Scottish & Southern Electricity Networks

TRANSMISSION

Annex P - Peat Slide Risk Assessment (PSRA)

November 2022

CRARAE SUBSTATION
ENVIRONMENTAL APPRAISAL

ANNEX **P**

PEAT LANDSLIDE HAZARD AND RISK ASSESSMENT

NOVEMBER 2022

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1 INTRODUCTION

1.1 Background

Arcus Consultancy Services Ltd (Arcus) was commissioned by ERM on behalf of SSEN Transmission Ltd (the Applicant) to carry out a Peat Landslide Hazard and Risk Assessment (PLHRA) to support an Environmental Assessment (EA) for a new 275 kV electricity substation and overhead line (OHL) Tie-In and Temporary Diversion (hereby known as the Project) in the vicinity of the existing Crarae substation located at National Grid Ref. 196140 697498.

The new proposed substation, Temporary Works Area (TWA), Sustainable Urban Drainage System (SUDS) attenuation pond and permanent access track (hereby known as the Proposed Development) will be subject to Town and Country Planning, while the OHL Tie-In, Temporary Diversion accompanying towers and temporary access track (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 both Development's construction schedules will be aligned. Therefore, peat excavation and re-use will be considered within the wider scope of the Project.

This Peat Landslide Hazard Risk Assessment (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; and
- Appendix C: Hazard Rank Calculations.

1.2 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 Development and Associated Development. 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.

[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 16/05/2022)

1.3 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 over 18 years of experience in ground condition assessment. This Chapter has been technically reviewed by Tomos Ap Tomos, Technical Director of Engineering.

2 SITE INFORMATION AND DESK STUDY

2.1 Site Description and Topography

The land which the Project occupies (the Site) is located approximately 1.9 km north west of Minard. The Site is located within the administrative boundary of ABC The Site extends northeast to southwest, making use of the existing access track to Crarae Substation which connects to the A83, approximately 2.1 km south west of Minard via an unnamed road.

The topography within the Red Line Boundary (RLB) and immediate vicinity is relatively complex. The elevation ranges from approximately 230 metres (m) Above Ordnance Survey Datum (AOD) and falls to around 170 m AOD towards the north eastern boundary.

2.2 Site Walkover

The purpose of the desk study and site visit was to gain a thorough understanding of the condition of the Site 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.

Aerial and satellite photography was reviewed ahead of a number of site visits, undertaken as part of the overall EA process between November 2021 and July 2022. The Site was examined for evidence of peatlands, presence of landslip and localised hagging. Geological mapping and details of proposed infrastructure 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 other potential receptors.

2.2.1 Site Conditions

The Project is in an area of mature coniferous plantation with a small area of marshy grassland in the west. There is open moorland further up the slope to the north.

Neither mining nor quarry activities are known to have taken place at the Site.

The Geomorphology Map is presented as Figure 4 in Appendix A, while site photographs taken during the site walkover are included in Appendix B.

2.3 Published Geology

2.3.1 Superficial Soils

Published British Geological Survey (BGS)[2] data information on superficial soils indicates centre portions of the Project to be unrecorded. However, glacial deposits of Till are shown to be on the northern portions of the Project and peat deposits are shown on the western boundaries. The proposed substation and TWA is located on the portion of the Project with unrecorded superficial soils.

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

2.3.2 Solid Geology

Published BGS mapping information on solid geology indicates the majority of the Site to be underlain by a mix of Semipelite and Calcerous rock forming part of the Ardrishaig

[2] BGS (2019): http://mapapps.bgs.ac.uk/geologyofbritain/home.html (Accessed 25/03/22)

Phyllite Formation. Metamicrogabbro and Metagabbro rock from the Dalradian Supergroup occur on the western areas, and isolated occurrences of Basalt and Microgabbro from the Mull-Dyke Swarm can be found throughout the Project. Most of the proposed infrastructure of the Project is located in the area containing Semipelite and Calcerous rock.

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

Published BGS Geosure mapping[3] indicates that no faulting exists on-site with the nearest faulting recorded approximately 13 km to the south west of the infrastructure, running north west to south east. This fault is not expected to influence the project.

2.4 Hydrology and Hydrogeology

The groundwater units underlying the Site are identified by Scotland's Environment mapping service as the Oban and Kintyre body[4]. These units have an overall SEPA classification of 'Good', with a low productivity in which groundwater "flow is virtually all through fractures and other discontinuities".

Based on SEPA mapping [5], the Project is located within the catchment of the River Add with the River Add passing the north-western Site boundary. The River Add is classified under the Water Framework Directive (WFD) as Good in certain areas and Moderate (SEPA ID 10266) in others. The River Add flows from the north in a south-western direction, passing the north-western Site boundary before discharging into Loch Crinan. Several unnamed watercourses drain across the Project area and flow north-west into the River Add.

Figure 4, illustrating the Geomorphology of the Site is included in Appendix A.

2.5 Historical Landslip and Geomorphology

No historical landslides are recorded on the site or in the surrounding area using the online BGS GeoIndex [6]

No evidence of historic peat hagging or localised slippage was noted during the Site walkover and topsoil, where undisturbed generally appeared to be in good condition. Extensive forestry plantations are present across the Site, the majority of which have been subject to felling and it is possible that properties of any peat deposits may have been altered due to these historical activities. Nonetheless, the possibility of instability within peat soils cannot be discounted, especially where there are significant topographic variances and the presence of watercourses.

[3] BGS (2019): https://mapapps2.bgs.ac.uk/geoindex/home.html (Accessed 17/05/22)

[4] SEPA (undated) Groundwater classification [Online] Available at: https://map.environment.gov.scot/sewebmap/ (Accessed: 17/05/22)

[5] SEPA (2014) Water Environment Hub [online] Available at https://www.sepa.org.uk/data-visualisation/water-environment-hub/ (Accessed 17/05/22)

[6] GeoIndex - British Geological Survey (bgs.ac.uk) (Accessed 17/05/22)

3 SITE SURVEYS AND RESULTS

3.1 Investigations

Preliminary peat probing was undertaken as part of the initial site optioneering, which was superseded by phases of detailed peat probing focussing on the proposed site infrastructure.

Peat depths have been determined within areas of proposed infrastructure through peat probe surveys undertaken as recommended in the NatureScot (formerly Scottish Natural Heritage (SNH)), Scottish Government and James Hutton Institute guidance for investigating peat. The survey was initiated to inform the EA and design work while supporting the PLHRA. The survey comprised of the following:

- 50 m centres along proposed OHL with perpendicular probes between 10 m and 25 m either side of line;
- 25 m x 25 m grid across footprint of proposed substation and TWA; and
- 10 m x 10 m grid covering an area of 50 m^2 at proposed towers.

Peat probing surveys were undertaken across a series of visits between November 2021 and February 2022. The probe positions for these visits were focussed on the Proposed infrastructure including the substation, permanent access tracks and TWA. Peat depths were measured along the proposed access tracks at 50 m centres with offsets of 25 m on either side of the centre line where possible, while a 25 m grid provided detailed peat information at the proposed substation and TWA. Furthermore, regarding the Associated Development three tower positions were covered at 10 m spacing to a 25 – 30 m distance in all directions to allow for potential micrositing and proposed temporary access tracks were covered in a similar methodology to the permanent tracks.

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

3.2 Summary of Peat Depths

Throughout the peat surveys a total of 591 probes were progressed with over 60% recording peat depths of 1.0 m or less. Thick peat (where the depth was greater than >1.0 m) was recorded at 39.8% of probe locations. The majority of thick peat was recorded at depths between 1.0 m – 3.0 m with 19 probes recording depths in excess of 4.5 m.

All peat depths of 5.0m or above have been recorded within a localised area in the central Site area to the northwest of the proposed substation. All probes are out with areas of proposed infrastructure other than one at the eastern extent of the proposed substation where peat at a depth of 5.2m was recorded.

Table 1 summarises the recorded peat depths.

Table 1: Peat Depth Summary

Peat Depth Range (m)	No of peat probes	Percentage of Total (%)
0.00 - 0.50	263	44.5
0.51 - 1.00	93	15.7
1.01 - 1.50	48	8.1
1.51 - 2.00	42	7.1
2.01 - 2.50	26	4.4
2.51 - 3.00	31	5.2
3.01 - 3.50	30	5.1

3.51 - 4.00	21	3.6
4.01 - 4.50	18	3.0
4.51 - 5.00	9	1.5
5.01 - 5.50	6	1.0
5.51 - 6.00	4	<1.0

The peat probe locations and depths are shown on Figure 5 appended with this PLHRA, and detailed probing records are included in Appendix C. The Interpolated Peat Depths were determined using the Inverse Distance Weighting (IDW) method of interpolation to a resolution of 5 m and are illustrated on Figure 6.

3.3 Peat Cores

Peat cores were also obtained from selected areas of the Site where peat probing had identified areas of deep peat, in order to further characterise the peatland. The methodology in which the peat coring was undertaken was guided by the Peatland Survey (2017) *Guidance on Developments on Peatland*[7], commissioned by the Scottish Government, Scottish National Heritage (now NatureScot) and SEPA. An outline of the methodology along with photographs and characterisation of the peat cores are presented in the Peat Coring Records in Appendix D.

Humification of peat is determined using the Von Post scale which indicates the degree to which peat has undergone humification or, more correctly, a type of decomposition which includes breakdown under anaerobic conditions. The Von Post Scale (H) ranges from 1 to 10, the higher the number the higher the degree of humification.

The core samples were obtained to depths ranging from 1.5 m to 2.5 m and humification values ranged between 2 and 9, generally becoming more humified with depth, as presented in the Peat Coring Records along with definitions of the Von Post values in Appendix D.

[7] Scottish Government, Scottish Natural Heritage, SEPA (2017) Peatland Survey. *Guidance on Developments on Peatland*,

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 development design. While peat does not wholly provide a development constraint, areas of deep peat or peat deposits on steep slope should be either avoided through design and micro-siting; or mitigation measures should be designed to avoid instability and movement.

4.2 Methodology

Despite The Proposed Development being an application under the Town and Country Planning (Scotland) Act 1997[9] and the Associated Development is to be submitted for Section 37 consent, 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 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 17/05/22)

[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 17/05/22)

[11] Scottish Government (2014) Scottish Planning Policy [Online] Available at: http://www.scotland.gov.uk/Topics/Built-Environment/planning/Policy (Accessed 17/05/22)

[12] Scottish Government (2014) National Planning Framework 3 [Online] Available at: http://scotland.gov.uk/Resource/0045/00453683.pdf (Accessed 17/05/22)

[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 17/05/22)

- An initial Phase 1 Probing scheme;
- Phase 2 Probing comprising infrastructure specific probing; and
- A hazard and risk ranking assessment.

The area of the Site subject to assessment was determined by the emerging 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;
- Excavation of infrastructure bases;
- 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 EA 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 the construction depends on several factors, the importance of which can vary by 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 in Figure 7. For the Proposed 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 4: 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 5: 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)	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 6: 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 7.

Table 7: 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.

In the absence of any historical hydrological monitoring, an assumption on groundwater levels has been adopted for the assessment, that 90% of the peat column at each probe location is below the water table, an overall conservative approach. While the assessment considers the recorded data at each of the peat probes to establish hazard ranking for the purposes of the peat stability analysis, groundwater depth is conservatively assumed to be within close proximity of the surface, based on the understanding of peat and its hydrological properties that it can consist of up to 90% water by volume.

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 8.

Table 8: 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	-

[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

Kirk (2001)[17]	2.7 – 8.2	26.1 – 30.4		Ombrotrophic blanket peat
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.

Y' – unit weight (kN/m^2), 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 (FoS) has been calculated for each probe locations which has been interpolated through ArcGIS Spatial Analyst tools. In this instance, the Inverse Distance Weighting (IDW) method of interpolation was used with a resolution of 5 m The FoS 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 FoS calculations indicate that all points present a 'low' risk other than one point within the central area of the Site which presents a 'high' risk. No infrastructure is proposed in this area with the proposed substation approximately 75 m east of the point where 2.5 m of peat was recorded on a slope in excess of 18°.

All other points in the surrounding area present a 'low' risk, indicating that the 'high' risk is confined to an isolated area, further supported by the 'Slope Map' in Figure 7 which demonstrates that the steep slope contributing to the 'high' risk is isolated in an area of no proposed infrastructure with relatively shallow slopes in all directions.

5.6 Exposure Assessment

The main Exposure receptors identified within the Site and surrounding area which could potentially be affected in the event of a peat slide were important habitats (blanket bog), watercourses and associated tributaries.

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.

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

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

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 in Tables 9-11.

Table 9: 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 10: 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 11: 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 12.

Table 12: 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 13.

Table 13: 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 14 and 15 below.

