feature	6	69.369851	4.944128	4	0.582974	1	24	3	3
337	182665	650650	70.453447	5.269915	4	0.1	70.353447	1	G	1	4	1	Minor Water Feature	6	69.369851	15.125946	3	1.083596	1	18	2	2
338	182674	650660	69.333686	5.712457	4	0.4	68.933686	1	G	1	4	1	Minor Water Feature	6	69.043349	3.455631	4	0.290337	1	24	3	3
339	182674	650650	69.600037	5.358445	4	0.4	69.200037	1	G	1	4	1	Minor Water Feature	6	69.043349	13.430112	3	0.556688	1	18	2	2
340	182673	650640	69.78381	5.478262	4	0.2	69.58381	1	G	1	4	1	Minor Water Feature	6	68.672505	23.39554	3	1.111305	1	18	2	2
341	182675	650630	69.788202	5.67952	4	0.2	69.588202	1	G	1	4	1	Minor Water Feature	6	68.672505	32.06735	3	1.115697	1	18	2	2
342	182685	650660	68.493441	5.290087	4	0.1	68.393441	1	G	1	4	1	Minor Water Feature	6	68.484504	1.199698	4	0.008937	1	24	3	3
343	182685	650651	68.592414	5.363981	4	1.2	67.392414	3	G	1	12	2	Minor Water Feature	6	68.484504	10.612835	3	0.10791	1	18	2	4
344	182684	650641	68.746435	5.372629	4	0.9	67.846435	2	G	1	8	2	Minor Water Feature	6	67.766511	20.382658	3	0.979924	1	18	2	4
345	182685	650630	68.851104	5.384724	4	1.7	67.151104	3	G	1	12	2	Minor Water Feature	6	67.766511	30.003714	3	1.084593	1	18	2	4
346	182684	650611	69.899195	4.890601	4	0.9	68.999195	2	G	1	8	2	Minor Water Feature	6	67.766511	49.582242	3	2.132684	1	18	2	4
347	182684	650621	69.322797	5.208419	4	1.2	68.122797	3	G	1	12	2	Minor Water Feature	6	67.766511	39.774458	3	1.556286	1	18	2	4
348	182674	650611	70.58565	5.500826	4	1	69.58565	2	G	1	8	2	Minor Water Feature	6	68.672505	51.191522	3	1.913145	1	18	2	4
349	182675	650621	70.127032	5.696061	4	0.9	69.227032	2	G	1	8	2	Minor Water Feature	6	68.672505	41.551069	3	1.454527	1	18	2	4
350	182696	650661	67.435472	4.946696	4	0.5	66.935472	1	G	1	4	1	Minor Water Feature	6	67.395455	1.974909	4	0.040017	1	24	3	3
351	182705	650661	66.744885	4.315277	4	0.9	65.844885	2	G	1	8	2	Minor Water Feature	6	66.81298	3.529729	4	-0.068095	1	24	3	6
352	182704	650650	66.958979	4.353361	4	1.1	65.858979	3	G	1	12	2	Minor Water Feature	6	66.81298	7.025093	4	0.145999	1	24	3	6
353	182695	650651	67.684174	4.912638	4	0.5	67.184174	1	G	1	4	1	Minor Water Feature	6	67.580983	8.768021	4	0.103191	1	24	3	3
354	182694	650640	67.856228	4.671182	4	1.7	66.156228	3	G	1	12	2	Minor Water Feature	6	67.108982	18.347962	3	0.747246	1	18	2	4
355	182690	650637	68.264807	5.034281	4	0.8	67.464807	2	G	1	8	2	Minor Water Feature	6	67.766511	22.523042	3	0.498296	1	18	2	4
356	182694	650629	68.113998	4.911669	4	1.7	66.413998	3	G	1	12	2	Minor Water Feature	6	67.108982	28.708227	3	1.005016	1	18	2	4
357	182695	650620	68.670844	5.104583	4	0.4	68.270844	1	G	1	4	1	Minor Water Feature	6	67.108982	37.731197	3	1.561862	1	18	2	2
358	182695	650610	69.261653	4.899404	4	0.2	69.061653	1	G	1	4	1	Minor Water Feature	6	67.108982	47.359204	3	2.152671	1	18	2	2
359	182704	650611	68.669993	5.288509	4	0.2	68.469993	1	G	1	4	1	Minor Water Feature	6	66.252984	45.58039	3	2.417009	1	18	2	2
360	182714	650610	68.063164	5.545765	4	0.4	67.663164	1	G	1	4	1	Minor Water Feature	6	65.692981	44.27435	3	2.370183	1	18	2	2
361	182716	650620	67.263434	5.564689	4	0.3	66.963434	1	G	1	4	1	Minor Water Feature	6	65.692981	34.075981	3	1.570453	1	18	2	2
362	182704	650621	67.96067	5.541075	4	0.9	67.06067	2	G	1	8	2	Minor Water Feature	6	66.252984	35.246876	3	1.707686	1	18	2	4
363	182704	650631	67.297821	4.8514	4	1.3	65.997821	3	G	1	12	2	Minor Water Feature	6	66.252984	25.482714	3	1.044837	1	18	2	4
364	182706	650641	66.999015	4.37736	4	1.2	65.799015	3	G	1	12	2	Minor Water Feature	6	66.252984	15.724997	3	0.746031	1	18	2	4
365	182715	650660	66.023517	4.190876	4	0.4	65.623517	1	G	1	4	1	Minor Water Feature	6	66.104983	4.544803	4	-0.081466	1	24	3	3
366	182714	650650	66.206659	4.329598	4	1.3	64.906659	3	G	1	12	2	Minor Water Feature	6	66.104983	5.477906	4	0.101676	1	24	3	6
367	182715	650640	66.335734	4.339601	4	0.6	65.735734	2	G	1	8	2	Minor Water Feature	6	65.692981	14.70113	3	0.642753	1	18	2	4
368	182714	650630	66.663603	5.15614	4	0.1	66.563603	1	G	1	4	1	Minor Water Feature	6	65.692981	24.207801	3	0.970622	1	18	2	2
369	182733	650610	66.704198	5.553281	4	0.1	66.604198	1	G	1	4	1	Minor Water Feature	6	64.829157	41.162527	3	1.875041	1	18	2	2
370	182785	650595	65.213822	6.154286	4	0.3	64.913822	1	G	1	4	1	Minor Water Feature	6	60.42202	42.619041	3	4.791802	1	18	2	2
371	182604	650683	74.720645	7.247243	4	0.2	74.520645	1	G	1	4	1	Minor Water Feature	6	75.214081	6.17046	4	-0.493436	1	24	3	3
372	182647	650660	71.040915	8.722743	6	0.3	70.740915	1	G	1	6	2	Minor Water Feature	6	69.799527	8.744434	4	1.241388	1	24	3	6
373	182736	650710	66.134676	3.013444	2	0.1	66.034676	1	G	1	2	1	Roads and Tracks	3	65.909136	37.759967	3	0.22554	1	9	1	1
374	182772	650761	66.715404	4.409353	4	0.2	66.515404	1	G	1	4	1	Roads and Tracks	3	66.999017	11.024589	3	-0.283613	1	9	1	1
375	182820	650820	61.43684	7.701969	4	0.3	61.13684	1	G	1	4	1	Roads and Tracks	3	67.908833	49.566339	3	-6.471993	1	9	1	1
376	182809	650820	62.783334	7.57976	4	0.3	62.483334	1	G	1	4	1	Roads and Tracks	3	67.908833	39.434163	3	-5.125499	1	9	1	1
377	182800	650820	64.046322	7.51338	4	0.1	63.946322	1	G	1	4	1	Roads and Tracks	3	67.908833	30.07557	3	-3.862511	1	9	1	1
378	182800	650830	63.767039	8.169546	6	0.4	63.367039	1	G	1	6	2	Roads and Tracks	3	67.773529	29.286944	3	-4.00649	1	9	1	2
379	182809	650832	62.397356	8.224506	6	0.1	62.297356	1	G	1	6	2	Roads and Tracks	3	67.022738	38.702223	3	-4.625382	1	9	1	2
380	182810	650841	61.942985	7.841934	4	0.2	61.742985	1	G	1	4	1	Roads and Tracks	3	67.022738	37.473958	3	-5.079753	1	9	1	1
381	182820	650831	60.979706	8.070055	6	0.3	60.679706	1	G	1	6	2	Roads and Tracks	3	67.022738	48.7242	3	-6.043032	1	9	1	2
382	182830	650820	60.043246	7.969149	4	0.2	59.843246	1	G	1	4	1	Roads and Tracks	3	67.908833	59.568572	3	-7.865587	1	9	1	1
383	182829	650831	59.681913	7.406031	4	0.1	59.581913	1	G	1	4	1	Roads and Tracks	3	67.022738	58.204936	3	-7.340825	1	9	1	1
384	182840	650831	58.445306	6.747778	4	0.1	58.345306	1	G	1	4	1	Site Infrastructure	3	52.596031	58.302093	3	5.849275	1	9	1	1
385	182839	650820	58.698069	7.70589	4	0.1	58.598069	1	G	1	4	1	Site Infrastructure	3	52.596031	65.212859	3	6.102038	1	9	1	1
386	182850	650821	57.393313	6.956649	4	0.1	57.293313	1	G	1	4	1	Site Infrastructure	3	52.407558	57.813906	3	4.985755	1	9	1	1
387	182850	650830	57.31707	6.663587	4	0.1	57.21707	1	G	1	4	1	Site Infrastructure	3	52.596031	51.304768	3	4.721039	1	9	1	1