Table 14: 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 15: 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 five hazard zones using the approach in Section 5. A summary of the Hazard Ranking result for each identified area is summarised in Table 16 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, 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 16: Hazard Ranking

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
Hazard Area	Infrastructure Affected	Ranking	Key Aspects	Specific Actions	Ranking
H1	Existing track and proposed permanent access track	Negligible	Location and topography: Southern section of the Site. Hydrology: A small section of an unnamed watercourse is present at the western extent of the zone Peat Depth: 0.0 m – 3.9 m. Generally, <1.5 m Slope Gradient: 0° to >30° Exposure: Minor watercourse	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 J: Water Construction Environmental Management Plan (WCEMP) and management of peat and peaty soils as outlined in Annex N: Outline Peat Management Plan (oPMP).	Negligible

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
H2	Existing Inveraray to Crossaig Overhead Line, SUDS attenuation pond and Proposed temporary access track	Negligible	Location and topography: Western sector of the Site Hydrology: None Peat Depth: 0.0 m – 4.9 m. Generally, <1.5 m Slope Gradient: 0° to <30° Exposure: Existing and proposed temporary 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 J: WCEMP and management of peat and peaty soils as outlined in Annex N: oPMP.	Negligible
H3	Proposed substation, proposed TWA, proposed towers, proposed OHL alignment proposed temporary tower, proposed permanent access track, proposed temporary access track and existing Inveraray to Crossaig Overhead Line.	Negligible	Location and topography: Central and northern area of the Proposed Development Hydrology: None Peat Depth: 0.00 m – 6.0 m. Generally, <2.0 m Slope Gradient: 0° to <15° Exposure: Proposed and existing 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 J: WCEMP and management of peat and peaty soils as outlined in Annex N: oPMP.	Negligible
H4	None	Low	Location and topography: Eastern area of the Proposed Development Hydrology: None Peat Depth: 0.3 m - 5.9 m. Generally, <2.5 m Slope Gradient: 0° to <30° Exposure: None	Best practice measures in relation to drainage prior to and during construction will be implemented as outlined in Annex J: WCEMP and management of peat and peaty soils as outlined in Annex N: oPMP. During construction visual inspections and monitoring in areas with the potential	Negligible

Hazard Area and Infrastructure		Unmitigated Hazard		Mitigated Hazard	
				for peat slide risk should take place.	
H5	Proposed tower, proposed OHL alignment and existing Inveraray to Crossaig Overhead Line	Negligible	Location and topography: North eastern extent of the Associated Development Hydrology: None Peat Depth: 0.1 m - 2.6 m. Generally, <1.0 m Slope Gradient: 0° to <15° Exposure: Proposed and existing 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 J: WCEMP and management of peat and peaty soils as outlined in Annex N: oPMP.	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 and pre-construction to validate the PLHRA and influence the detailed design of the Development, including:

- Peat probing in proposed areas of peat restoration once identified;
- Ground investigations prior to detailed design;
- Update the PLHRA as necessary following further peat probing and detailed ground investigations;
- Identification of areas sensitive to changes in drainage regime prior to detailed design;
- Development of a drainage strategy that will not create areas of concentrated flow and will not affect any peatland hydrology;
- Design of a Development drainage system for tracks and hardstanding that will require minimal ongoing maintenance during the operation of the substation;
- 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.

During the construction stage, toolbox talks should be delivered to site personnel, which should contain but not be limited to the following information:

- Peat slide risks and associated indicators;
- Best practise techniques when working in the peatland environment; and
- Discussion on being careful not to disrupt or disturb the natural drainage on slopes.

8 CONCLUSIONS

This PLHRA has been undertaken for the Development in accordance with best practice, as detailed in Section 4.2 of this 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 majority of the Development is underlain by peat less than 1.0 m in thickness. Pockets of deep peat were recorded across the Proposed Development area with depths up to 6.0 m encountered in the north eastern area.

FoS calculations indicate that all points present a 'low' risk other than one 'high' risk point within the central area of the Proposed Development. The point is considered to be a result of a localised steep slope out with areas of proposed infrastructure or any other receptor; this is reflected in the 'negligible' hazard ranking assigned to the point.

Based on the scope of the study, the PLHRA has indicated that the majority of the Site is generally of 'negligible' hazard ranking with one area also highlighted as 'low' hazard ranking. Therefore, a significant risk of peat slide does not exist and it is considered that following the implementation of mitigation measures outlined in Section 7.3 of this PLHRA, the maximum residual hazard posed to the Development will be 'negligible'.

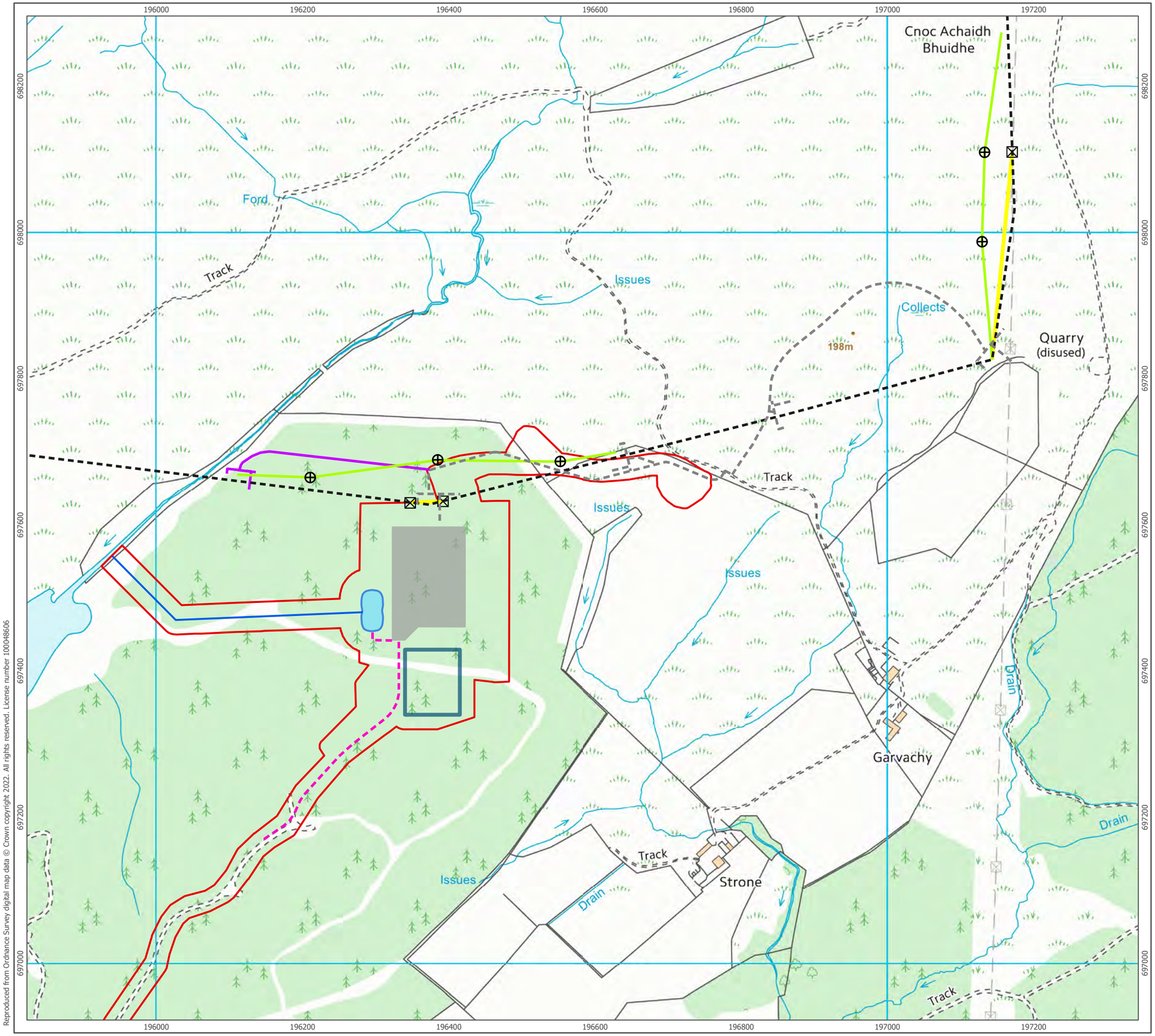
Notwithstanding the findings of the PLHRA, the final design of infrastructure should be carefully sited and micro-siting adopted if required in order to maintain the design objective of avoiding any potential peat slide risk.

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 Crarae Report.aprx\4534-REP-032 Fig01 Site Layout Plan

Scottish & Southern Electricity Networks

ARCUS

- Existing Access Tracks
- Existing Inveraray to Crossaig Overhead Line

Proposed Development

- Indicative Town and Country Planning Boundary
- Proposed Substation Temporary Works Area
- Proposed Substation Layout
- SUDs

Site Infrastructure Line PD

Infrastructure Type

- SUDs Outfall
- Proposed Permanent Access Tracks

Associated Development

- Proposed Temporary Access Tracks
- Proposed OHL Alignment
- Proposed Temporary OHL Bypass
- ⊕ Proposed Indicative Temporary Tower Location
- ⊠ Proposed Indicative Tower Location

1:5,000 Scale @ A3

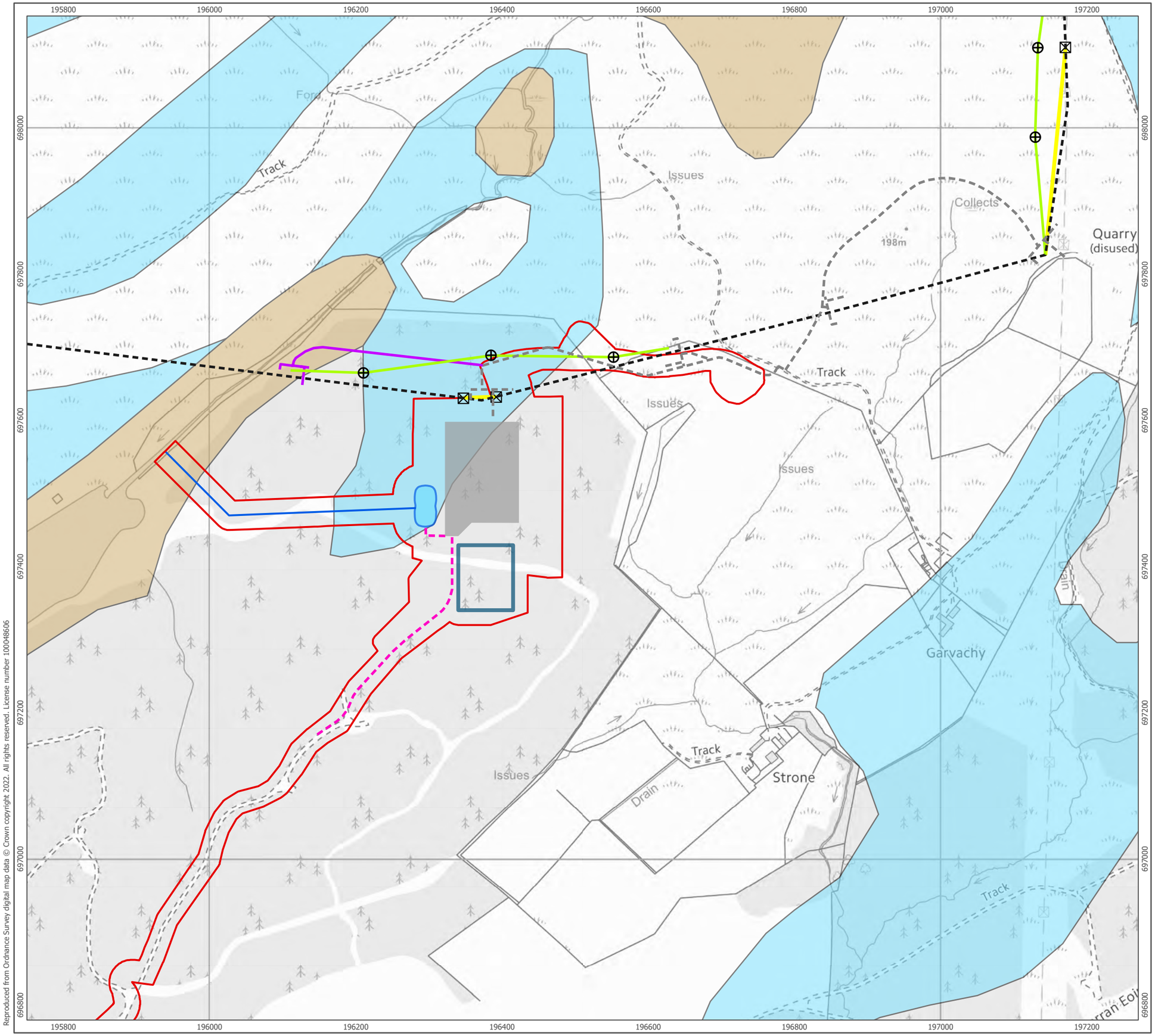
0 100 200 m

NORTH

Produced By: BM	Ref: 4534-REP-032
Checked By: SC	Date: 16/11/2022

Site Layout Plan
Figure 1

Crarae
Annex P:
Peat Slide Risk Assessment



Scottish & Southern Electricity Networks

ARCUS

- Existing Access Tracks
- Existing Inveraray to Crossaig Overhead Line

Proposed Development

- Indicative Town and Country Planning Boundary
- Proposed Substation Temporary Works Area
- Proposed Substation Layout
- SUDs
- SUDs Outfall
- Proposed Permanent Access Tracks