388	182850	650841	57.206938	6.77936	4	0.1	57.106938	1	G	1	4	1	Site Infrastructure	3	52.596031	44.152807	3	4.610907	1	9	1	1
389	182866	650810	55.666309	5.796682	4	1.1	54.566309	3	G	1	12	2	Site Infrastructure	3	52.407558	57.833595	3	3.258751	1	9	1	2
390	182908	650782	52.214888	6.406655	4	0.3	51.914888	1	G	1	4	1	Minor Water Feature	6	49.147604	29.826601	3	3.067284	1	18	2	2
391	182890	650926	51.680373	6.845376	4	0.2	51.480373	1	G	1	4	1	Site Infrastructure	3	52.077871	54.804073	3	-0.397498	1	9	1	1
392	182858	650887	55.840137	6.833636	4	0.3	55.540137	1	G	1	4	1	Site Infrastructure	3	52.53643	32.924518	3	3.303707	1	9	1	1
393	182850	650870	56.965652	6.842238	4	0.1	56.865652	1	G	1	4	1	Site Infrastructure	3	52.553226	36.923255	3	4.412426	1	9	1	1
394	182850	650861	57.040391	6.833652	4	0.2	56.840391	1	G	1	4	1	Site Infrastructure	3	52.596031	37.129782	3	4.44436	1	9	1	1
395	182850	650850	57.152471	6.820239	4	0.1	57.052471	1	G	1	4	1	Site Infrastructure	3	52.596031	39.965694	3	4.55644	1	9	1	1
396	182840	650841	58.392193	6.590568	4	0.1	58.292193	1	G	1	4	1	Site Infrastructure	3	52.596031	52.732443	3	5.796162	1	9	1	1
397	182830	650840	59.522681	6.61973	4	0.1	59.422681	1	G	1	4	1	Roads and Tracks	3	67.022738	57.357573	3	-7.500057	1	9	1	1
398	182826	650846	59.892645	6.5824	4	0.2	59.692645	1	G	1	4	1	Roads and Tracks	3	66.096741	53.547201	3	-6.204096	1	9	1	1
399	182819	650841	60.72752	7.075874	4	0.1	60.62752	1	G	1	4	1	Roads and Tracks	3	67.022738	47.021978	3	-6.295218	1	9	1	1
400	182800	650840	63.404383	8.192559	6	0.3	63.104383	1	G	1	6	2	Roads and Tracks	3	67.022738	27.29273	3	-3.618355	1	9	1	2
401	182799	650850	63.027248	7.617765	4	0.3	62.727248	1	G	1	4	1	Roads and Tracks	3	66.096741	26.629734	3	-3.069493	1	9	1	1
402	182810	650850	61.756044	6.808368	4	0.3	61.456044	1	G	1	4	1	Roads and Tracks	3	66.096741	36.381015	3	-4.340697	1	9	1	1
403	182820	650851	60.594227	6.575943	4	0.3	60.294227	1	G	1	4	1	Roads and Tracks	3	66.096741	46.021128	3	-5.502514	1	9	1	1
404	182830	650851	59.442066	6.572234	4	0.1	59.342066	1	G	1	4	1	Roads and Tracks	3	66.096741	56.032616	3	-6.654675	1	9	1	1
405	182839	650852	58.32526	6.660352	4	0.1	58.22526	1	G	1	4	1	Site Infrastructure	3	52.596031	48.987179	3	5.729229	1	9	1	1
406	182839	650861	58.268881	6.746225	4	0.2	58.068881	1	G	1	4	1	Site Infrastructure	3	52.596031	47.35293	3	5.67285	1	9	1	1
407	182839	650870	58.18137	6.815744	4	0.6	57.58137	2	G	1	8	2	Site Infrastructure	3	52.553226	47.027756	3	5.628144	1	9	1	2
408	182830	650869	59.345625	6.605457	4	0.3	59.045625	1	G	1	4	1	Roads and Tracks	3	65.419828	53.214173	3	-6.074203	1	9	1	1
409	182830	650860	59.397347	6.575717	4	0.2	59.197347	1	G	1	4	1	Roads and Tracks	3	65.419828	54.806472	3	-6.022481	1	9	1	1
410	182819	650860	60.577018	6.572232	4	0.3	60.277018	1	G	1	4	1	Roads and Tracks	3	65.419828	44.838451	3	-4.84281	1	9	1	1
411	182820	650871	60.44057	6.572235	4	0.4	60.04057	1	G	1	4	1	Roads and Tracks	3	65.419828	43.505431	3	-4.979258	1	9	1	1
412	182810	650871	61.639404	6.572234	4	0.4	61.239404	1	G	1	4	1	Roads and Tracks	3	65.419828	33.128593	3	-3.780424	1	9	1	1
413	182810	650861	61.692043	6.572235	4	0.2	61.492043	1	G	1	4	1	Roads and Tracks	3	66.016741	35.164331	3	-4.324698	1	9	1	1
414	182800	650861	62.859106	6.630559	4	0.4	62.459106	1	G	1	4	1	Roads and Tracks	3	66.016741	25.043392	3	-3.157635	1	9	1	1
415	182800	650871	62.772173	6.577091	4	0.8	61.972173	2	G	1	8	2	Roads and Tracks	3	65.419828	23.338651	3	-2.647655	1	9	1	2
416	182788	650883	64.023428	6.572219	4	0.3	63.723428	1	G	1	4	1	Roads and Tracks	3	65.356383	11.678931	3	-1.332955	1	9	1	1
417	182747	650919	67.591318	3.914551	2	0.9	66.691318	2	G	1	4	1	Roads and Tracks	3	65.892383	25.711401	3	1.698935	1	9	1	1
418	182646	650474	75.9288	3.042286	2	0.4	75.5288	1	R	1.5	3	1	Site Infrastructure	3	77.948084	55.98677	3	-2.019284	1	9	1	1
419	182627	650498	77.913472	3.938443	2	0.7	77.213472	2	G	1	4	1	Site Infrastructure	3	78.626085	51.637397	3	-0.712613	1	9	1	1
420	182677	650527	74.055446	2.517339	2	0.2	73.855446	1	G	1	2	1	Site Infrastructure	3	78.626085	109.105152	3	-4.570639	1	9	1	1
421	182694	650504	75.479964	3.22967	2	0.4	75.079964	1	G	1	2	1	Site Infrastructure	3	78.28626	112.164493	3	-2.806296	1	9	1	1
422	182750	650533	72.193647	5.593585	4	0.3	71.893647	1	C	2	8	2	Minor Water Feature	6	62.151739	112.068094	3	10.041908	2	36	4	8
423	182735	650558	70.525704	5.029334	4	0.2	70.325704	1	G	1	4	1	Minor Water Feature	6	62.151739	92.120681	3	8.373965	1	18	2	2
424	182790	650614	63.228953	6.333528	4	0.1	63.128953	1	G	1	4	1	Minor Water Feature	6	60.69602	24.01893	3	2.532933	1	18	2	2
425	182802	650596	64.071049	6.519757	4	0.3	63.771049	1	G	1	4	1	Minor Water Feature	6	60.42202	37.066813	3	3.649029	1	18	2	2
426	182818	650576	65.012987	6.781569	4	0.5	64.512987	1	G	1	4	1	Minor Water Feature	6	59.525873	57.281518	3	5.487114	1	18	2	2
427	182932	650577	60.763774	3.863246	2	0.7	60.063774	2	G	1	4	1	Site Infrastructure	3	59.642346	35.936307	3	1.121428	1	9	1	1
428	182868	650599	60.165831	6.054367	4	0.1	60.065831	1	G	1	4	1	Minor Water Feature	6	57.818705	43.719894	3	2.347126	1	18	2	2
429	182850	650623	58.368101	6.505685	4	0.1	58.268101	1	G	1	4	1	Minor Water Feature	6	57.818705	13.303221	3	0.549396	1	18	2	2
430	182863	650639	55.946042	7.36149	4	0.4	55.546042	1	G	1	4	1	Minor Water Feature	6	55.132727	10.829522	3	0.813315	1	18	2	2
431	182863	650648	54.951411	4.939524	4	0.3	54.651411	1	G	1	4	1	Minor Water Feature	6	54.91059	4.213404	4	0.040821	1	24	3	3
432	182863	650657	54.923283	2.194235	2	0.1	54.823283	1	G	1	2	1	Minor Water Feature	6	54.937618	0.423913	4	-0.014335	1	24	3	3
433	182864	650668	54.984098	1.610321	1	0.1	54.884098	1	G	1	1	1	Minor Water Feature	6	54.887358	4.022599	4	0.09674	1	24	3	3
434	182872	650668	54.728067	1.990483	1	0.2	54.528067	1	G	1	1	1	Minor Water Feature	6	54.780324	1.902089	4	-0.052257	1	24	3	3
435	182871	650658	54.627108	2.055407	2	0.1	54.527108	1	G	1	2	1	Minor Water Feature	6	54.886693	6.617776	4	-0.259585	1	24	3	3
436	182872	650648	54.790969	4.673952	4	0.1	54.690969	1	G	1	4	1	Minor Water Feature	6	54.91059	11.646967	3	-0.119621	1	18	2	2
437	182872	650639	55.90066	7.096042	4	0.1	55.80066	1	G	1	4	1	Site Infrastructure	3	54.865059	16.328129	3	1.035601	1	9	1	1
438	182863	650619	58.249801	6.079932	4	0.1	58.149801	1	G	1	4	1	Minor Water Feature	6	57.818705	24.744965	3	0.431096	1	18	2	2
439	182880	650618	58.339706	6.091243	4	0.2	58.139706	1	G	1	4	1	Site Infrastructure	3	55.099208	26.265334	3	3.240498	1	9	1	1
440	182890	650630	56.868515	7.403996	4	0.3	56.568515	1	G	1	4	1	Site Infrastructure	3	55.074479	13.836012	3	1.794036	1	9	1	1
441	182879	650638	55.836334	7.26955	4	0.1	55.736334	1	G	1	4	1	Site Infrastructure	3	54.865059	10.497647	3	0.971275	1	9	1	1
442	182877	650646	54.883544	5.697389	4	0.1	54.783544	1	G	1	4	1	Site Infrastructure	3	54.865059	9.431342	4	0.018485	1	12	2	2
443	182877	650662	54.467489	1.830888	1	0.2	54.267489	1	G	1	1	1	Minor Water Feature	6	54.780324	9.800639	4	-0.312835	1	24	3	3
444	182880	650667	54.416885	1.937243	1	0.2	54.216885	1	G	1	1	1	Minor Water Feature	6	54.732502	9.595509	4	-0.315617	1	24	3	3
445	182890	650667	54.1645	1.076989	1	0.2	53.9645	1	G	1	1	1	Site Infrastructure	3	54.282947	15.111747	3	-0.118447	1	9	1	1
446	182891	650659	54.184399	0.977226	1	0.1	54.084399	1	G	1	1	1	Site Infrastructure	3	54.282947	7.386301	4	-0.098548	1	12	2	2
447	182891	650646	54.685296	6.070453	4	0.01	54.675296	1	G	1	4	1	Site Infrastructure	3	54.812075	1.194761	4	-0.126779	1	12	2	2
448	182892	650638	55.762409	7.453731	4	0.01	55.752409	1	G	1	4	1	Site Infrastructure	3	55.049698	5.478922	4	0.712711	1	12	2	2
449	182898	650628	57.005275	7.552496	4	0.01	56.995275	1	G	1	4	1	Site Infrastructure	3	55.049698	16.799484	3	1.955577	1	9	1	1
450	182899	650646	54.597302	6.138965	4	0.2	54.397302	1	G	1	4	1	Site Infrastructure	3	54.393191	1.825193	4	0.204111	1	12	2	2
451	182899	650657	54.055535	0.959945	1	0.2	53.855535	1	G	1	1	1	Site Infrastructure	3	54.258112	7.901333	4	-0.202577	1	12	2	2
452	182908	650665	53.894063	0.924319	1	0.2	53.694063	1	G	1	1	1	Site Infrastructure	3	54.004076	13.321791	3	-0.110013	1	9	1	1
453	182907	650657	53.93241	1.030433	1	0.2	53.73241	1	G	1	1	1	Site Infrastructure	3	54.035637	5.809759	4	-0.103227	1	12	2	2
454	182907	650646	54.531449	6.222766	4	0.2	54.331449	1	G	1	4	1	Site Infrastructure	3	54.329263	3.012723	4	0.202186	1	12	2	2
455	182900	650666	54.015379	0.918474	1	0.4	53.615379	1	G	1	1	1	Site Infrastructure	3	54.035637	16.098963	3	-0.020258	1	9	1	1
456	182827	650646	58.432288	3.74462	2	0.1	58.332288	1	G	1	2	1	Minor Water Feature	6	58.894357	10.574792	3	-0.462069	1	18	2	2
457	182726	650580	69.285188	5.351572	4	0.4	68.885188	1	R	1.5	6	2	Minor Water Feature	6	64.829157	72.071426	3	4.456031	1	18	2	4
458	182667	650548	74.090494	2.746744	2	0.1	73.990494	1	G	1	2	1	Minor Water Feature	6	67.766511	113.923541	3	6.323983	1	18	2	2
459	182612	650520	78.38836	4.815399	4	0.1	78.28836	1	G	1	4	1	Site Infrastructure	3	78.762084	59.943377	3	-0.373724	1	9	1	1
460	182590	650472	78.69879	3.032531	2	0.9	77.79879	2	G	1	4	1	Site Infrastructure	3	78.762084	7.854125	4	-0.063294	1	12	2	2
461	182600	650472	78.215894	3.049009	2	0.4	77.815894	1	G	1	2	1	Site Infrastructure	3	78.626085	13.873057	3	-0.410191	1	9	1	1
462	182579	650472	79.224431	3.086102	2	0.4	78.824431	1	G	1	2	1	Site Infrastructure	3	78.862084	8.293915	4	0.362347	1	12	2	2
463	182566	650464	79.904842	5.129843	4	0.4	79.504842	1	G	1	4	1	Site Infrastructure	3	79.877242	0.928987	4	0.0276	1	12	2	2
464	182567	650451	79.664257	3.672861	2	1.1	78.564257	3	G	1	6	2	Site Infrastructure	3	79.848981	10.663357	3	-0.184724	1	9	1	2
465	182569	650441	79.482321	3.682516	2	0.5	78.982321	1	G	1	2	1	Site Infrastructure	3	79.722536	20.431552	3	-0.240215	1	9	1	1
466	182567	650432	79.458431	3.674536	2	0.9	78.558431	2	R	1.5	6	2	Site Infrastructure	3	79.593069	22.129439	3	-0.134638	1	9	1	2
467	182552	650435	80.493245	6.222412	4	0.9	79.593245	2	G	1	8	2	Site Infrastructure	3	80.651121	19.449393	3	-0.157876	1	9	1	2
468	182539	650434	82.861891	13.12724	6	0.2	82.661891	1	G	1	6	2	Site Infrastructure	3	83.050549	14.659232	3	-0.188658	1	9	1	2
469	182552	650441	80.547503	7.539499	4	0.2	80.347503	1	G	1	4	1	Site Infrastructure	3	79.973852	23.797657	3	0.573651	1	9	1	1
470	182540	650445	83.497651	14.653076	6	0.1	83.397651	1	G	1	6	2	Site Infrastructure	3	84.229902	25.885554	3	-0.732251	1	9	1	2
471	182541	650458	84.555342	13.761121	6	0.1	84.455342	1	G	1	6	2	Site Infrastructure	3	80.15146	22.570865	3	4.403882	1	9	1	2
472	182541	650471	85.039394	12.655889	6	0.1	84.939394	1	G	1	6	2	Site Infrastructure	3	80.243371	22.06257	3	4.796023	1	9	1	2
473	182542	650486	86.040414	12.235865	6	0.1	85.940414	1	G	1	6	2	Site Infrastructure	3	80.243371	29.256677	3	5.797043	1	9	1	2
474	182542	650498	86.658533	10.883847	6	0.1	86.558533	1	G	1	6	2	Site Infrastructure	3	79.996909	37.883332	3	6.661624	1	9	1	2
475	182556	650498	83.96755	11.863213	6	0.1	83.86755	1	G	1	6	2	Site Infrastructure	3	79.996909	30.479498	3	3.970641	1	9	1	2
476	182556	650486	83.170558	12.204541	6	0.1	83.070558	1	G	1	6	2	Site Infrastructure	3	79.996909	19.525209	3	3.173649	1	9	1	2
477	182555	650470	82.129516	12.326565	6	0.1	82.029516	1	G	1	6	2	Site Infrastructure	3	80.243371	9.143752	4	1.886145	1	12	2	4
478	182567	650471	79.954993	6.614727	4	0.8	79.154993	2	G	1	8	2	Site Infrastructure	3	79.996909	1.496174	4	-0.041916	1	12	2	4
479	182567	650486	80.900586	10.49557	6	0.1	80.800586	1	G	1	6	2	Site Infrastructure	3	79.996909	16.202281	3	0.903677	1	9	1	2
480	182567	650496	81.584384	10.462127	6	0.2	81.384384	1	G	1	6	2	Site Infrastructure	3	79.996909	26.887243	3	1.587475	1	9	1	2
481	182580	650484	79.555068	4.538889	4	0.3	79.255068	1	G	1	4	1	Site Infrastructure	3	79.810547	18.905195	3	-0.255479	1	9	1	1
482	182583	650496	80.216979	5.075017	4	0.1	80.116979	1	G	1	4	1	Site Infrastructure	3	79.810547	30.009908	3	0.406432	1	9	1	1
483	182591	650495	79.712754	5.088042	4	1	78.712754	2	G	1	8	2	Site Infrastructure	3	78.762084	29.775821	3	0.95067	1	9	1	2
484	182600	650495	79.236171	5.077307	4	0.1	79.136171	1	G	1	4	1	Site Infrastructure	3	78.762084	32.43826	3	0.474087	1	9	1	1
485	182577	650527	81.138668	8.365747	6	0.2	80.938668	1	G	1	6	2	Site Infrastructure	3	79.810547	58.086922	3	1.328121	1	9	1	2
486	182590	650485	79.090357	4.522416	4	1	78.090357	2	G	1	8	2	Site Infrastructure	3	78.762084	19.664507	3	0.328273	1	9	1	2
487	182600	650485	78.511483	4.315255	4	0.9	77.611483	2	G	1	8	2	Site Infrastructure	3	78.762084	23.794424	3	-0.250601	1	9	1	2
488	182498	650454	89.693518	2.494478	2	0.3	89.393518	1	G	1	2	1	Site Infrastructure	3	89.305531	22.874288	3	0.387987	1	9	1	1
489	182476	650447	89.619406	1.433672	1	0.2	89.419406	1	G	1	1	1	Site Infrastructure	3	89.340409	24.325491	3	0.278997	1	9	1	1
490	182457	650465	90.925593	3.063468	2	1.5	89.425593	3	G	1	6	2	Site Infrastructure	3	89.340409	50.22826	3	1.585184	1	9	1	2