Associated Development

- Proposed Temporary Access Tracks
- Proposed OHL Alignment
- Proposed Temporary OHL Bypass
- ⊕ Proposed Indicative Temporary Tower Location
- ⊠ Proposed Indicative Tower Location

Superficial Soils

- Peat
- Raised Marine Deposits
- Till, Devensian
- Superficial Soils Not Mapped

1:5,000 Scale @ A3

0 100 200 m

NORTH

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Checked By: SC	Date: 16/11/2022

Superficial Soils
Figure 2

Crarae
Annex P:
Peat Slide Risk Assessment

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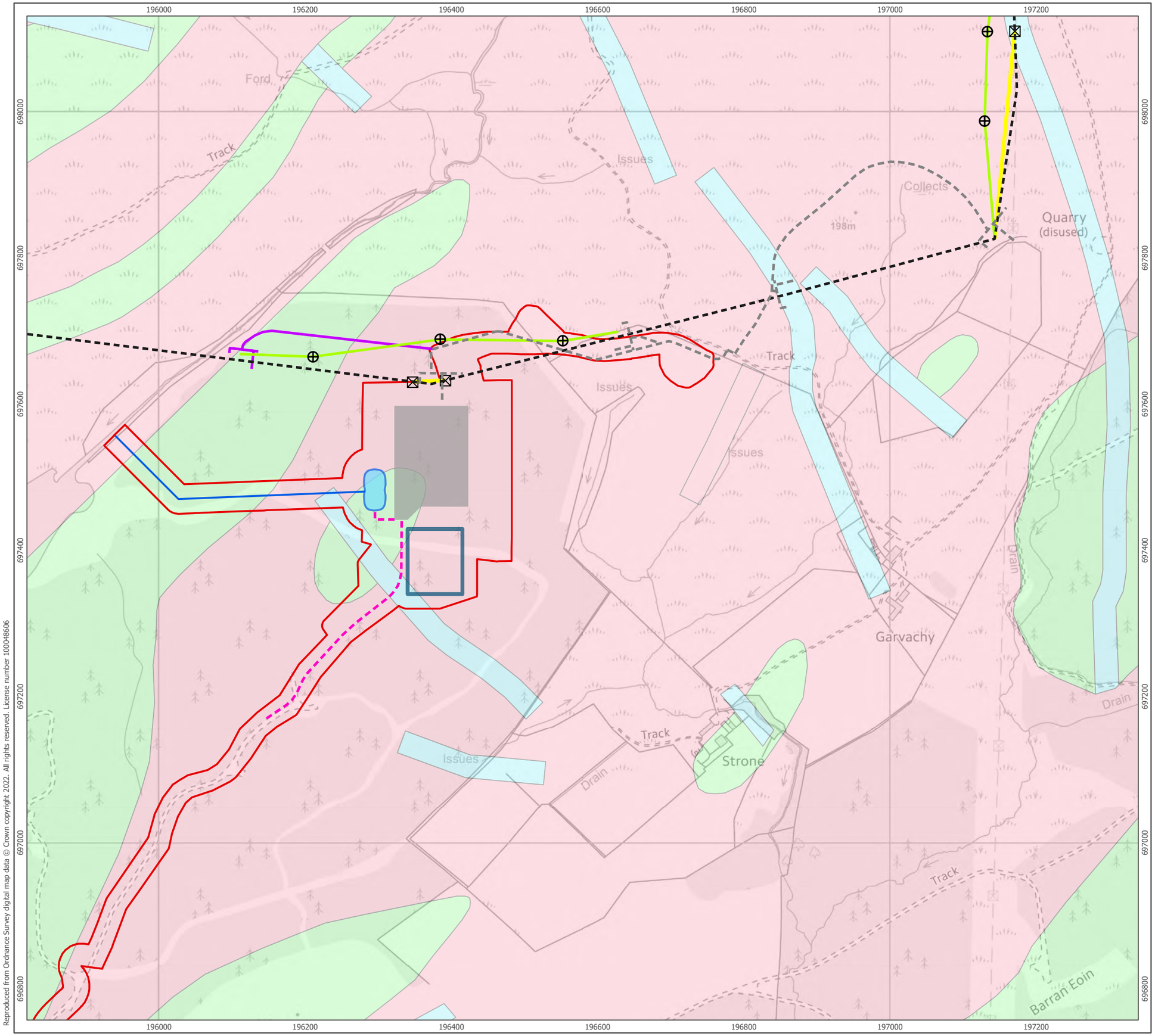

Y:\GIS\Engineering\Projects\4534 Argyll Substations\4534 Crarae Report.aprx\4534-REP-034 Fig03 Solid Geology

Scottish & Southern Electricity Networks

ARCUS

- Existing Access Tracks
- Existing Inveraray to Crossaig Overhead Line

Proposed Development

- Indicative Town and Country Planning Boundary
- Proposed Substation Temporary Works Area
- Proposed Substation Layout
- SUDs
- SUDs Outfall
- Proposed Permanent Access Tracks

Associated Development

- Proposed Temporary Access Tracks
- Proposed OHL Alignment
- Proposed Temporary OHL Bypass
- ⊕ Proposed Indicative Temporary Tower Location
- ⊠ Proposed Indicative Tower Location

Solid Geology

- Ardrishaig Phyllite Formation
- Dalradian Supergroup
- Mull Dyke-Swarm

1:5,000 Scale @ A3

0 100 200 m

NORTH

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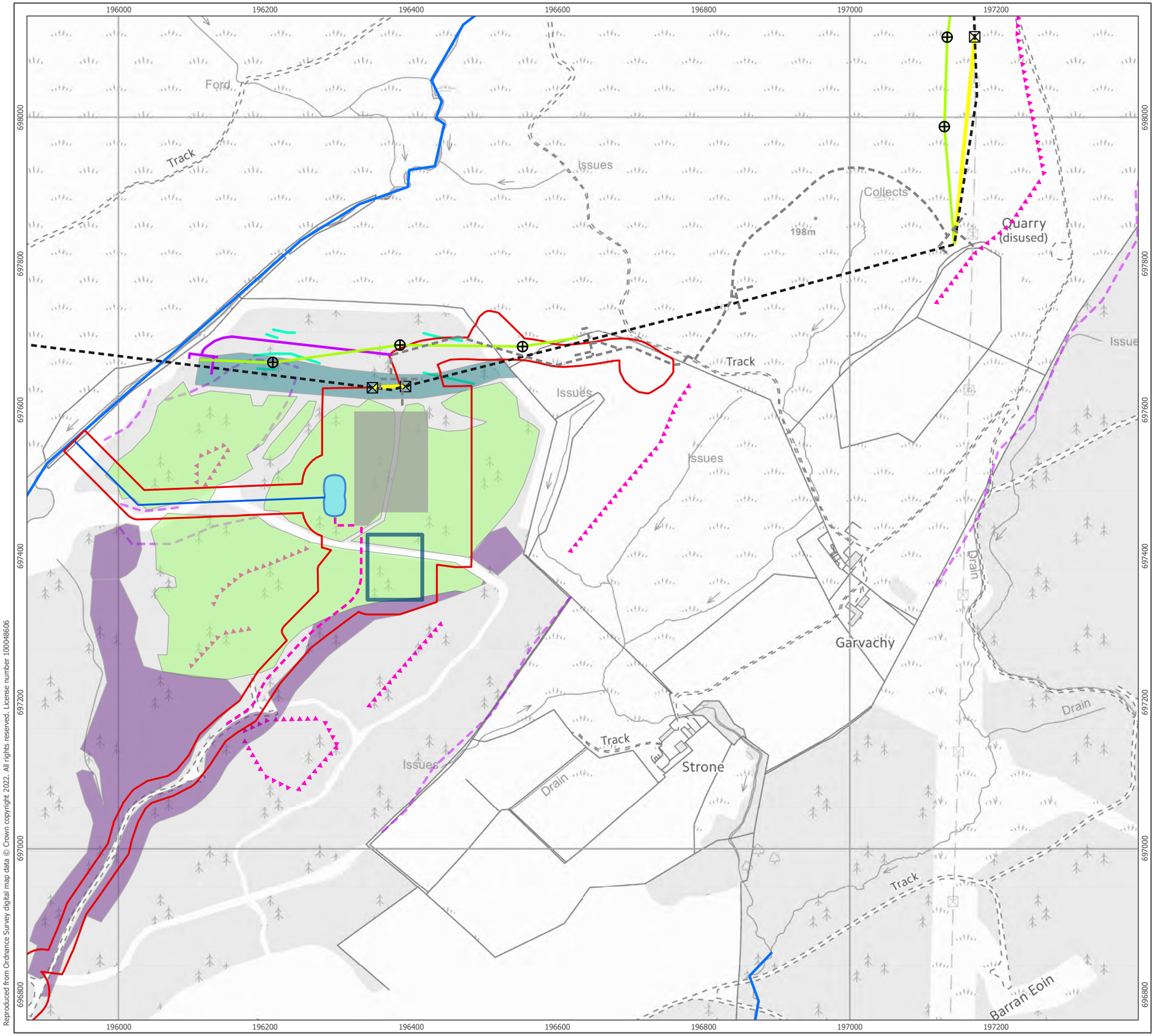
Solid Geology
Figure 3

Crarae
Annex P:
Peat Slide Risk Assessment



Scottish & Southern Electricity Networks

ARCUS

- Existing Access Tracks
- Existing Inveraray to Crossaig Overhead Line

Proposed Development

- Indicative Town and Country Planning Boundary
- Proposed Substation Temporary Works Area
- Proposed Substation Layout
- SUDs
- SUDs Outfall
- Proposed Permanent Access Tracks

Associated Development

- Proposed Temporary Access Tracks
- Proposed OHL Alignment
- Proposed Temporary OHL Bypass
- Proposed Indicative Temporary Tower Location
- Proposed Indicative Tower Location

Geomorphology

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

1:5,000 Scale @ A3

0 100 200 m

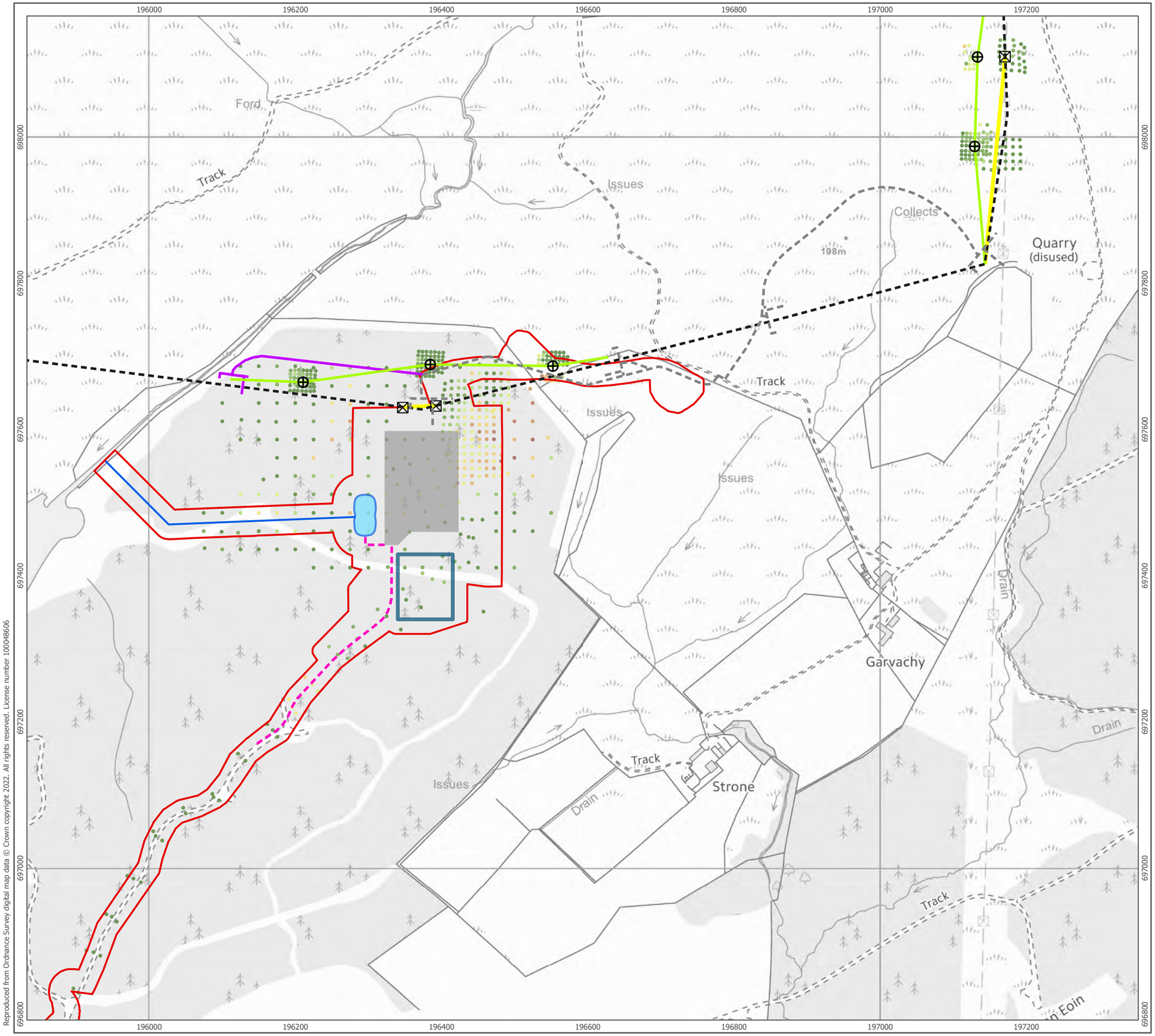
NORTH

Produced By: BM	Ref: 4534-REP-035
Checked By: SC	Date: 16/11/2022

Geomorphology Map
Figure 4

Crarae
Annex P:
Peat Slide Risk Assessment

Y:\GIS\Engineering\Projects\4534 Argyll Substations\4534 Crarae Report.aprx\4534-REP-035 Fig04 Geomorphology Map



Scottish & Southern Electricity Networks

ARCUS

- Existing Access Tracks
- Existing Inveraray to Crossaig Overhead Line

Proposed Development

- Indicative Town and Country Planning Boundary
- Proposed Substation Temporary Works Area
- Proposed Substation Layout
- SUDs
- SUDs Outfall
- Proposed Permanent Access Tracks

Associated Development

- Proposed Temporary Access Tracks
- Proposed OHL Alignment
- Proposed Temporary OHL Bypass
- Proposed Indicative Temporary Tower Location
- Proposed Indicative Tower Location

Recorded Peat Depths (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
- 4.51 - 5.00
- 5.01 - 5.50
- 5.51 - 6.00

1:5,000 Scale @ A3

0 100 200 m

NORTH

Produced By: BM	Ref: 4534-REP-036
Checked By: SC	Date: 16/11/2022

Recorded Peat Depths
Figure 5

Crarae
Annex P:
Peat Slide Risk Assessment

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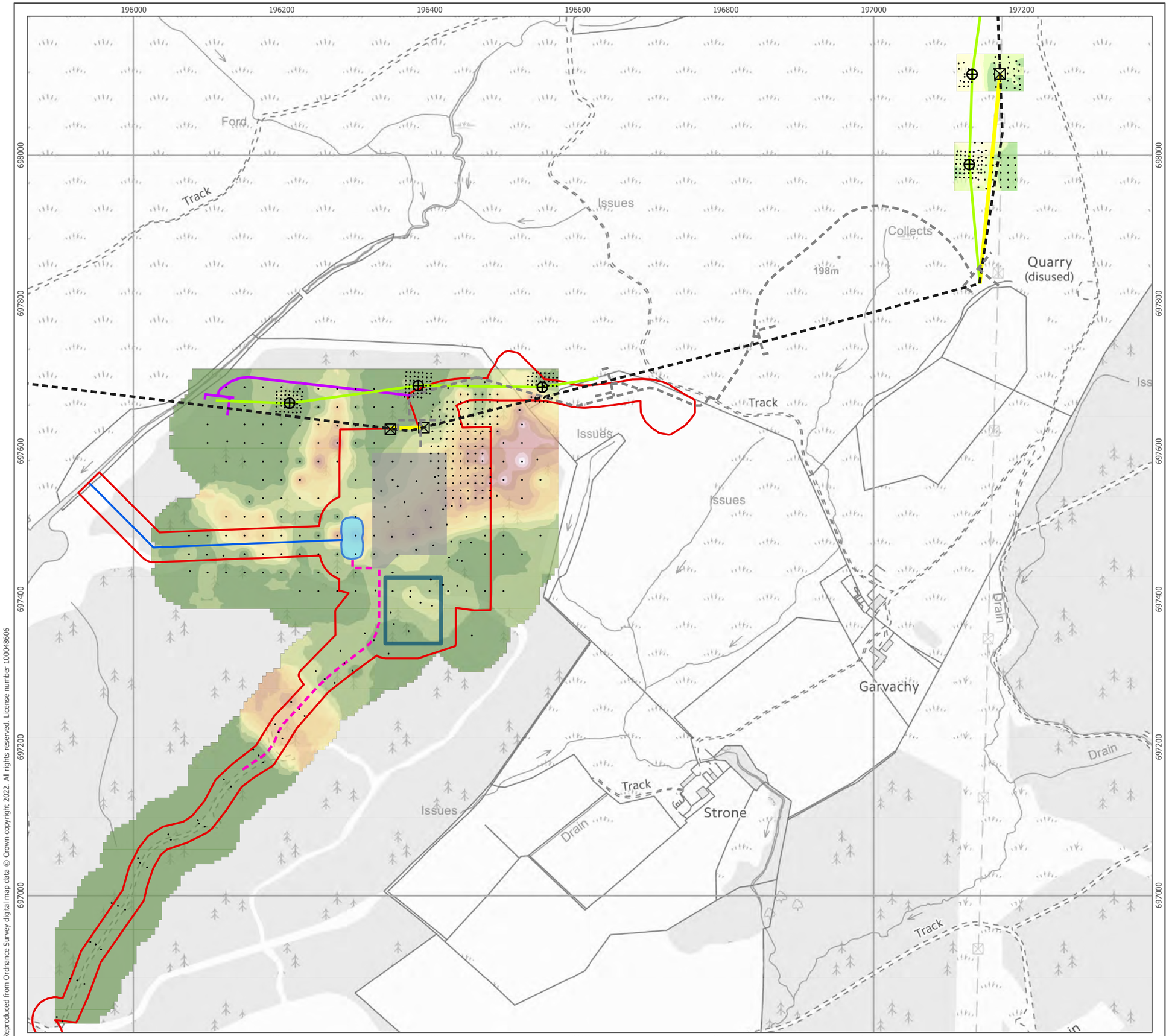

Scottish & Southern Electricity Networks

ARCUS

- Existing Access Tracks
- Existing Inveraray to Crossaig Overhead Line
- Peat Probe Location

Proposed Development

- Indicative Town and Country Planning Boundary
- Proposed Substation Temporary Works Area
- Proposed Substation Layout
- SUDs
- SUDs Outfall
- Proposed Permanent Access Tracks

Associated Development

- Proposed Temporary Access Tracks
- Proposed OHL Alignment
- Proposed Temporary OHL Bypass
- Proposed Indicative Temporary Tower Location
- Proposed Indicative Tower Location

Interpolated Peat Depths (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
- 4.51 - 5.00
- 5.01 - 5.50
- 5.51 - 6.00

1:5,000 Scale @ A3

0 125 250 m

NORTH

Produced By: BM	Ref: 4534-REP-037
Checked By: SC	Date: 16/11/2022

Interpolated Peat Depths
Figure 6

Crarae
Annex P:
Peat Slide Risk Assessment

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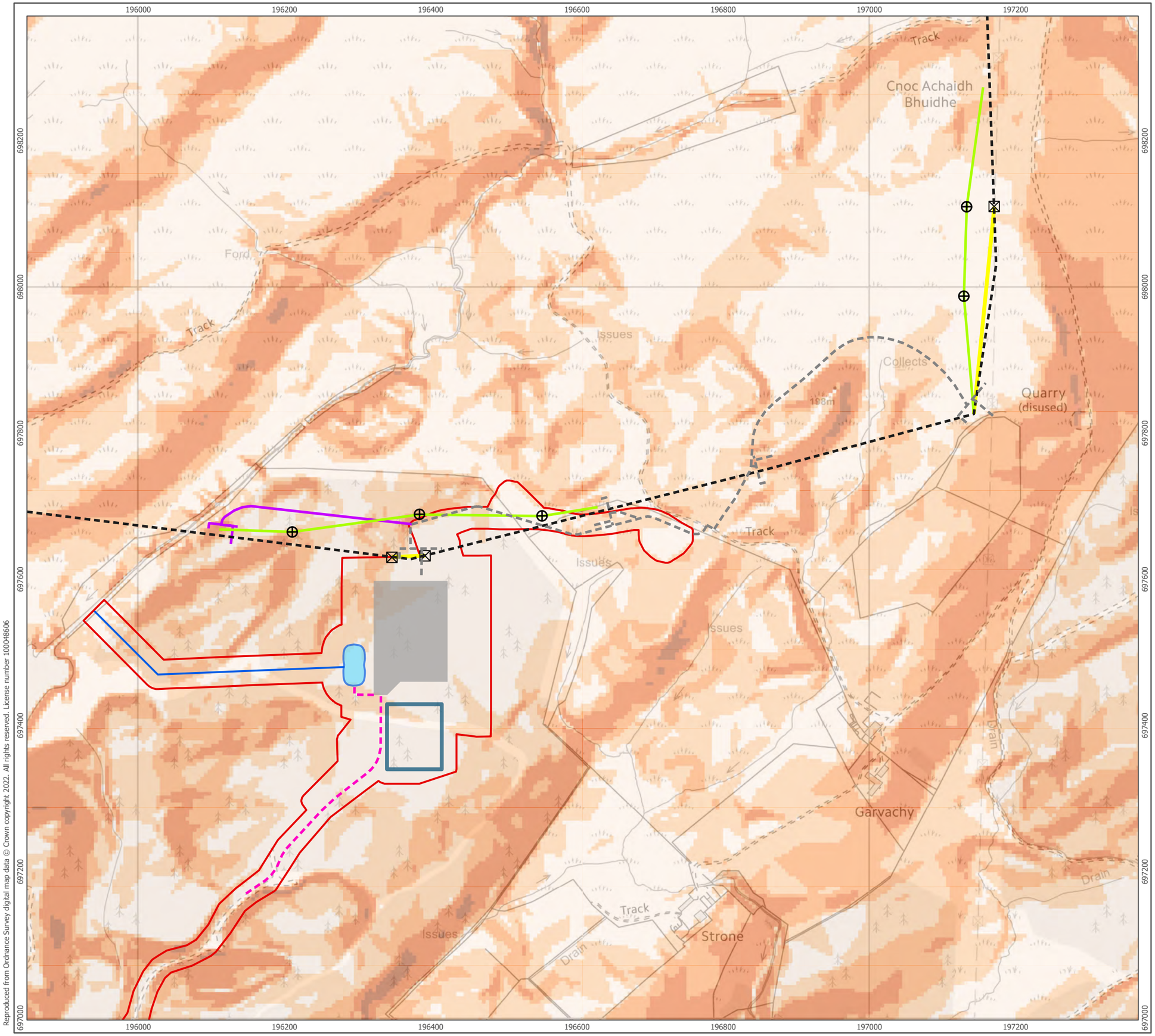

Scottish & Southern Electricity Networks

ARCUS

- Existing Access Tracks
- Existing Inveraray to Crossaig Overhead Line

Proposed Development

- Indicative Town and Country Planning Boundary
- Proposed Substation Temporary Works Area
- Proposed Substation Layout
- SUDs
- SUDs Outfall
- Proposed Permanent Access Tracks

Associated Development

- Proposed Temporary Access Tracks
- Proposed OHL Alignment
- Proposed Temporary OHL Bypass
- Proposed Indicative Temporary Tower Location
- Proposed Indicative Tower Location

Slope Gradient (deg)

- 0 - 5
- 5 - 10
- 10 - 15
- 15 - 30
- 30+

1:5,000 Scale @ A3

0 125 250 m

NORTH

Produced By: BM	Ref: 4534-REP-038
Checked By: SC	Date: 16/11/2022

Slope Map
Figure 7

Crarae
Annex P:
Peat Slide Risk Assessment

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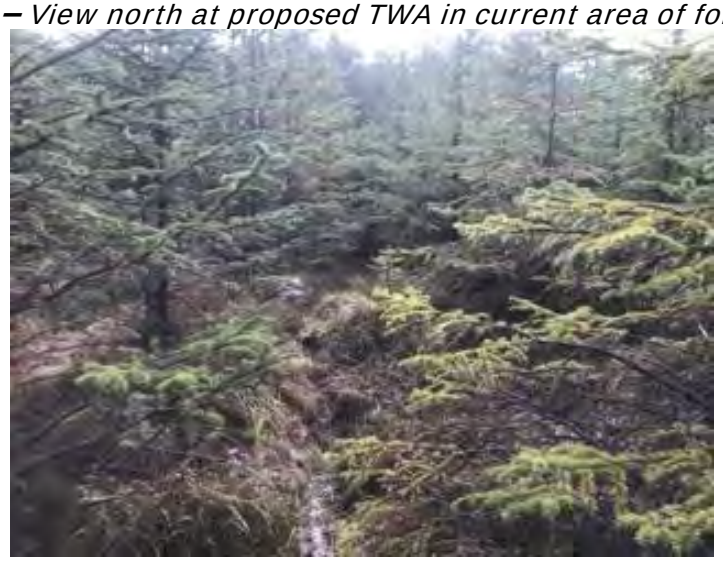
APPENDIX **B** - **SITE PHOTGRAPHS**