491	182435	650407	88.078719	4.503714	4		1.1	86.978719	3	R	1.5	18	3	Site Infrastructure	3	85.388829	49.173176	3	2.68989	1	9	1	3
492	182457	650399	86.8915	4.809611	4		0.3	86.5915	1	G	1	4	1	Site Infrastructure	3	85.388829	25.723091	3	1.502671	1	9	1	1
493	182442	650355	83.861353	4.726802	4		0.6	83.261353	2	G	1	8	2	Site Infrastructure	3	82.522829	25.808903	3	1.338524	1	9	1	2
494	182420	650365	85.13889	4.704801	4		0.3	84.83889	1	G	1	4	1	Site Infrastructure	3	82.522829	49.687634	3	2.616061	1	9	1	1
495	182403	650309	81.224296	4.706535	4		0.3	80.924296	1	G	1	4	1	Roads and Tracks	3	77.987994	39.576945	3	3.236302	1	9	1	1
496	182426	650298	79.739182	4.722792	4		0.3	79.439182	1	G	1	4	1	Site Infrastructure	3	78.666839	23.278292	3	1.072343	1	9	1	1
497	182415	650252	76.165461	5.151092	4		0.1	76.065461	1	G	1	4	1	Roads and Tracks	3	77.385993	13.866772	3	-1.220532	1	9	1	1
498	182386	650254	77.01537	5.151851	4		0.01	77.00537	1	G	1	4	1	Roads and Tracks	3	77.975992	11.145223	3	-0.960622	1	9	1	1
499	182424	650223	73.506469	4.617381	4		1	72.506469	2	G	1	8	2	Site Infrastructure	3	75.388055	26.10801	3	-1.881586	1	9	1	2
500	182413	650202	71.87943	4.328297	4		0.9	70.97943	2	G	1	8	2	Site Infrastructure	3	75.388055	50.223172	3	-3.508625	1	9	1	2
501	182468	650185	72.447186	2.979173	2		2.1	70.347186	3	G	1	6	2	Site Infrastructure	3	75.3054	49.683679	3	-2.858214	1	9	1	2
502	182476	650203	73.506208	2.982286	2		1.8	71.706208	3	G	1	6	2	Site Infrastructure	3	75.3054	29.444522	3	-1.799192	1	9	1	2
503	182519	650195	73.896139	4.479274	4		0.5	73.396139	1	G	1	4	1	Roads and Tracks	3	72.738095	9.135819	4	1.158044	1	12	2	2
504	182512	650172	72.931637	2.922271	2		0.1	72.831637	1	G	1	2	1	Roads and Tracks	3	72.146039	14.803204	3	0.785598	1	9	1	1
505	182596	650248	74.381017	2.519913	2		0.01	74.371017	1	G	1	2	1	Site Infrastructure	3	74.222997	10.561432	3	0.15802	1	9	1	1
506	182597	650273	76.775516	4.34046	4		0.01	76.765516	1	G	1	4	1	Site Infrastructure	3	76.648885	6.191536	4	0.126631	1	12	2	2
507	182600	650280	76.704507	3.720191	2		0.01	76.694507	1	G	1	2	1	Site Infrastructure	3	76.684819	1.051063	4	0.019688	1	12	2	2
508	182597	650298	76.807156	3.378079	2		0.1	76.707156	1	G	1	2	1	Site Infrastructure	3	76.421514	10.688996	3	0.385642	1	9	1	1
509	182621	650323	77.396764	2.081454	2		0.01	77.386764	1	G	1	2	1	Site Infrastructure	3	76.546145	25.52151	3	0.850619	1	9	1	1
510	182622	650349	77.062443	2.933103	2		0.2	76.862443	1	G	1	2	1	Site Infrastructure	3	76.3207	18.958911	3	0.741743	1	9	1	1
511	182622	650373	77.116516	2.833791	2		0.1	77.016516	1	R	1.5	3	1	Site Infrastructure	3	76.434721	12.020135	3	0.681795	1	9	1	1
512	182645	650374	78.13263	2.481514	2		0.2	77.93263	1	R	1.5	3	1	Site Infrastructure	3	76.500515	33.801241	3	1.632115	1	9	1	1
513	182672	650372	79.195188	1.792272	1		0.01	79.185188	1	G	1	1	1	Site Infrastructure	3	76.404514	59.708701	3	2.790674	1	9	1	1
514	182721	650351	80.686247	5.37125	4		0.01	80.676247	1	G	1	4	1	Roads and Tracks	3	79.331096	29.894459	3	1.355151	1	9	1	1
515	182698	650348	79.466327	0.879135	1		0.01	79.456327	1	G	1	1	1	Roads and Tracks	3	79.331096	39.485373	3	0.135231	1	9	1	1
516	182697	650323	79.322224	0.774487	1		0.01	79.312224	1	G	1	1	1	Roads and Tracks	3	79.099087	27.207412	3	0.223137	1	9	1	1
517	182695	650299	79.169502	0.76204	1		0.01	79.159502	1	G	1	1	1	Roads and Tracks	3	78.427865	21.097757	3	0.741637	1	9	1	1
518	182696	650274	78.372268	4.233461	4		0.01	78.362268	1	G	1	4	1	Roads and Tracks	3	77.766413	11.614371	3	0.605855	1	9	1	1
519	182673	650248	78.258808	5.946965	4		0.01	78.248808	1	G	1	4	1	Roads and Tracks	3	77.003241	24.268738	3	1.255567	1	9	1	1
520	182649	650246	78.593849	7.322617	4		0.1	78.493849	1	G	1	4	1	Site Infrastructure	3	77.286	9.360661	4	1.307849	1	12	2	2
521	182633	650249	77.436728	8.642537	6		0.01	77.426728	1	G	1	6	2	Site Infrastructure	3	77.539821	0.88238	4	-0.103093	1	12	2	4
522	182622	650249	76.486705	8.623069	6		0.01	76.476705	1	G	1	6	2	Site Infrastructure	3	77.454002	6.42895	4	-0.967297	1	12	2	4
523	182622	650273	78.255478	4.06029	4		0.01	78.245478	1	G	1	4	1	Site Infrastructure	3	78.089969	6.439072	4	0.165509	1	12	2	2
524	182622	650298	77.959148	2.077935	2		0.01	77.949148	1	G	1	2	1	Site Infrastructure	3	77.311974	24.76814	3	0.647174	1	9	1	1
525	182647	650298	78.733245	0.755666	1		0.01	78.723245	1	G	1	1	1	Site Infrastructure	3	78.089969	42.278046	3	0.643276	1	9	1	1
526	182671	650348	79.138816	0.572603	1		0.01	79.128816	1	G	1	1	1	Roads and Tracks	3	79.331096	61.276004	3	-0.19228	1	9	1	1
527	182671	650323	79.035975	0.558807	1		0.01	79.025975	1	G	1	1	1	Roads and Tracks	3	78.913014	51.644771	3	0.122961	1	9	1	1
528	182649	650348	78.416031	2.961456	2		0.01	78.406031	1	G	1	2	1	Site Infrastructure	3	76.3207	45.029327	3	2.095331	1	9	1	1
529	182648	650324	78.626967	2.810129	2		0.01	78.616967	1	G	1	2	1	Site Infrastructure	3	76.470144	50.89974	3	2.156823	1	9	1	1
530	182672	650298	78.936479	0.512465	1		0.01	78.926479	1	G	1	1	1	Roads and Tracks	3	78.122893	42.282051	3	0.813586	1	9	1	1
531	182672	650273	79.311772	1.892822	1		0.01	79.301772	1	G	1	1	1	Roads and Tracks	3	77.653072	33.715932	3	1.6587	1	9	1	1
532	182647	650273	79.538114	3.606057	2		0.01	79.528114	1	G	1	2	1	Site Infrastructure	3	77.878001	25.500884	3	1.660113	1	9	1	1
533	182671	650223	75.51666	5.880064	4		0.01	75.50666	1	G	1	4	1	Site Infrastructure	3	74.607145	9.838584	4	0.909515	1	12	2	2
534	182647	650223	75.747591	7.635208	4		0.01	75.737591	1	G	1	4	1	Site Infrastructure	3	76.143357	4.416799	4	-0.395766	1	12	2	2
535	182597	650323	76.718362	1.98568	1		0.1	76.618362	1	G	1	1	1	Site Infrastructure	3	76.620465	2.913435	4	0.097897	1	12	2	2
536	182600	650348	76.294122	1.298175	1		0.2	76.094122	1	G	1	1	1	Site Infrastructure	3	76.316145	0.903914	4	-0.022023	1	12	2	2
537	182872	650618	58.297421	5.530262	4		0.2	58.097421	1	G	1	4	1	Site Infrastructure	3	55.099208	30.236242	3	3.198213	1	9	1	1
538	182872	650629	57.09325	7.118391	4		0.2	56.89325	1	G	1	4	1	Site Infrastructure	3	54.865059	21.848592	3	2.228191	1	9	1	1
539	182863	650630	57.02709	6.597041	4		0.1	56.92709	1	G	1	4	1	Minor Water Feature	6	57.424877	16.805786	3	-0.397787	1	18	2	2
540	182879	650629	57.080823	7.350987	4		0.1	56.980823	1	G	1	4	1	Site Infrastructure	3	55.099208	17.55617	3	1.981615	1	9	1	1
541	182891	650618	58.329905	6.994422	4		0.2	58.129905	1	G	1	4	1	Site Infrastructure	3	55.074479	25.162242	3	3.255426	1	9	1	1
542	182899	650638	55.676638	7.508273	4		0.1	55.576638	1	G	1	4	1	Site Infrastructure	3	55.049698	8.9933	4	0.62694	1	12	2	2
543	182907	650637	55.552702	7.320533	4		0.2	55.352702	1	G	1	4	1	Site Infrastructure	3	54.329263	10.169572	3	1.223439	1	9	1	1
544	182898	650619	58.206947	7.429162	4		0.01	58.196947	1	G	1	4	1	Site Infrastructure	3	55.049698	25.439974	3	3.157249	1	9	1	1
545	182906	650628	56.837496	7.579183	4		0.01	56.827496	1	G	1	4	1	Site Infrastructure	3	54.329263	19.871711	3	2.508233	1	9	1	1