Photograph 1 – View north in area of proposed substation in current area of forestry plantation

Photograph 2 – View north at proposed TWA in current area of forestry plantation



Photograph 3 – View north west from western area of Proposed Development

Photograph 4 – Cutting to enable construction of existing access track in southern area of Proposed Development

Photograph 5 – View east along existing track adjacent to the existing Inveraray to Crossaig Overhead Line within northern area of the Proposed Development

Photograph 6 – View west-west along existing Inveraray to Crossaig Overhead Line within northern area of the Proposed Development

Photograph 7 – Existing floating track within Associated Development

Photograph 8 – Existing substation in north eastern area of Associated Development

Photograph 9 – View north west at proposed tower location in north eastern area of Associated Development

APPENDIX C – HAZARD RANK ASSESSMENT RECORDS

4534 - Argyll Substations - Crarae - PSRA - Tabulated Peat Probe Data

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	196258	697292	186.702995	3.142968	2	0.6	186.102995	2	G	1	4	1	Site Infrastructure	3	186.710457	0.732032	4	-0.007462	1	12	2	2
2	196271	697287	187.642755	4.416137	4	0.9	186.742755	2	G	1	8	2	Site Infrastructure	3	186.85156	10.548372	3	0.791195	1	9	1	2
3	196246	697303	186.795137	2.740459	2	1.2	185.595137	3	G	1	6	2	Site Infrastructure	3	186.710457	16.181694	3	0.08468	1	9	1	2
4	196231	697242	188.211571	2.441092	2	2.4	185.811571	3	G	1	6	2	Site Infrastructure	3	188.140469	12.090307	3	0.071102	1	9	1	2
5	196213	697261	188.07917	1.472506	1	3.9	184.17917	8	G	1	8	2	Site Infrastructure	3	188.066853	11.538735	3	0.012317	1	9	1	2
6	196224	697251	188.069812	1.439448	1	2.8	185.269812	3	G	1	3	1	Site Infrastructure	3	188.03292	2.130324	4	0.036892	1	12	2	2
7	196196	697220	188.679271	0.978783	1	3.5	185.179271	8	G	1	8	2	Site Infrastructure	3	188.68387	0.460442	4	-0.004599	1	12	2	4
8	196201	697212	189.049907	3.308256	2	3.4	185.649907	8	G	1	16	3	Site Infrastructure	3	188.796175	6.489965	4	0.253732	1	12	2	6
9	196191	697231	188.8008	1.242371	1	3.4	185.4008	8	G	1	8	2	Site Infrastructure	3	188.661007	7.37425	4	0.139793	1	12	2	4
10	196175	697180	189.617572	13.954344	6	0.01	189.607572	1	G	1	6	2	Roads and Tracks	3	189.382402	1.624333	4	0.23517	1	12	2	4
11	196169	697189	189.668466	3.449393	2	0.1	189.568466	1	G	1	2	1	Site Infrastructure	3	189.818151	3.021353	4	-0.149685	1	12	2	2
12	196161	697197	189.437012	6.77408	4	0.01	189.427012	1	G	1	4	1	Site Infrastructure	3	189.388399	12.669228	3	0.048613	1	9	1	1
13	196121	697157	186.768516	10.910272	6	0.01	186.758516	1	G	1	6	2	Roads and Tracks	3	187.913985	7.89122	4	-1.145469	1	12	2	4
14	196131	697147	188.28895	13.6521	6	0.01	188.27895	1	G	1	6	2	Roads and Tracks	3	188.008398	0.815199	4	0.280552	1	12	2	4
15	196096	697093	188.863584	17.804468	8	0.01	188.853584	1	G	1	8	2	Roads and Tracks	3	188.769017	0.753203	4	0.094567	1	12	2	4
16	196086	697101	187.649429	14.315499	6	0.01	187.639429	1	G	1	6	2	Roads and Tracks	3	188.17172	4.969583	4	-0.522291	1	12	2	4
17	196088	697097	188.248795	7.508159	4	0.01	188.238795	1	G	1	4	1	Roads and Tracks	3	188.17172	1.535862	4	0.077075	1	12	2	2
18	196047	697082	191.222947	21.209115	8	0.01	191.212947	1	G	1	8	2	Roads and Tracks	3	192.258312	4.772024	4	-1.035365	1	12	2	4
19	196050	697075	192.449671	12.120834	6	0.01	192.439671	1	G	1	6	2	Site Infrastructure	3	192.379235	1.01946	4	0.070436	1	12	2	4
20	196018	697038	194.238852	14.540762	6	0.3	193.938852	1	G	1	6	2	Roads and Tracks	3	193.344048	6.718541	4	0.894804	1	12	2	4
21	196006	697050	193.939529	3.297623	2	0.1	193.839529	1	G	1	2	1	Roads and Tracks	3	193.7415	6.391438	4	0.198029	1	12	2	2
22	196009	697044	193.756865	2.545721	2	0.01	193.746865	1	G	1	2	1	Roads and Tracks	3	193.686104	0.802115	4	0.070761	1	12	2	2
23	195988	696980	194.472339	9.914315	6	0.01	194.462339	1	G	1	6	2	Roads and Tracks	3	194.226843	1.425114	4	0.245496	1	12	2	4
24	195978	696985	193.538484	7.78639	4	0.01	193.528484	1	C	2	8	2	Roads and Tracks	3	193.984886	6.430989	4	-0.446402	1	12	2	4
25	195970	696989	191.365083	16.249055	8	0.1	191.265083	1	G	1	8	2	Roads and Tracks	3	193.984886	15.449178	3	-2.619803	1	9	1	2
26	195941	696937	193.870197	14.608933	6	0.01	193.860197	1	G	1	6	2	Roads and Tracks	3	194.962796	10.445312	3	-1.092599	1	9	1	2
27	195949	696933	194.878566	9.235317	6	0.01	194.868566	1	G	1	6	2	Roads and Tracks	3	194.962796	2.793718	4	-0.08423	1	12	2	4
28	195956	696927	196.376668	20.709328	8	0.01	196.366668	1	G	1	8	2	Roads and Tracks	3	195.579245	3.711889	4	0.797423	1	12	2	4
29	195914	696887	198.295085	6.884616	4	0.01	198.285085	1	G	1	4	1	Site Infrastructure	3	198.514722	12.805831	3	-0.219637	1	9	1	1
30	195924	696885	198.452642	1.663152	1	0.01	198.442642	1	G	1	1	1	Site Infrastructure	3	198.514722	3.797075	4	-0.06208	1	12	2	2
31	195933	696880	199.115179	18.805677	8	0.01	199.105179	1	G	1	8	2	Roads and Tracks	3	198.556197	4.022544	4	0.558982	1	12	2	4
32	195896	696835	199.660109	3.708007	2	0.01	199.650109	1	G	1	2	1	Site Infrastructure	3	199.167074	9.233139	4	0.493035	1	12	2	2
33	195903	696829	199.152318	5.886368	4	0.01	199.142318	1	G	1	4	1	Roads and Tracks	3	199.167074	0.416297	4	-0.014756	1	12	2	2
34	197137	698017	187.856068	2.442573	2	2.6	185.256068	3	G	1	6	2	Site Infrastructure	3	188.160134	20.773281	3	-0.304066	1	9	1	2
35	197146	698017	188.134094	0.682403	1	1	187.134094	2	G	1	2	1	Roads and Tracks	3	188.160134	11.080132	3	-0.02604	1	9	1	1
36	197152	697955	189.798047	2.889323	2	1	188.798047	2	G	1	4	1	Site Infrastructure	3	188.088531	45.058417	3	1.709516	1	9	1	1
37	197141	697957	189.471271	2.652685	2	0.5	188.971271	1	G	1	2	1	Site Infrastructure	3	188.088531	45.687146	3	1.38274	1	9	1	1
38	197141	697967	188.9777	3.144475	2	1.8	187.1777	3	G	1	6	2	Site Infrastructure	3	188.088531	36.483494	3	0.889169	1	9	1	2
39	197151	697967	189.16068	3.103247	2	0.8	188.36068	2	G	1	4	1	Site Infrastructure	3	188.088531	33.548303	3	1.072149	1	9	1	1
40	197150	697977	188.651909	3.013541	2	0.9	187.751909	2	G	1	4	1	Site Infrastructure	3	188.088531	23.9036	3	0.563378	1	9	1	1
41	197141	697977	188.460963	3.118113	2	1	187.460963	2	G	1	4	1	Site Infrastructure	3	188.088531	27.834787	3	0.372432	1	9	1	1
42	197141	697987	188.012829	2.129771	2	1.2	186.812829	3	G	1	6	2	Site Infrastructure	3	188.088531	20.457403	3	-0.075702	1	9	1	2
43	197151	697987	188.281882	2.508856	2	1	187.281882	2	G	1	4	1	Site Infrastructure	3	188.088531	14.126477	3	0.193351	1	9	1	1
44	197151	697997	188.005862	1.119398	1	0.9	187.105862	2	G	1	2	1	Roads and Tracks	3	188.088531	6.579312	4	-0.082669	1	12	2	2
45	197151	698007	188.053368	0.504084	1	1.2	186.853368	3	G	1	3	1	Roads and Tracks	3	188.070137	6.002778	4	-0.016769	1	12	2	2
46	197141	698007	188.01685	1.123672	1	1.5	186.51685	3	G	1	3	1	Site Infrastructure	3	188.070137	15.968135	3	-0.053287	1	9	1	1
47	197141	697997	187.94535	0.73209	1	1.2	186.74535	3	G	1	3	1	Site Infrastructure	3	188.088531	16.193682	3	-0.143181	1	9	1	1
48	196404	697636	170.950361	3.030176	2	0.4	170.550361	1	R	1.5	3	1	Site Infrastructure	3	170.530081	8.664348	4	0.42028	1	12	2	2
49	196402	697647	171.121745	3.17831	2	0.3	170.821745	1	G	1	2	1	Site Infrastructure	3	170.530081	12.773485	3	0.591664	1	9	1	1
50	196404	697655	171.254441	3.625922	2	0.5	170.754441	1	G	1	2	1	Site Infrastructure	3	170.530081	20.723303	3	0.72436	1	9	1	1
51	196405	697663	171.385619	3.781586	2	0.1	171.285619	1	G	1	2	1	Site Infrastructure	3	170.530081	28.959974	3	0.855538	1	9	1	1
52	196413	697666	171.861392	2.474385	2	0.01	171.851392	1	G	1	2	1	Site Infrastructure	3	170.530081	35.550852	3	1.331311	1	9	1	1
53	196414	697656	171.755572	2.346608	2	1	170.755572	2	R	1.5	6	2	Site Infrastructure	3	170.530081	27.65947	3	1.225491	1	9	1	2
54	196413	697647	171.585183	2.470524	2	1	170.585183	2	G	1	4	1	Site Infrastructure	3	170.530081	20.757928	3	1.055102	1	9	1	1
55	196414	697636	171.336119	2.657372	2	0.4	170.936119	1	G	1	2	1	Site Infrastructure	3	170.530081	18.101856	3	0.806038	1	9	1	1
56	196414	697627	171.13483	2.754733	2	1	170.13483	2	G	1	4	1	Site Infrastructure	3	170.356133	18.987468	3	0.778697	1	9	1	1
57	196404	697627	170.652441	3.096066	2	1	169.652441	2	G	1	4	1	Site Infrastructure	3	170.356133	8.694822	4	0.296308	1	12	2	2
58	196404	697617	170.360157	3.02209	2	0.7	169.660157	2	G	1	4	1	Site Infrastructure	3	170.204137	15.139072	3	0.15602	1	9	1	1
59	196414	697617	170.847915	2.947986	2	0.8	170.047915	2	G	1	4	1	Site Infrastructure	3	170.61522	21.442737	3	0.232695	1	9	1	1
60	196402	697607	170.11014	1.859308	1	1.8	168.31014	3	G	1	3	1	Site Infrastructure	3	170.239573	11.141935	3	-0.129433	1	9	1	1
61	196411	697607	170.434053	2.524966	2	1.4	169.034053	3	G	1	6	2	Site Infrastructure	3	170.555133	11.186624	3	-0.12108	1	9	1	2
62	196421	697607	170.866683	2.387444	2	1.8	169.066683	3	G	1	6	2	Site Infrastructure	3	170.795871	11.186624	3	0.070812	1	9	1	2
63	196423	697617	171.168461	2.329652	2	2	169.168461	3	G	1	6	2	Site Infrastructure	3	170.795871	21.043735	3	0.37259	1	9	1	2
64	196424	697627	171.456397	2.309344	2	1.8	169.656397	3	R	1.5	9	2	Site Infrastructure	3	170.356133	28.412472	3	1.100264	1	9	1	2
65	196424	697637	171.726977	2.380743	2	1	170.726977	2	G	1	4	1	Site Infrastructure	3	170.530081	28.188966	3	1.196896	1	9	1	1
66	196422	697647	171.945329	2.52274	2	0.5	171.445329	1	R	1.5	3	1	Site Infrastructure	3	170.530081	29.325843	3	1.415248	1	9	1	1
67	196423	697657	172.138958	2.346991	2	1.5	170.638958	3	G	1	6	2	Site Infrastructure	3	170.530081	35.174061	3	1.608877	1	9	1	2
68	196423	697667	172.264811	2.498277	2	1.8	170.464811	3	G	1	6	2	Site Infrastructure	3	170.530081	41.876347	3	1.73473	1	9	1	2
69	196431	697667	172.608056	2.223905	2	1.3	171.308056	3	G	1	6	2	Site Infrastructure	3	170.530081	47.669568	3	2.077975	1	9	1	2
70	196432	697656	172.417109	1.812166	1	1.3	171.117109	3	R	1.5	4.5	1	Site Infrastructure	3	170.530081	41.753918	3	1.887028	1	9	1	1
71	196431	697647	172.108968	1.776379	1	0.8	171.308968	2	G	1	2	1	Site Infrastructure	3	170.530081	37.748215	3	1.578887	1	9	1	1
72	196431	697637	171.819003	1.784541	1	1.8	170.019003	3	G	1	3	1	Site Infrastructure	3	170.530081	36.072119	3	1.288922	1	9	1	1
73	196431	697627	171.530373	1.838233	1	2.1	169.430373	3	G	1	3	1	Site Infrastructure	3	170.795871	32.766638	3	0.734502	1	9	1	1
74	196431	697617	171.230697	1.837801	1	3.4	167.830697	8	G	1	8	2	Site Infrastructure	3	170.795871	23.450427	3	0.434826	1	9	1	2
75	196431	697607	170.9429	1.535805	1	2.4	168.5429	3	G	1	3	1	Site Infrastructure	3	170.795871	15.039699	3	0.147029	1	9	1	1
76	196441	697607	170.865375	0.782535	1	4.8	166.065375	8	G	1	8	2	Site Infrastructure	3	170.795871	22.961806	3	0.069504	1	9	1	2