546	182907	650618	58.090786	7.592199	4		0.01	58.080786	1	G	1	4	1	Site Infrastructure	3	55.049698	28.946785	3	3.041088	1	9	1	1
547	182859	650253	70.822805	2.27648	2		0.01	70.812805	1	G	1	2	1	Roads and Tracks	3	71.064583	8.474437	4	-0.241778	1	12	2	2
548	182872	650267	70.824606	2.365296	2		0.01	70.814606	1	G	1	2	1	Roads and Tracks	3	71.333308	15.64682	3	-0.508702	1	9	1	1
549	182892	650245	69.225369	3.495449	2		0.01	69.215369	1	G	1	2	1	Roads and Tracks	3	69.922352	35.860667	3	-0.696983	1	9	1	1
550	182878	650239	69.796737	3.226267	2		0.01	69.786737	1	G	1	2	1	Roads and Tracks	3	70.957342	30.451788	3	-1.160605	1	9	1	1
551	182864	650231	70.040323	2.281479	2		0.01	70.030323	1	G	1	2	1	Roads and Tracks	3	70.987049	20.803225	3	-0.946726	1	9	1	1
552	182864	650204	69.30843	2.866606	2		0.01	69.29843	1	G	1	2	1	Roads and Tracks	3	69.223318	2.912603	4	0.085112	1	12	2	2
553	182881	650212	68.81456	3.47585	2		0.01	68.80456	1	G	1	2	1	Roads and Tracks	3	69.219295	14.417261	3	-0.404735	1	9	1	1
554	182899	650220	68.101655	3.504945	2		0.01	68.091655	1	G	1	2	1	Roads and Tracks	3	69.219295	33.880928	3	-1.11764	1	9	1	1
555	182880	650182	67.904501	3.888439	2		0.01	67.894501	1	G	1	2	1	Roads and Tracks	3	68.315857	5.985593	4	-0.411356	1	12	2	2
556	182878	650152	69.441575	8.457698	6		0.01	69.431575	1	G	1	6	2	Roads and Tracks	3	70.012376	23.550135	3	-0.570801	1	9	1	2
557	182861	650166	70.402663	6.738395	4	<Null>		#VALUE!	FALSE	<Null>	FALSE	0	1	Roads and Tracks	3	70.472377	2.894632	4	-0.069714	1	12	2	2
558	182852	650179	70.000688	5.077024	4		0.01	69.990688	1	G	1	4	1	Roads and Tracks	3	70.276377	11.188379	3	-0.275689	1	9	1	1
559	182830	650171	72.04084	5.345758	4		0.01	72.03084	1	G	1	4	1	Roads and Tracks	3	72.694322	9.646082	4	-0.653482	1	12	2	2
560	182837	650157	72.822851	4.940507	4		0.01	72.812851	1	G	1	4	1	Roads and Tracks	3	72.809254	1.017005	4	0.013597	1	12	2	2
561	182844	650146	73.185894	4.318498	4		2.2	70.985894	3	G	1	12	2	Roads and Tracks	3	72.312379	13.33721	3	0.873515	1	9	1	2
562	182826	650125	75.111757	2.69036	2		0.4	74.711757	1	G	1	2	1	Roads and Tracks	3	75.077374	19.330089	3	0.034383	1	9	1	1
563	182818	650142	74.27893	3.159477	2		0.01	74.26893	1	G	1	2	1	Roads and Tracks	3	73.913269	8.068815	4	0.365661	1	12	2	2
564	182811	650153	73.72146	3.131288	2		0.01	73.71146	1	G	1	2	1	Roads and Tracks	3	73.818794	2.599309	4	-0.097334	1	12	2	2
565	182781	650072	76.418149	7.334648	4		0.3	76.118149	1	G	1	4	1	Site Infrastructure	3	76.425616	0	4	-0.007467	1	12	2	2
566	182766	650056	76.641314	5.456185	4		0.4	76.241314	1	G	1	4	1	Site Infrastructure	3	76.684417	0	4	-0.043103	1	12	2	2
567	182744	650028	76.375073	5.534292	4		0.3	76.075073	1	G	1	4	1	Site Infrastructure	3	75.738416	28.850264	3	0.636657	1	9	1	1
568	182724	650044	73.9041	5.470438	4		0.3	73.6041	1	G	1	4	1	Site Infrastructure	3	73.745048	20.764253	3	0.159052	1	9	1	1
569	182701	650053	72.087137	3.360876	2		0.2	71.887137	1	G	1	2	1	Site Infrastructure	3	71.578088	21.396971	3	0.509049	1	9	1	1
570	182721	650000	76.921048	5.448773	4		0.5	76.421048	1	G	1	4	1	Site Infrastructure	3	75.174427	63.61781	3	1.746621	1	9	1	1
571	182696	649968	77.717678	5.180495	4		0.3	77.417678	1	G	1	4	1	Roads and Tracks	3	79.872188	86.825463	3	-2.15451	1	9	1	1
572	182675	649976	76.371913	4.246405	4		0.3	76.071913	1	G	1	4	1	Site Infrastructure	3	72.36505	101.692833	3	4.006863	1	9	1	1
573	182658	649982	75.433383	4.289116	4		0.3	75.133383	1	G	1	4	1	Site Infrastructure	3	71.447866	102.582836	3	3.985517	1	9	1	1
574	182702	650013	74.827646	4.992246	4		0.3	74.527646	1	G	1	4	1	Site Infrastructure	3	72.881047	58.111358	3	1.946599	1	9	1	1
575	182677	650024	73.219509	4.264151	4		0.2	73.019509	1	G	1	4	1	Site Infrastructure	3	71.447866	56.634254	3	1.771643	1	9	1	1
576	182860	650838	56.001038	6.840688	4		0.3	55.701038	1	G	1	4	1	Site Infrastructure	3	52.596031	37.855507	3	3.405007	1	9	1	1
577	182860	650848	55.870429	6.855785	4		0.3	55.570429	1	G	1	4	1	Site Infrastructure	3	52.596031	31.512965	3	3.274398	1	9	1	1
578	182870	650838	54.815248	6.643093	4		0.4	54.415248	1	G	1	4	1	Site Infrastructure	3	52.407558	31.232131	3	2.40769	1	9	1	1
579	182870	650848	54.722969	6.817118	4		0.2	54.522969	1	G	1	4	1	Site Infrastructure	3	52.596031	23.876505	3	2.126938	1	9	1	1
580	182870	650858	54.632968	6.834391	4		0.3	54.332968	1	G	1	4	1	Site Infrastructure	3	52.596031	18.047867	3	2.036937	1	9	1	1
581	182860	650858	55.828145	6.860864	4		0.2	55.628145	1	G	1	4	1	Site Infrastructure	3	52.596031	27.513184	3	3.232114	1	9	1	1
582	182860	650868	55.73319	6.846857	4		0.3	55.43319	1	G	1	4	1	Site Infrastructure	3	52.570416	26.481931	3	3.162774	1	9	1	1
583	182870	650868	54.560838	6.847805	4		0.1	54.460838	1	G	1	4	1	Site Infrastructure	3	52.570416	16.666716	3	1.990422	1	9	1	1
584	182870	650878	54.470926	6.861808	4		0.2	54.270926	1	G	1	4	1	Site Infrastructure	3	52.53643	17.939041	3	1.934496	1	9	1	1
585	182860	650878	55.622783	6.833647	4		0.3	55.322783	1	G	1	4	1	Site Infrastructure	3	52.53643	27.20084	3	3.086353	1	9	1	1
586	182860	650888	55.561562	6.83433	4		0.3	55.261562	1	G	1	4	1	Site Infrastructure	3	52.53643	31.354968	3	3.025132	1	9	1	1
587	182860	650898	55.477337	6.848437	4		0.1	55.377337	1	G	1	4	1	Site Infrastructure	3	52.53643	37.705791	3	2.940907	1	9	1	1
588	182870	650898	54.277338	6.847929	4		0.3	53.977338	1	G	1	4	1	Site Infrastructure	3	52.53643	31.47848	3	1.740908	1	9	1	1
589	182870	650888	54.366318	6.853557	4		0.2	54.166318	1	G	1	4	1	Site Infrastructure	3	52.53643	23.463557	3	1.829888	1	9	1	1
590	182880	650898	53.080478	6.847608	4		0.2	52.880478	1	G	1	4	1	Site Infrastructure	3	52.53643	27.150302	3	0.544048	1	9	1	1
591	182890	650898	51.878723	6.846722	4		0.1	51.778723	1	G	1	4	1	Site Infrastructure	3	52.077871	26.787376	3	-0.199148	1	9	1	1
592	182890	650888	51.968721	6.844248	4		0.4	51.568721	1	G	1	4	1	Site Infrastructure	3	52.077871	16.790637	3	-0.10915	1	9	1	1
593	182880	650888	53.168722	6.840207	4		0.2	52.968722	1	G	1	4	1	Site Infrastructure	3	52.53643	18.011793	3	0.632292	1	9	1	1
594	182880	650878	53.2558	6.838357	4		0.3	52.9558	1	R	1.5	6	2	Site Infrastructure	3	52.53643	9.464717	4	0.71937	1	12	2	4
595	182890	650878	52.072775	6.656796	4		1	51.072775	2	R	1.5	12	2	Site Infrastructure	3	52.077871	6.836154	4	-0.005096	1	12	2	4
596	182880	650868	53.347337	6.836899	4		0.4	52.947337	1	G	1	4	1	Site Infrastructure	3	52.570416	6.588163	4	0.776921	1	12	2	2
597	182880	650858	53.437337	6.644667	4		0.8	52.637337	2	G	1	8	2	Site Infrastructure	3	52.596031	9.741329	4	0.841306	1	12	2	4
598	182880	650848	53.564407	6.191069	4		0.9	52.664407	2	G	1	8	2	Site Infrastructure	3	52.407558	17.47356	3	1.156849	1	9	1	2
599	182880	650838	53.740592	5.829661	4		0.4	53.340592	1	G	1	4	1	Site Infrastructure	3	52.407558	26.624016	3	1.333034	1	9	1	1
600	182890	650838	52.760465	5.722335	4		0.7	52.060465	2	G	1	8	2	Site Infrastructure	3	52.209372	25.196231	3	0.551093	1	9	1	2