77	196441	697617	171.090381	1.774447	1	3.2	167.890381	8	G	1	8	2	Site Infrastructure	3	170.795871	29.171468	3	0.29451	1	9	1	2
78	196441	697627	171.390374	1.860208	1	3.4	167.990374	8	G	1	8	2	Site Infrastructure	3	170.795871	37.077008	3	0.594503	1	9	1	2
79	196441	697637	171.680377	1.890397	1	2.2	169.480377	3	G	1	3	1	Site Infrastructure	3	170.795871	45.808673	3	0.884506	1	9	1	1
80	196441	697647	171.993835	2.072369	2	1.8	170.193835	3	G	1	6	2	Site Infrastructure	3	170.530081	47.391769	3	1.463754	1	9	1	2
81	196441	697657	172.360051	2.19384	2	1.8	170.560051	3	G	1	6	2	Site Infrastructure	3	170.530081	50.692305	3	1.82997	1	9	1	2
82	196441	697667	172.730365	2.076693	2	1.7	171.030365	3	G	1	6	2	Site Infrastructure	3	170.530081	55.6187	3	2.200284	1	9	1	2
83	196451	697667	172.630044	2.203316	2	2.1	170.530044	3	G	1	6	2	Site Infrastructure	3	170.530081	64.144304	3	2.099963	1	9	1	2
84	196452	697658	172.298417	2.202619	2	1.7	170.598417	3	G	1	6	2	Site Infrastructure	3	170.530081	60.869002	3	1.768336	1	9	1	2
85	196451	697647	171.881622	2.188754	2	1.5	170.381622	3	G	1	6	2	Site Infrastructure	3	170.530081	57.157954	3	1.351541	1	9	1	2
86	196451	697637	171.540378	1.94834	1	4	167.540378	8	G	1	8	2	Site Infrastructure	3	170.795871	50.98516	3	0.744507	1	9	1	2
87	196451	697627	171.241957	1.83848	1	4.1	167.141957	8	G	1	8	2	Site Infrastructure	3	170.795871	43.310005	3	0.446086	1	9	1	2
88	196451	697617	170.973513	1.103918	1	3.3	167.673513	8	G	1	8	2	Site Infrastructure	3	170.795871	36.769914	3	0.177642	1	9	1	2
89	196461	697607	170.879585	0.792211	1	3.8	167.079585	8	G	1	8	2	Site Infrastructure	3	170.795871	41.585437	3	0.083714	1	9	1	2
90	196451	697607	170.87369	0.505382	1	3.9	166.97369	8	G	1	8	2	Site Infrastructure	3	170.795871	32.067063	3	0.077819	1	9	1	2
91	196461	697617	170.971676	0.613381	1	3.3	167.671676	8	G	1	8	2	Site Infrastructure	3	170.795871	45.31091	3	0.175805	1	9	1	2
92	196461	697627	171.107946	1.419758	1	2.4	168.707946	3	G	1	3	1	Site Infrastructure	3	170.795871	50.762275	3	0.312075	1	9	1	1
93	196461	697637	171.413833	2.01344	2	0.5	170.913833	1	G	1	2	1	Site Infrastructure	3	170.795871	57.450314	3	0.617962	1	9	1	1
94	196459	697648	171.858937	2.319673	2	0.2	171.658937	1	G	1	2	1	Site Infrastructure	3	170.795871	64.312359	3	1.063066	1	9	1	1
95	196461	697657	172.11797	3.342373	2	0.2	171.91797	1	G	1	2	1	Site Infrastructure	3	170.530081	69.367238	3	1.587889	1	9	1	1
96	196461	697667	172.269237	4.756271	4	0.3	171.969237	1	G	1	4	1	Site Infrastructure	3	170.530081	73.044806	3	1.739156	1	9	1	1
97	196461	697677	172.378082	5.630709	4	0.1	172.278082	1	G	1	4	1	Site Infrastructure	3	170.530081	77.841337	3	1.848001	1	9	1	1
98	196451	697677	173.00037	2.269771	2	2.5	170.50037	3	G	1	6	2	Site Infrastructure	3	170.530081	69.557327	3	2.470289	1	9	1	2
99	196441	697677	173.072987	1.841807	1	3.6	169.472987	8	G	1	8	2	Site Infrastructure	3	170.530081	61.783248	3	2.542906	1	9	1	2
100	196401	697597	170.169552	2.901446	2	1.5	168.669552	3	G	1	6	2	Site Infrastructure	3	170.239573	0	4	-0.070021	1	12	2	4
101	196411	697597	170.463756	3.099954	2	2.2	168.263756	3	G	1	6	2	Site Infrastructure	3	170.555133	0	4	-0.091377	1	12	2	4
102	196421	697597	170.737361	1.664241	1	3.4	167.337361	8	G	1	8	2	Site Infrastructure	3	170.795871	0	4	-0.05851	1	12	2	4
103	196431	697597	170.7799	0.425332	1	2.7	168.0799	3	G	1	3	1	Site Infrastructure	3	170.795871	10.122379	3	-0.015971	1	9	1	1
104	196441	697597	170.780413	0.480786	1	2.8	167.980413	3	G	1	3	1	Site Infrastructure	3	170.795871	20.087672	3	-0.015458	1	9	1	1
105	196451	697597	170.790418	0.512817	1	5.4	165.390418	8	G	1	8	2	Site Infrastructure	3	170.795871	30.076013	3	-0.005453	1	9	1	2
106	196461	697597	170.748678	1.027387	1	4.5	166.248678	8	G	1	8	2	Site Infrastructure	3	170.795871	40.07017	3	-0.047193	1	9	1	2
107	196471	697597	170.583752	1.280401	1	5.5	165.083752	8	G	1	8	2	Site Infrastructure	3	170.795871	50.066661	3	-0.212119	1	9	1	2
108	196471	697587	170.435006	1.240388	1	6	164.435006	8	G	1	8	2	Site Infrastructure	3	171.077825	50.05921	3	-0.642819	1	9	1	2
109	196461	697587	170.605015	1.189703	1	4.8	165.805015	8	G	1	8	2	Site Infrastructure	3	171.077825	40.060861	3	-0.47281	1	9	1	2
110	196451	697587	170.704534	0.531585	1	4.5	166.204534	8	G	1	8	2	Site Infrastructure	3	171.077825	30.063608	3	-0.373291	1	9	1	2
111	196441	697587	170.751862	1.075331	1	3.5	167.251862	8	G	1	8	2	Site Infrastructure	3	171.077825	20.069094	3	-0.325963	1	9	1	2
112	196431	697587	170.942169	1.797431	1	3.1	167.842169	8	G	1	8	2	Site Infrastructure	3	171.077825	10.085462	3	-0.135656	1	9	1	2
113	196421	697587	171.100134	1.694904	1	2.4	168.700134	3	G	1	3	1	Site Infrastructure	3	171.077825	0	4	0.022309	1	12	2	2
114	196411	697587	171.168287	2.779965	2	1.8	169.368287	3	G	1	6	2	Site Infrastructure	3	171.141947	0	4	0.02634	1	12	2	4
115	196401	697587	170.964258	5.042973	4	1	169.964258	2	G	1	8	2	Site Infrastructure	3	170.88968	0	4	0.074578	1	12	2	4
116	196411	697577	171.44855	1.56689	1	2.8	168.64855	3	G	1	3	1	Site Infrastructure	3	171.427819	0	4	0.020731	1	12	2	2
117	196421	697577	171.368548	1.613663	1	2.3	169.068548	3	G	1	3	1	Site Infrastructure	3	171.347818	0	4	0.02073	1	12	2	2
118	196430	697577	171.239576	1.844844	1	2.7	168.539576	3	G	1	3	1	Site Infrastructure	3	171.347818	8.941597	4	-0.108242	1	12	2	2
119	196441	697577	171.020593	1.884245	1	3	168.020593	3	G	1	3	1	Site Infrastructure	3	171.347818	20.069094	3	-0.327225	1	9	1	1
120	196451	697577	170.810401	1.800058	1	3.2	167.610401	8	G	1	8	2	Site Infrastructure	3	171.347818	30.063608	3	-0.537417	1	9	1	2
121	196461	697577	170.573332	1.362561	1	2.5	168.073332	3	G	1	3	1	Site Infrastructure	3	171.347818	40.060861	3	-0.774486	1	9	1	1
122	196471	697577	170.372701	1.208712	1	3	167.372701	3	G	1	3	1	Site Infrastructure	3	171.347818	50.05921	3	-0.975117	1	9	1	1
123	196481	697577	170.172704	1.170908	1	3.4	166.772704	8	G	1	8	2	Site Infrastructure	3	171.347818	60.05811	3	-1.175114	1	9	1	2
124	196482	697565	170.344316	1.433612	1	4.3	166.044316	8	G	1	8	2	Site Infrastructure	3	171.669821	60.27501	3	-1.325505	1	9	1	2
125	196471	697567	170.523024	1.499315	1	3.9	166.623024	8	G	1	8	2	Site Infrastructure	3	171.61777	50.05921	3	-1.094746	1	9	1	2
126	196461	697567	170.755158	1.859562	1	3.9	166.855158	8	G	1	8	2	Site Infrastructure	3	171.61777	40.060861	3	-0.862612	1	9	1	2
127	196451	697567	171.025465	1.978477	1	3	168.025465	3	R	1.5	4.5	1	Site Infrastructure	3	171.61777	30.063608	3	-0.592305	1	9	1	1
128	196441	697567	171.286381	1.893546	1	2.9	168.386381	3	G	1	3	1	Site Infrastructure	3	171.61777	20.069094	3	-0.331389	1	9	1	1
129	196431	697567	171.480597	1.8693	1	2.9	168.580597	3	G	1	3	1	Site Infrastructure	3	171.61777	10.085462	3	-0.137173	1	9	1	1
130	196421	697567	171.63855	1.653795	1	2.5	169.13855	3	R	1.5	4.5	1	Site Infrastructure	3	171.61777	0	4	0.02078	1	12	2	2
131	196411	697567	171.718551	1.604406	1	1.8	169.918551	3	G	1	3	1	Site Infrastructure	3	171.697772	0	4	0.020779	1	12	2	2
132	196411	697557	171.980127	1.613025	1	2	169.980127	3	G	1	3	1	Site Infrastructure	3	171.957818	0	4	0.022309	1	12	2	2
133	196421	697557	171.906862	1.653284	1	3.4	168.506862	8	G	1	8	2	Site Infrastructure	3	171.885673	0	4	0.021189	1	12	2	4
134	196431	697557	171.748909	1.870896	1	3.5	168.248909	8	G	1	8	2	Site Infrastructure	3	171.885673	10.085462	3	-0.136764	1	9	1	2
135	196441	697557	171.515153	1.979682	1	3.8	167.715153	8	G	1	8	2	Site Infrastructure	3	171.885673	20.069094	3	-0.37052	1	9	1	2
136	196451	697557	171.242198	1.981306	1	4.2	167.042198	8	G	1	8	2	Site Infrastructure	3	171.885673	30.063608	3	-0.643475	1	9	1	2
137	196461	697557	170.96515	1.981399	1	4.4	166.56515	8	G	1	8	2	Site Infrastructure	3	171.885673	40.060861	3	-0.920523	1	9	1	2
138	196471	697557	170.692195	1.786918	1	3.5	167.192195	8	G	1	8	2	Site Infrastructure	3	171.885673	50.05921	3	-1.193478	1	9	1	2
139	196481	697557	170.472704	1.463898	1	6	164.472704	8	G	1	8	2	Site Infrastructure	3	171.885673	60.05811	3	-1.412969	1	9	1	2
140	196481	697547	170.638935	1.695386	1	2.4	168.238935	3	G	1	3	1	Site Infrastructure	3	172.147817	60.05811	3	-1.508882	1	9	1	1
141	196471	697547	170.903892	1.971123	1	5	165.903892	8	G	1	8	2	Site Infrastructure	3	172.147817	50.05921	3	-1.243925	1	9	1	2
142	196461	697547	171.175474	1.972333	1	4.3	166.875474	8	G	1	8	2	Site Infrastructure	3	172.147817	40.060861	3	-0.972343	1	9	1	2
143	196452	697546	171.449196	1.957355	1	2.6	168.849196	3	G	1	3	1	Site Infrastructure	3	172.20377	30.549873	3	-0.754574	1	9	1	1
144	196441	697547	171.725147	1.97067	1	3.4	168.325147	8	G	1	8	2	Site Infrastructure	3	172.147817	20.069094	3	-0.42267	1	9	1	2
145	196431	697547	171.998824	1.909301	1	4	167.998824	8	G	1	8	2	Site Infrastructure	3	172.147817	10.085462	3	-0.148993	1	9	1	2
146	196421	697547	172.170126	1.604588	1	4.2	167.970126	8	G	1	8	2	Site Infrastructure	3	172.147817	0	4	0.022309	1	12	2	4
147	196411	697547	172.246654	1.428759	1	3.5	168.746654	8	G	1	8	2	Site Infrastructure	3	172.227819	0	4	0.018835	1	12	2	4
148	196421	697537	172.383481	0.985115	1	3.8	168.583481	8	G	1	8	2	Site Infrastructure	3	172.373805	0	4	0.009676	1	12	2	4
149	196421	697527	172.513486	0.918532	1	5.2	167.313486	8	G	1	8	2	Site Infrastructure	3	172.503886	0	4	0.0096	1	12	2	4
150	196430	697526	172.361051	1.608623	1	3	169.361051	3	G	1	3	1	Site Infrastructure	3	172.527934	8.500283	4	-0.166883	1	12	2	2
151	196431	697537	172.202744	1.698808	1	3.5	168.702744	8	G	1	8	2	Site Infrastructure	3	172.397929	9.560714	4	-0.195185	1	12	2	4
152	196441	697537	171.908835	1.785432	1	4.5	167.408835	8	G	1	8	2	Site Infrastructure	3	172.373805	20.069094	3	-0.46497	1	9	1	2
153	196452	697536	171.64076	1.765257	1	3	168.64076	3	G	1	3	1	Site Infrastructure	3	172.397929	30.31734	3	-0.757169	1	9	1	1
154	196461	697537	171.358844	1.768251	1	4.4	166.958844	8	G	1	8	2	Site Infrastructure	3	172.373805	40.060861	3	-1.014961	1	9	1	2
155	196471	697537	171.087579	1.790992	1	3.4	167.687579	8	G	1	8	2	Site Infrastructure	3	172.373805	50.05921	3	-1.286226	1	9	1	2
156	196481	697537	170.800328	2.034011	2	3.5	167.300328	8	G	1	16	3	Site Infrastructure	3	172.373805	60.05811	3	-1.573477	1	9	1	3
157	196491	697540	170.428742	2.432915	2	3.2	167.228742	8	G	1	16	3	Site Infrastructure	3	172.339497	69.364771	3	-1.910755	1	9	1	3
158	196441	697527	172.037576	1.730953	1	4.5	167.537576	8	R	1.5	12	2	Site Infrastructure	3	172.503886	20.069094	3	-0.46631	1	9	1	2
159	196429	697478	173.003401	3.74231	2	0.9	172.103401	2	G	1	4	1	Site Infrastructure	3	173.38138	7.571359	4	-0.377979	1	12	2	2
160	196441	697477	172.360703	3.032658	2	0.3	172.060703	1	G	1	2	1	Site Infrastructure	3	173.38138	20.069094	3	-1.020677	1	9	1	1