601	182890	650848	52.564634	5.733848	4		0.3	52.264634	1	G	1	4	1	Site Infrastructure	3	52.209372	15.227735	3	0.355262	1	9	1	1
602	182900	650838	51.774633	5.712505	4		0.8	50.974633	2	G	1	8	2	Site Infrastructure	3	52.209372	26.933509	3	-0.434739	1	9	1	2
603	182900	650848	51.575336	5.73452	4		1.8	49.775336	3	G	1	12	2	Site Infrastructure	3	52.209372	17.917921	3	-0.634036	1	9	1	2
604	182900	650858	51.426015	5.719118	4		0.9	50.526015	2	G	1	8	2	Site Infrastructure	3	51.971194	9.963695	4	-0.545179	1	12	2	4
605	182890	650858	52.364633	5.819329	4		0.3	52.064633	1	G	1	4	1	Site Infrastructure	3	52.209372	5.246132	4	0.155261	1	12	2	2
606	182890	650868	52.191542	6.200006	4		1	51.191542	2	G	1	8	2	Site Infrastructure	3	52.138944	0.939005	4	0.052598	1	12	2	4
607	182900	650868	51.191557	5.714127	4		1.5	49.691557	3	G	1	12	2	Site Infrastructure	3	51.735194	5.444376	4	-0.543637	1	12	2	4
608	182899	650877	51.098524	5.820796	4		1	50.098524	2	G	1	8	2	Site Infrastructure	3	51.851196	8.667617	4	-0.752672	1	12	2	4
609	182900	650888	50.808988	6.168899	4		0.4	50.408988	1	G	1	4	1	Site Infrastructure	3	51.851196	18.364637	3	-1.042208	1	9	1	1
610	182900	650898	50.687337	6.631308	4		0.2	50.487337	1	G	1	4	1	Site Infrastructure	3	51.851196	27.801041	3	-1.163859	1	9	1	1
611	182910	650898	49.614633	5.824037	4		1	48.614633	2	G	1	8	2	Site Infrastructure	3	51.851196	31.969765	3	-2.236563	1	9	1	2
612	182910	650888	49.810386	5.745915	4		0.9	48.910386	2	G	1	8	2	Site Infrastructure	3	51.851196	24.216273	3	-2.04081	1	9	1	2
613	182910	650878	50.004632	5.719671	4		1.3	48.704632	3	G	1	12	2	Site Infrastructure	3	51.695194	17.778748	3	-1.690562	1	9	1	2
614	182910	650868	50.202833	5.716395	4		1.3	48.902833	3	G	1	12	2	Site Infrastructure	3	51.735194	15.488946	3	-1.532361	1	9	1	2
615	182910	650858	50.399836	5.736317	4		1	49.399836	2	G	1	8	2	Site Infrastructure	3	51.735194	17.999702	3	-1.335358	1	9	1	2
616	182910	650848	50.594632	5.712876	4		0.9	49.694632	2	G	1	8	2	Site Infrastructure	3	51.971194	24.520577	3	-1.376562	1	9	1	2
617	182910	650838	50.794633	5.716434	4		1	49.794633	2	G	1	8	2	Site Infrastructure	3	52.209372	31.852502	3	-1.414739	1	9	1	2
618	182915	650752	50.620399	6.554375	4		0.4	50.220399	1	G	1	4	1	Minor Water Feature	6	50.09268	11.332402	3	0.527719	1	18	2	2
619	182925	650752	49.720964	3.451776	2		0.5	49.220964	1	G	1	2	1	Minor Water Feature	6	49.816761	4.300892	4	-0.095797	1	24	3	3
620	182935	650752	49.639615	3.558984	2		0.2	49.439615	1	G	1	2	1	Minor Water Feature	6	49.669706	2.293059	4	-0.030091	1	24	3	3
621	182944	650752	49.589203	3.580476	2		0.2	49.389203	1	G	1	2	1	Minor Water Feature	6	49.409195	10.308276	3	0.180008	1	18	2	2
622	182955	650752	49.590535	3.678319	2		0.3	49.290535	1	G	1	2	1	Roads and Tracks	3	50.210191	8.44145	4	-0.619656	1	12	2	2
623	182964	650752	49.567874	4.025211	4		0.2	49.367874	1	G	1	4	1	Roads and Tracks	3	50.132717	6.648927	4	-0.564843	1	12	2	2
624	182944	650742	50.219103	5.594131	4		0.01	50.209103	1	G	1	4	1	Roads and Tracks	3	50.337184	2.445387	4	-0.118081	1	12	2	2
625	182954	650742	50.405084	7.315303	4		0.01	50.395084	1	G	1	4	1	Roads and Tracks	3	50.462483	0.454962	4	-0.057399	1	12	2	2
626	182965	650742	50.632255	8.199825	6		0.01	50.622255	1	G	1	6	2	Roads and Tracks	3	50.397581	1.622906	4	0.234674	1	12	2	4
627	182934	650742	50.244723	4.07548	4		0.01	50.234723	1	G	1	4	1	Roads and Tracks	3	50.588117	4.743912	4	-0.343394	1	12	2	2
628	182925	650742	50.299553	3.599406	2		0.9	49.399553	2	G	1	4	1	Minor Water Feature	6	50.215889	1.422847	4	0.083664	1	24	3	3
629	182915	650732	51.007935	4.873903	4		0.01	50.997935	1	G	1	4	1	Roads and Tracks	3	51.072314	0.625362	4	-0.064379	1	12	2	2
630	182925	650732	51.103234	6.721423	4		0.01	51.093234	1	G	1	4	1	Roads and Tracks	3	50.979048	1.331826	4	0.124186	1	12	2	2
631	182934	650732	51.279066	7.62208	4		0.01	51.269066	1	G	1	4	1	Roads and Tracks	3	51.088116	2.030644	4	0.19095	1	12	2	2
632	182924	650712	53.135656	4.88824	4		0.01	53.125656	1	G	1	4	1	Site Infrastructure	3	52.500116	16.822433	3	0.63554	1	9	1	1
633	182925	650702	53.836464	3.163684	2		0.01	53.826464	1	G	1	2	1	Minor Water Feature	6	52.786293	24.236555	3	1.050171	1	18	2	2
634	182915	650742	50.48035	3.516926	2		0.5	49.98035	1	G	1	2	1	Minor Water Feature	6	50.622105	5.441789	4	-0.141755	1	24	3	3
635	182915	650722	51.988063	5.001962	4		0.3	51.688063	1	G	1	4	1	Minor Water Feature	6	51.605667	5.522003	4	0.382396	1	24	3	3
636	182915	650712	52.774612	4.919159	4		0.2	52.574612	1	G	1	4	1	Minor Water Feature	6	52.489924	10.868497	3	0.284688	1	18	2	2
637	182925	650722	52.430168	6.565588	4		0.01	52.420168	1	G	1	4	1	Roads and Tracks	3	51.102374	11.143375	3	1.327794	1	9	1	1
638	182935	650722	52.645669	7.674479	4		0.2	52.445669	1	G	1	4	1	Site Infrastructure	3	52.500116	1.790862	4	0.145553	1	12	2	2
639	182945	650722	52.999099	7.961932	4		0.3	52.699099	1	G	1	4	1	Site Infrastructure	3	52.708355	2.445321	4	0.290744	1	12	2	2
640	182945	650731	51.752764	8.406726	6		0.1	51.652764	1	G	1	6	2	Site Infrastructure	3	51.904292	3.581978	4	-0.151528	1	12	2	4
641	182955	650732	51.97376	8.666097	6		0.1	51.87376	1	G	1	6	2	Roads and Tracks	3	50.782483	7.500199	4	1.191277	1	12	2	4
642	182965	650732	52.09554	6.995224	4		0.1	51.99554	1	G	1	4	1	Roads and Tracks	3	50.644483	9.642797	4	1.451057	1	12	2	2
643	182964	650722	52.942109	7.025866	4		0.1	52.842109	1	G	1	4	1	Roads and Tracks	3	50.830483	18.825943	3	2.111626	1	9	1	1
644	182956	650722	53.397298	5.692964	4		0.2	53.197298	1	G	1	4	1	Site Infrastructure	3	52.549354	11.68217	3	0.847944	1	9	1	1
645	182940	650727	52.17225	7.976142	4		0.1	52.07225	1	G	1	4	1	Site Infrastructure	3	52.096239	0.864937	4	0.076011	1	12	2	2
646	182965	650712	52.962203	5.742604	4		0.1	52.862203	1	G	1	4	1	Site Infrastructure	3	52.549354	24.847705	3	0.412849	1	9	1	1
647	182955	650712	53.616495	3.34921	2		0.2	53.416495	1	G	1	2	1	Site Infrastructure	3	52.708355	16.959817	3	0.90814	1	9	1	1
648	182965	650702	52.6558	3.877705	2		0.2	52.4558	1	G	1	2	1	Site Infrastructure	3	52.708355	30.993143	3	-0.052555	1	9	1	1
649	182955	650702	53.171851	4.019699	4		0.2	52.971851	1	G	1	4	1	Site Infrastructure	3	52.708355	24.993335	3	0.463496	1	9	1	1
650	182945	650703	53.711532	4.021391	4		0.2	53.511532	1	G	1	4	1	Site Infrastructure	3	52.708355	20.992289	3	1.003177	1	9	1	1
651	182945	650712	54.087728	2.345224	2		0.1	53.987728	1	G	1	2	1	Site Infrastructure	3	52.708355	11.721626	3	1.379373	1	9	1	1
652	182936	650712	53.904862	4.768556	4		0.4	53.504862	1	G	1	4	1	Site Infrastructure	3	52.500116	11.655273	3	1.404746	1	9	1	1
653	182935	650702	54.049957	2.168299	2		0.01	54.039957	1	G	1	2	1	Site Infrastructure	3	52.500116	21.595495	3	1.549841	1	9	1	1
654	182934	650632	55.950138	8.005859	6		0.1	55.850138	1	G	1	6	2	Site Infrastructure	3	53.757637	22.086824	3	2.192501	1	9	1	2
655	182944	650632	56.51385	10.239734	6		0.1	56.41385	1	G	1	6	2	Site Infrastructure	3	59.296345	25.718292	3	-2.782495	1	9	1	2

656	182953	650632	56.385326	12.3064411	6		1	55.385326	2	G	1	12	2	Site Infrastructure	3	59.296345	22.471134	3	-2.911019	1	9	1	2								
657	182963	650631	56.416628	12.4052777	6		0.2	56.216628	1	G	1	6	2	Site Infrastructure	3	59.158161	21.810418	3	-2.741533	1	9	1	2								
658	182973	650632	56.462201	7.153391	4		0.2	56.262201	1	G	1	4	1	Site Infrastructure	3	59.158161	24.944131	3	-2.69596	1	9	1	1								
659	182983	650631	56.232446	5.132115	4		0.1	56.132446	1	G	1	4	1	Site Infrastructure	3	59.158161	30.065969	3	-2.925715	1	9	1	1								
660	182983	650622	56.990775	5.282503	4		0.1	56.890775	1	G	1	4	1	Site Infrastructure	3	59.158161	23.783009	3	-2.167386	1	9	1	1								
661	182983	650612	57.274246	6.901939	4		0.1	57.174246	1	R	1.5	6	2	Site Infrastructure	3	59.158161	20.280245	3	-1.883915	1	9	1	2								
662	182973	650613	58.363628	6.381248	4		0.2	58.163628	1	G	1	4	1	Site Infrastructure	3	59.158161	11.252384	3	-0.794533	1	9	1	1								
663	182973	650622	57.806941	8.218749	6		0.2	57.606941	1	G	1	6	2	Site Infrastructure	3	59.158161	16.126681	3	-1.35122	1	9	1	2								
664	182964	650622	58.263142	7.95001	4		0.1	58.163142	1	G	1	4	1	Site Infrastructure	3	59.158161	12.690023	3	-0.895019	1	9	1	1								
665	182964	650612	59.010119	3.359831	2		0.1	58.910119	1	G	1	2	1	Site Infrastructure	3	59.158161	2.764139	4	-0.148042	1	12	2	2								
666	182959	650606	59.407081	3.096498	2		0.2	59.207081	1	G	1	2	1	Site Infrastructure	3	59.446995	0.748544	4	-0.039914	1	12	2	2								
667	182954	650621	58.534863	7.943128	4		0.4	58.134863	1	G	1	4	1	Site Infrastructure	3	59.296345	11.880523	3	-0.761482	1	9	1	1								
668	182953	650613	59.244128	2.761841	2		0.01	59.234128	1	G	1	2	1	Site Infrastructure	3	59.296345	4.392523	4	-0.052217	1	12	2	2								
669	182944	650621	58.151586	8.935706	6		0.01	58.141586	1	G	1	6	2	Site Infrastructure	3	59.296345	17.477821	3	-1.144759	1	9	1	2								
670	182934	650621	57.399747	8.480763	6		0.01	57.389747	1	G	1	6	2	Site Infrastructure	3	59.440273	24.372949	3	-2.040526	1	9	1	2								
671	182933	650612	58.617097	5.68765	4		0.2	58.417097	1	G	1	4	1	Site Infrastructure	3	59.440273	21.539099	3	-0.823176	1	9	1	1								
672	182946	650610	59.203854	3.252534	2		0.7	58.503854	2	G	1	4	1	Site Infrastructure	3	59.440273	8.747812	4	-0.236419	1	12	2	2								
673	182953	650602	59.749996	2.706394	2		0.3	59.449996	1	G	1	2	1	Site Infrastructure	3	59.589793	3.751776	4	0.160203	1	12	2	2								
674	182953	650592	60.197924	2.67494	2		0.1	60.097924	1	G	1	2	1	Site Infrastructure	3	59.642346	11.085441	3	0.555578	1	9	1	1								
675	182953	650581	60.669125	2.751856	2		0.01	60.659125	1	G	1	2	1	Site Infrastructure	3	59.642346	21.430214	3	1.026779	1	9	1	1								
676	182943	650581	60.352353	3.076597	2		0.1	60.252353	1	R	1.5	3	1	Site Infrastructure	3	59.642346	25.206808	3	0.710007	1	9	1	1								
677	182943	650592	59.859584	3.16055	2		0.4	59.459584	1	G	1	2	1	Site Infrastructure	3	59.538669	17.654832	3	0.320915	1	9	1	1								
678	182943	650602	59.431094	3.092933	2		0.6	58.831094	2	G	1	4	1	Site Infrastructure	3	59.538669	12.16299	3	-0.107575	1	9	1	1								
679	182934	650602	59.190907	3.153284	2		0.01	59.180907	1	G	1	2	1	Site Infrastructure	3	59.538669	20.838103	3	-0.347762	1	9	1	1								
680	182934	650591	59.837678	3.620551	2		0.01	59.827678	1	G	1	2	1	Site Infrastructure	3	59.538669	25.526764	3	0.299009	1	9	1	1								
681	182950	650488	64.240061	4.51051	4		0.01	64.230061	1	G	1	4	1	Site Infrastructure	3	65.068296	21.508104	3	-0.828235	1	9	1	1								
682	182960	650489	63.394013	7.050921	4		0.4	62.994013	1	G	1	4	1	Site Infrastructure	3	64.874209	21.880059	3	-1.480196	1	9	1	1								
683	182970	650489	62.947856	8.91176	6		0.01	62.937856	1	G	1	6	2	Site Infrastructure	3	64.874209	24.780092	3	-1.926353	1	9	1	2								
684	182981	650489	62.510804	7.877866	4		0.2	62.310804	1	G	1	4	1	Site Infrastructure	3	64.874209	30.917025	3	-2.363405	1	9	1	1								
685	182981	650479	63.617484	6.650883	4		0.5	63.117484	1	G	1	4	1	Site Infrastructure	3	64.876686	24.694258	3	-1.259202	1	9	1	1								
686	182980	650470	64.185297	5.866902	4		0.3	63.885297	1	G	1	4	1	Site Infrastructure	3	64.876686	20.388798	3	-0.691389	1	9	1	1								
687	182980	650460	64.749832	4.843012	4		0.3	64.449832	1	G	1	4	1	Site Infrastructure	3	64.979092	19.725854	3	-0.22926	1	9	1	1								
688	182980	650449	65.159406	3.443922	2		0.1	65.059406	1	G	1	2	1	Site Infrastructure	3	65.276186	23.917605	3	-0.11678	1	9	1	1								
689	182980	650439	65.481604	2.79991	2		0.1	65.381604	1	G	1	2	1	Site Infrastructure	3	65.276186	29.752489	3	0.205418	1	9	1	1								
690	182970	650439	65.724786	3.701533	2		0.01	65.714786	1	G	1	2	1	Site Infrastructure	3	65.276186	23.710231	3	0.4486	1	9	1	1								
691	182970	650449	65.247542	2.78303	2		0.2	65.047542	1	G	1	2	1	Site Infrastructure	3	65.276186	15.552023	3	-0.028644	1	9	1	1								
692	182970	650459	64.922159	1.921147	1		0.3	64.622159	1	G	1	1	1	Site Infrastructure	3	64.979092	10.407739	3	-0.056933	1	9	1	1								
693	182970	650469	64.802754	1.83187	1		0.3	64.502754	1	G	1	1	1	Site Infrastructure	3	64.876686	10.309738	3	-0.073932	1	9	1	1								
694	182970	650479	64.488938	5.463158	4		0.1	64.388938	1	G	1	4	1	Site Infrastructure	3	64.874209	16.537597	3	-0.385271	1	9	1	1								
695	182960	650479	64.284761	3.785216	2		0.9	63.384761	2	G	1	4	1	Site Infrastructure	3	64.874209	11.304632	3	-0.589448	1	9	1	1								
696	182961	650469	64.690475	2.97734	2		0.01	64.680475	1	G	1	2	1	Site Infrastructure	3	64.874209	2.632823	4	-0.183734	1	12	2	2								
697	182956	650464	65.18942	4.038413	4		0.1	65.08942	1	G	1	4	1	Site Infrastructure	3	65.173811	0.842227	4	0.015609	2	12	2	2								
698	182960	650460	65.199754	3.931317	2		0.01	65.189754	1	G	1	2	1	Site Infrastructure	3	65.276186	1.373031	4	-0.076432	1	12	2	2								
699	182960	650449	65.7187	4.024986	4		0.01	65.7087	1	G	1	4	1	Site Infrastructure	3	65.276186	10.830744	3	0.442514	1	9	1	1								
700	182960	650439	66.215891	4.024986	4		0.01	66.205891	1	G	1	4	1	Site Infrastructure	3	65.276186	16.150882	3	0.939705	1	9	1	1								
701	182949	650440	66.70623	4.024986	4		0.01	66.69623	1	G	1	4	1	Site Infrastructure	3	65.474173	19.973103	3	1.232057	1	9	1	1								
702	182941	650440	67.134613	4.009829	4		0.01	67.124613	1	G	1	4	1	Site Infrastructure	3	65.474173	23.847294	3	1.66044	1	9	1	1								
703	182931	650439	67.63655	3.80809	2		1	66.63655	2	G	1	4	1	Site Infrastructure	3	65.474173	30.765302	3	2.162377	1	9	1	1								
704	182932	650450	67.099902	4.024986	4		0.01	67.089902	1	G	1	4	1	Site Infrastructure	3	65.474173	24.146124	3	1.625729	1	9	1	1								
705	182930	650459	66.666934	4.024986	4		0.4	66.266934	1	G	1	4	1	Site Infrastructure	3	65.474173	22.163352	3	1.192761	1	9	1	1								
706	182931	650470	66.118592	4.036498	4		0.1	66.018592	1	G	1	4	1	Site Infrastructure	3	65.268363	22.220068	3	0.850229	1	9	1	1								
707	182931	650479	65.648372	3.975708	2		0.1	65.548372	1	G	1	2	1	Site Infrastructure	3	65.268363	25.710363	3	0.380009	1	9	1	1								
708	182931	650489	65.170016	3.958755	2		0.3	64.870016	1	G	1	2	1	Site Infrastructure	3	65.268363	32.329312	3	-0.098347	1	9	1	1								
709	182941	650469	65.665059	4.038653	4		0.6	65.065059	2	G	1	8	2	Site Infrastructure	3	65.268363	12.577125	3	0.396696	1	9	1	2								
710	182941	650459	66.167571	4.024986	4		1	65.167571	2	R	1.5	12	2	Site Infrastructure	3	65.474173	12.157651	3	0.693198	1	9	1	2								
711	182941	650449	66.671294	4.024995	4		0.4	66.271294	1	G	1	4	1	Site Infrastructure	3	65.474173	17.073941	3	1.197121	1	9	1	1								
712	182951	650449	66.173988	4.024992	4		0.01	66.163988	1	G	1	4	1	Site Infrastructure	3	65.474173	10.804956	3	0.699815	1	9	1	1								
713	182951	650459	65.681537	4.025001	4		0.01	65.671537	1	G	1	4	1	Site Infrastructure	3	65.474173	3.071322	4	0.207364	2	12	2	2								
714	182951	650469	65.155452	4.037824	4		0.01	65.145452	1	G	1	4	1	Site Infrastructure	3	65.068296	4.286947	4	0.087156	1	12	2	2								
715	182951	650480	64.646462	4.046465	4		0.01	64.636462	1	G	1	4	1	Site Infrastructure	3	65.068296	12.666104	3	-0.421834	1	9	1	1								