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

161	196456	697476	171.639399	2.806365	2	0.2	171.439399	1	G	1	2	1	Site Infrastructure	3	173.493311	34.612247	3	-1.853912	1	9	1	1
162	196443	697452	173.223679	6.531539	4	0.2	173.023679	1	G	1	4	1	Site Infrastructure	3	174.226358	23.841725	3	-1.002679	1	9	1	1
163	196437	697453	173.768256	5.835759	4	0.3	173.468256	1	G	1	4	1	Site Infrastructure	3	174.226358	17.662907	3	-0.458102	1	9	1	1
164	196405	697473	173.863118	3.302346	2	0.5	173.363118	1	G	1	2	1	Site Infrastructure	3	173.806106	0	4	0.057012	1	12	2	2
165	196418	697521	172.592381	0.793376	1	2	170.592381	3	G	1	3	1	Site Infrastructure	3	172.593886	0	4	-0.001505	1	12	2	2
166	196423	697501	172.830517	1.027015	1	2.4	170.430517	3	R	1.5	4.5	1	Site Infrastructure	3	172.835939	1.973246	4	-0.005422	1	12	2	2
167	196401	697497	172.966352	1.421065	1	4	168.966352	8	G	1	8	2	Site Infrastructure	3	172.942368	0	4	0.023984	1	12	2	4
168	196394	697520	172.708969	0.668761	1	4.4	168.308969	8	G	1	8	2	Site Infrastructure	3	172.717109	0	4	-0.00814	1	12	2	4
169	196389	697543	172.431737	0.809902	1	2	170.431737	3	G	1	3	1	Site Infrastructure	3	172.42993	0	4	0.001807	1	12	2	2
170	196382	697560	172.14104	1.644662	1	1.5	170.64104	3	G	1	3	1	Site Infrastructure	3	172.14582	0	4	-0.00478	1	12	2	2
171	196357	697552	172.41282	3.076696	2	1	171.41282	2	G	1	4	1	Site Infrastructure	3	172.419761	0	4	-0.006941	1	12	2	2
172	196334	697546	172.302598	4.879505	4	0.3	172.002598	1	G	1	4	1	Site Infrastructure	3	172.311928	0	4	-0.00933	1	12	2	2
173	196340	697525	173.000181	2.190585	2	1.5	171.500181	3	G	1	6	2	Site Infrastructure	3	172.976077	0	4	0.024104	1	12	2	4
174	196366	697531	172.611414	0.556707	1	2.2	170.411414	3	G	1	3	1	Site Infrastructure	3	172.608959	0	4	0.002455	1	12	2	2
175	196377	697488	173.671985	2.20739	2	4.8	168.871985	8	G	1	16	3	Site Infrastructure	3	173.670026	0	4	0.001959	1	12	2	6
176	196349	697484	174.24598	2.195725	2	4	170.24598	8	G	1	16	3	Site Infrastructure	3	174.264078	0	4	-0.018098	1	12	2	6
177	196356	697460	175.187997	3.326456	2	0.9	174.287997	2	G	1	4	1	Site Infrastructure	3	175.221313	0	4	-0.033316	1	12	2	2
178	196381	697467	174.487815	3.327721	2	0.7	173.787815	2	G	1	4	1	Site Infrastructure	3	174.441311	0	4	0.046504	1	12	2	2
179	196387	697395	178.767637	3.185694	2	1.2	177.567637	3	G	1	6	2	Site Infrastructure	3	178.746409	0	4	0.021228	1	12	2	4
180	196403	697391	178.561649	3.333749	2	1.2	177.361649	3	G	1	6	2	Site Infrastructure	3	178.525035	0	4	0.036614	1	12	2	4
181	196374	697403	178.745085	3.768171	2	1.2	177.545085	3	G	1	6	2	Site Infrastructure	3	178.73224	0	4	0.012845	1	12	2	4
182	196437	697418	175.520697	4.175106	4	0.5	175.020697	1	G	1	4	1	Site Infrastructure	3	176.827795	23.446595	3	-1.307098	1	9	1	1
183	196418	697420	176.480197	4.172667	4	0.8	175.680197	2	G	1	8	2	Site Infrastructure	3	176.724547	4.489899	4	-0.24435	1	12	2	4
184	196401	697427	176.517824	3.327713	2	1	175.517824	2	G	1	4	1	Site Infrastructure	3	176.471322	0	4	0.046502	1	12	2	2
185	196426	697456	174.2483	4.096348	4	0.5	173.7483	1	G	1	4	1	Site Infrastructure	3	174.226358	6.852981	4	0.021942	1	12	2	2
186	196457	697351	176.840342	7.559214	4	0.2	176.640342	1	G	1	4	1	Site Infrastructure	3	180.191669	43.587885	3	-3.351327	1	9	1	1
187	196471	697607	170.726702	1.285573	1	4.5	166.226702	8	G	1	8	2	Site Infrastructure	3	170.795871	51.287431	3	-0.069169	1	9	1	2
188	196471	697617	170.875009	1.22264	1	3.9	166.975009	8	G	1	8	2	Site Infrastructure	3	170.795871	54.351914	3	0.079138	1	9	1	2
189	196469	697624	171.017172	1.063852	1	3.5	167.517172	8	G	1	8	2	Site Infrastructure	3	170.795871	55.374312	3	0.221301	1	9	1	2
190	196471	697627	171.011945	1.279591	1	3.4	167.611945	8	G	1	8	2	Site Infrastructure	3	170.795871	58.973388	3	0.216074	1	9	1	2
191	196471	697637	171.037873	3.017998	2	2.3	168.737873	3	G	1	6	2	Site Infrastructure	3	170.795871	64.819677	3	0.242002	1	9	1	2
192	196481	697627	170.759478	1.644874	1	3	167.759478	3	G	1	3	1	Site Infrastructure	3	170.795871	67.667663	3	-0.036393	1	9	1	1
193	196491	697627	170.452121	1.768762	1	4.9	165.552121	8	G	1	8	2	Site Infrastructure	3	170.795871	76.680927	3	-0.34375	1	9	1	2
194	196491	697637	170.371163	1.931124	1	2.8	167.571163	3	G	1	3	1	Site Infrastructure	3	170.795871	81.263119	3	-0.424708	1	9	1	1
195	196481	697637	170.674435	1.950636	1	2.4	168.274435	3	G	1	3	1	Site Infrastructure	3	170.795871	72.819246	3	-0.121436	1	9	1	1
196	196481	697647	170.531166	2.151384	2	1.7	168.831166	3	G	1	6	2	Site Infrastructure	3	170.795871	78.907367	3	-0.264705	1	9	1	2
197	196471	697647	171.091356	4.798279	4	0.5	170.591356	1	G	1	4	1	Site Infrastructure	3	170.795871	71.591344	3	0.295485	1	9	1	1
198	196491	697647	170.221475	1.971786	1	3	167.221475	3	G	1	3	1	Site Infrastructure	3	170.795871	86.760732	3	-0.574396	1	9	1	1
199	196491	697657	170.071478	1.943353	1	1.4	168.671478	3	G	1	3	1	Site Infrastructure	3	170.795871	93.011583	3	-0.724393	1	9	1	1
200	196481	697657	170.40504	2.826172	2	1.2	169.20504	3	G	1	6	2	Site Infrastructure	3	170.795871	85.732739	3	-0.390831	1	9	1	2
201	196471	697657	171.170095	5.608519	4	0.5	170.670095	1	G	1	4	1	Site Infrastructure	3	170.530081	78.948501	3	0.640014	1	9	1	1
202	196471	697667	171.248077	5.942693	4	0.4	170.848077	1	G	1	4	1	Site Infrastructure	3	170.530081	82.198514	3	0.717996	1	9	1	1
203	196481	697667	170.348256	3.645233	2	1	169.348256	2	G	1	4	1	Site Infrastructure	3	170.530081	91.529491	3	-0.181825	1	9	1	1
204	196491	697667	169.924435	2.026262	2	1.9	168.024435	3	G	1	6	2	Site Infrastructure	3	170.795871	99.874344	3	-0.871436	1	9	1	2
205	196491	697677	169.78962	2.331126	2	2.9	166.88962	3	G	1	6	2	Site Infrastructure	3	170.530081	104.510429	3	-0.740461	1	9	1	2
206	196481	697677	170.36305	4.477715	4	1.5	168.86305	3	G	1	12	2	Site Infrastructure	3	170.530081	95.401141	3	-0.167031	1	9	1	2
207	196471	697677	171.321352	6.014509	4	0.01	171.311352	1	G	1	4	1	Site Infrastructure	3	170.530081	86.488876	3	0.791271	1	9	1	1
208	196371	697512	172.921367	2.010502	2	2.9	170.021367	3	G	1	6	2	Site Infrastructure	3	172.932031	0	4	-0.010664	1	12	2	4
209	196344	697505	173.619769	2.189487	2	2.5	171.119769	3	G	1	6	2	Site Infrastructure	3	173.602078	0	4	0.017691	1	12	2	4
210	196407	697565	171.798998	1.585634	1	1.5	170.298998	3	R	1.5	4.5	1	Site Infrastructure	3	171.781817	0	4	0.017181	1	12	2	2
211	196279	697330	184.34545	4.207121	4	0.8	183.54545	2	G	1	8	2	Site Infrastructure	3	184.790597	15.041417	3	-0.445147	1	9	1	2
212	196285	697314	185.139904	4.362272	4	0.6	184.539904	2	G	1	8	2	Site Infrastructure	3	185.123431	0.79546	4	0.016473	1	12	2	4
213	196296	697303	185.347959	4.624844	4	0.4	184.947959	1	R	1.5	6	2	Site Infrastructure	3	185.04661	13.030769	3	0.301349	1	9	1	2
214	196344	697326	182.982231	0.960966	1	0.5	182.482231	1	G	1	1	1	Site Infrastructure	3	182.557547	15.167793	3	0.424684	1	9	1	1
215	196325	697344	182.446432	1.22408	1	0.4	182.046432	1	G	1	1	1	Site Infrastructure	3	182.445318	1.36932	4	0.001114	1	12	2	2
216	196312	697354	182.156448	1.167511	1	0.6	181.556448	2	G	1	2	1	Site Infrastructure	3	182.343176	11.954439	3	-0.186728	1	9	1	1
217	196371	697357	181.093954	3.336165	2	0.2	180.893954	1	G	1	2	1	Site Infrastructure	3	181.049808	0	4	0.044146	1	12	2	2