Slope Angles

	Co-eff.
0	2.0 1.0
2	4.0 2.0
4	8.0 4.0
8	15.0 6.0
15	35.0 8.0

Peat depths

	Co-eff.
0	0.5 1.0
0.51	1.0 2.0
1.01	3.0 3.0
3.01	6.0 8.0

Substrate **Co-eff.**

G	1.0
R	1.5
C	2.0
not proven	2.0
slip material	5.0

Receptor **Co-eff**

Roads and Tracks	3.0
Minor Water Feature	6.0
Dwelling	6.0
Major Water Feature	8.0
Site Infrastructure	3.0
important Habitat	8.0

Receptor Dist.

	Co-eff.
0	10.0 4.0
10	100.0 3.0
100	1000.0 2.0
1000	2000.0 1.0

Receptor Elev.

	Co-eff.
0	10.0 1.0
10	50.0 2.0
50	100.0 3.0
100	200.0 4.0

risk rating normalisation

0	5.0 1.0
5	15.0 2.0
15	31.0 3.0
31	50.0 4.0
50	100.0 5.0

impact rating normalisation

0	10.0 1.0
10	20.0 2.0
20	30.0 3.0
30	50.0 4.0
50	100.0 5.0

APPENDIX D – PEAT CORING RECORDS

Background

Peat cores were obtained from two locations at the proposed Crossaig Substation and associated infrastructure in July 2022, one at the northern boundary of the proposed substation footprint and one in the proposed temporary works area. Cores were advanced in areas of the Site where peat probing had identified the presence of deep peat to characterise the properties of the peatland in accordance with the *Peatland Survey. Guidance on Developments on Peatland (2017).* The document, which was published jointly by the Scottish Government, Scottish Natural Heritage (NatureScot) and SEPA, defines a consistent sampling methodology to quantify and qualify the peat material on site. It also provides advice on how to publish peat surveys as part of wider site investigations for development management applications, with a particular focus on wind farm developments.

The parameters used to determine the characteristics of the peat materials are outlined below.

i. Surface firmness estimation

An average man standing on one foot applies a pressure to the ground of between 5 and 6 lbs / p.s.i. and this fact is used to estimate the bearing capacity. The following symbols are used to denote the pressure the ground will stand.

Firmness of surface (P)

PO = Surface too soft to walk on

P1 = Surface just passable

P2 = Surface fairly firm

P3 = Surface firm

ii. Observations on the vegetation

The Site is largely surrounded by commercial forestry plantations at varying stages of development and will require felling prior to the beginning of construction. The Temporary Works Area and proposed access tracks are situated in a previously felled area adjacent to the existing Crossaig Substation.

iii. Observations on the peat

a. Botanical observations

Botanical observations of peat samples identified that Carex species are likely to make up a significant proportion of the organic material in the lower horizons where catotelmic peat is typically found.

b. Degree of humification - von POST SCALE

The degree of humification of peat samples is estimated in the field according to the method devised by the Swedish botanist L. von Post by squeezing a small amount of peat in the hand and the water and / or peat exuded indicates, by its colour and consistency, the degree to which the peat has undergone humification or, more correctly, a type of decomposition which includes breakdown under anaerobic conditions. The von Post scale ranges from 1 to 10, the higher the number the higher the degree of humification. The full scale is as follows:

Von Post Scale (H)	
H1	Completely undecomposed peat free of amorphous material. On squeezing, clear colourless water is pressed out.

H2	Nearly undecomposed peat, free of amorphous material, yielding only yellowish brown water on pressing.
H3	Very slightly decomposed peat, containing a little amorphous material. On squeezing, muddy brown water but no peat passes between the fingers. Residue is not pasty.
H4	Slightly decomposed peat containing some amorphous material. Strongly muddy brown water but no peat passes between the fingers. Residue is somewhat pasty.
H5	Moderately decomposed peat containing a fair amount of amorphous material. Plant structure recognisable though somewhat vague. On squeezing, some peat but mainly muddy water issues. Residue is strongly pasty.
H6	Moderately decomposed peat with a fair amount of amorphous material and indistinct plant structure. On pressing, about one third of the peat passes between the fingers. Residue is strongly pasty, but shows the plant structure more distinctly than in unsqueezed peat.
H7	Strongly decomposed peat with much amorphous material and faintly recognisable plant structure. On squeezing, about one half of the peat is extruded. The water is very dark in colour.
H8	Strongly decomposed peat with much amorphous material and very indistinct plant structure. On squeezing, two thirds of the peat and some water passes between the fingers. Residue consists of plant tissues capable of resisting decomposition (roots, fibres, wood, etc.).
H9	Practically fully decomposed peat with almost no recognisable plant structure. Nearly all the peat squeezed between the fingers as a uniform paste.
H10	Completely decomposed peat with no discernible plant structure. On squeezing, all the peat, without water, passes between the fingers.

iv. Fibre

The fibre content of each peat sample is estimated visually and the amounts of the two types (classified 'fine' or 'coarse') are noted on a scale ranging from 0 to 3 as shown below.

Fine fibres, mainly derived from *Eriophorum spp*. (F)

F0 = Nil
Fl = Low content
F2 = Moderate content
F3 = High content

Coarse fibres, mainly rootlets (R)

R0 = Nil
Rl = Low content
R2 = Moderate content
R3 = High content

v. Wood

Wood remains, especially if they are large and resistant, may conceivably cause a certain amount of difficulty during the exploitation of a bog. An attempt is therefore made when sampling to assess the extent of wood. It is estimated on a scale ranging from 0 to 3 as detailed below.

Wood remains (W)
W0= Nil

Wl = Low content
W2 = Moderate content
W3 = High content

vi. Other observations

When peat is freshly sampled and before it darkens by oxidation, note is taken of its colour, stratification, the presence of visible mineral matter and any other features of interest.

Photographs of the peat cores obtained from Crossaig along with information relating to the parameters outlined above are presented overleaf with a summary of the information gathered during the peat coring process presented in the main body of text of the Peat Slide Risk Assessment (PSRA).

It was noted during sampling that the water table at sample 1 was 0.3 m below the surface and that sample 2 had a high water content.

Core 1		
Core Samples	Detail	Surrounding Environment
		

Location	Depth (m)	Firmness of Surface (P)	Von Post (H)	Fine Fibres (F)	Coarse Fibres (R)	Wood Remains (W)	Other Observations (Colour)
E 18255, N 650413	0.00 – 0.50	2	3	2	3	1	Dark Brown
	0.51 – 1.00		4	2	2	2	Dark Brown
	1.01 – 1.50		5	1	2	2	Dark Brown
	1.51 – 2.00		6	2	1	1	Dark Brown

Core 2		
Core Samples	Detail	Surrounding Environment
		

Location	Depth (m)	Firmness of Surface (P)	Von Post (H)	Fine Fibres (F)	Coarse Fibres (R)	Wood Remains (W)	Other Observations (Colour)
E 182671, N 650128	0.00 – 0.50	3	4	2	3	1	Brown
	0.51 – 1.00		4	3	2	1	Brown
	1.01 – 1.50		6	3	1	1	Dark Brown
	1.51 – 2.00		7	3	1	1	Dark Brown