218	196351	697367	181.125986	3.187667	2	0.4	180.725986	1	G	1	2	1	Site Infrastructure	3	181.0884	0	4	0.037586	1	12	2	2
219	196347	697382	180.503644	3.189317	2	0.6	179.903644	2	G	1	4	1	Site Infrastructure	3	180.518415	0	4	-0.014771	1	12	2	2
220	197161	697997	188.263995	2.142042	2	0.2	188.063995	1	R	1.5	3	1	Site Infrastructure	3	188.18397	2.813992	4	0.080025	1	12	2	2
221	197171	697997	188.534302	2.270689	2	0.3	188.234302	1	R	1.5	3	1	Roads and Tracks	3	188.453734	2.813992	4	0.080568	1	12	2	2
222	197181	697997	188.805996	2.257346	2	0.3	188.505996	1	R	1.5	3	1	Roads and Tracks	3	188.724995	2.813992	4	0.081001	1	12	2	2
223	197191	697997	189.058882	2.283813	2	0.5	188.558882	1	G	1	2	1	Roads and Tracks	3	188.994999	3.050005	4	0.063883	1	12	2	2
224	197191	697987	189.391883	2.590664	2	0.2	189.191883	1	G	1	2	1	Roads and Tracks	3	188.994999	12.813608	3	0.396884	1	9	1	1
225	197181	697987	189.111884	2.574321	2	0.2	188.911884	1	G	1	2	1	Roads and Tracks	3	188.724995	12.813608	3	0.386889	1	9	1	1
226	197166	697987	188.657251	2.524872	2	0.8	187.857251	2	G	1	4	1	Site Infrastructure	3	188.288185	12.185135	3	0.369066	1	9	1	1
227	197171	697987	188.833463	2.558863	2	0.5	188.333463	1	G	1	2	1	Site Infrastructure	3	188.453734	12.813608	3	0.379729	1	9	1	1
228	197161	697987	188.555154	2.536633	2	1	187.555154	2	G	1	4	1	Site Infrastructure	3	188.18397	12.813608	3	0.371184	1	9	1	1
229	197161	697977	188.918386	2.876891	2	0.6	188.318386	2	G	1	4	1	Site Infrastructure	3	188.18397	22.63401	3	0.734416	1	9	1	1
230	197161	697967	189.410836	3.037598	2	0.8	188.610836	2	R	1.5	6	2	Site Infrastructure	3	188.18397	32.813542	3	1.226866	1	9	1	2
231	197161	697958	189.835661	3.108892	2	1.5	188.335661	3	G	1	6	2	Site Infrastructure	3	188.18397	41.791712	3	1.651691	1	9	1	2
232	197171	697957	190.123792	3.045685	2	0.5	189.623792	1	G	1	2	1	Site Infrastructure	3	188.453734	42.813532	3	1.670058	1	9	1	1
233	197171	697967	189.660518	3.021592	2	0.2	189.460518	1	G	1	2	1	Site Infrastructure	3	188.453734	32.813542	3	1.206784	1	9	1	1
234	197171	697977	189.222518	2.747405	2	0.2	189.022518	1	G	1	2	1	Site Infrastructure	3	188.453734	22.813561	3	0.768784	1	9	1	1
235	197181	697977	189.501884	2.745621	2	0.1	189.401884	1	G	1	2	1	Roads and Tracks	3	188.724995	22.813561	3	0.776889	1	9	1	1
236	197191	697977	189.775155	2.730952	2	0.1	189.675155	1	G	1	2	1	Roads and Tracks	3	188.994999	22.813561	3	0.780156	1	9	1	1
237	197191	697967	190.166939	2.842742	2	0.2	189.966939	1	G	1	2	1	Roads and Tracks	3	188.994999	32.813542	3	1.17194	1	9	1	1
238	197191	697957	190.622213	2.800907	2	0.1	190.522213	1	G	1	2	1	Site Infrastructure	3	188.994999	42.813532	3	1.627214	1	9	1	1
239	197181	697957	190.373476	3.045039	2	0.3	190.073476	1	G	1	2	1	Site Infrastructure	3	188.724995	42.813532	3	1.648481	1	9	1	1
240	197181	697967	189.903474	2.937986	2	0.4	189.503474	1	R	1.5	3	1	Site Infrastructure	3	188.724995	32.813542	3	1.178479	1	9	1	1
241	196500	697411	170.981255	8.135901	6	0.7	170.281255	2	G	1	12	2	Minor Water Feature	6	159.674625	76.022477	3	11.30663	2	36	4	8
242	196475	697411	172.835116	6.106137	4	0.4	172.435116	1	R	1.5	6	2	Site Infrastructure	3	177.115877	61.251129	3	-4.280761	1	9	1	2
243	196450	697411	175.143273	5.114825	4	0.5	174.643273	1	R	1.5	6	2	Site Infrastructure	3	177.115877	36.252252	3	-1.972604	1	9	1	2
244	196425	697411	176.521449	4.18863	4	1.1	175.421449	3	R	1.5	18	3	Site Infrastructure	3	177.115877	11.258365	3	-0.594428	1	9	1	3
245	196400	697411	177.433343	3.536911	2	0.7	176.733343	2	R	1.5	6	2	Site Infrastructure	3	177.411322	0	4	0.022021	1	12	2	4
246	196374	697411	178.066218	5.913795	4	1	177.066218	2	R	1.5	12	2	Site Infrastructure	3	178.075613	0	4	-0.009395	1	12	2	4
247	196350	697411	178.979414	4.705601	4	1	177.979414	2	R	1.5	12	2	Site Infrastructure	3	178.961443	0	4	0.017971	1	12	2	4
248	196350	697436	176.631322	3.901955	2	0.7	175.931322	2	G	1	4	1	Site Infrastructure	3	177.339898	8.556938	4	-0.708576	1	12	2	2
249	196326	697412	179.628975	3.609165	2	0.6	179.028975	2	G	1	4	1	Site Infrastructure	3	179.506409	5.068286	4	0.122566	1	12	2	2
250	196300	697411	180.121877	2.765943	2	0.1	180.021877	1	R	1.5	3	1	Site Infrastructure	3	179.506409	31.753642	3	0.615468	1	9	1	1
251	196300	697436	178.067005	5.184269	4	0.3	177.767005	1	G	1	4	1	Site Infrastructure	3	176.684696	24.890552	3	1.382309	1	9	1	1
252	196275	697411	181.268457	6.201696	4	0.1	181.168457	1	G	1	4	1	Site Infrastructure	3	179.506409	56.752258	3	1.762048	1	9	1	1
253	196275	697436	178.196492	8.174507	6	0.8	177.396492	2	G	1	12	2	Site Infrastructure	3	176.684696	49.315967	3	1.511796	1	9	1	2
254	196250	697411	181.890244	14.860858	6	0.5	181.390244	1	G	1	6	2	Site Infrastructure	3	176.684696	80.57248	3	5.205548	1	9	1	2
255	196250	697436	177.235321	7.894793	4	0.5	176.735321	1	G	1	4	1	Site Infrastructure	3	176.684696	74.125499	3	0.550625	1	9	1	1
256	196225	697411	182.495101	14.612054	6	0.5	181.995101	1	G	1	6	2	Site Infrastructure	3	176.684696	103.944454	3	5.810405	1	9	1	2
257	196225	697436	175.861874	11.396751	6	0.4	175.461874	1	G	1	6	2	Site Infrastructure	3	176.684696	99.030877	3	-0.822822	1	9	1	2
258	196250	697461	174.641389	5.400415	4	0.7	173.941389	2	G	1	8	2	Site Infrastructure	3	175.50332	73.751853	3	-0.861931	1	9	1	2
259	196225	697461	172.706363	7.799863	4	0.1	172.606363	1	G	1	4	1	Site Infrastructure	3	175.50332	98.75151	3	-2.796957	1	9	1	1
260	196200	697436	174.200087	14.203052	6	0.3	173.900087	1	R	1.5	9	2	Site Infrastructure	3	176.684696	123.974351	3	-2.484609	1	9	1	2
261	196175	697436	172.090734	9.797664	6	0.2	171.890734	1	G	1	6	2	Site Infrastructure	3	176.684696	148.936781	3	-4.593962	1	9	1	2
262	196150	697436	170.401404	9.715353	6	0.3	170.101404	1	G	1	6	2	Site Infrastructure	3	176.684696	173.910004	3	-6.283292	1	9	1	2
263	196125	697436	168.385894	7.881213	4	0.2	168.185894	1	G	1	4	1	Site Infrastructure	3	162.89717	194.695196	3	5.488724	1	9	1	1
264	196100	697436	166.510799	10.335923	6	0.9	165.610799	2	G	1	12	2	Site Infrastructure	3	162.717995	172.201382	3	3.792804	1	9	1	2
265	196076	697438	163.072189	8.235131	6	0.2	162.872189	1	R	1.5	9	2	Site Infrastructure	3	162.717995	152.132025	3	0.354194	1	9	1	2
266	196075	697461	161.694043	6.811628	4	0.8	160.894043	2	G	1	8	2	Site Infrastructure	3	156.636268	163.467874	3	5.057775	1	9	1	2
267	196075	697486	166.11398	9.33565	6	0.2	165.91398	1	G	1	6	2	Site Infrastructure	3	158.063029	146.156351	3	8.050951	1	9	1	2
268	196099	697460	163.469515	4.785884	4	0.1	163.369515	1	R	1.5	6	2	Site Infrastructure	3	158.063029	181.646217	3	5.406486	1	9	1	2
269	196100	697486	166.02237	9.598937	6	0.1	165.92237	1	G	1	6	2	Site Infrastructure	3	158.215994	163.394068	3	7.806376	1	9	1	2
270	196121	697459	165.970337	7.948048	4	0.6	165.370337	2	G	1	8	2	Site Infrastructure	3	163.761588	188.980243	3	2.208749	1	9	1	2
271	196125	697486	166.044395	5.049265	4	2	164.044395	3	R	1.5	18	3	Site Infrastructure	3	163.761588	161.448444	3	2.282807	1	9	1	3
272	196150	697461	167.672375	5.214653	4	0.1	167.572375	1	R	1.5	6	2	Site Infrastructure	3	175.50332	173.751074	3	-7.830945	1	9	1	2
273	196150	697486	166.270402	3.07823	2	3.3	162.970402	8	G	1	16	3	Site Infrastructure	3	163.709436	162.972627	3	2.560966	1	9	1	3
274	196150	697511	166.634847	4.336623	4	2.3	164.334847	3	R	1.5	18	3	Site Infrastructure	3	163.709436	138.248842	3	2.925411	1	9	1	3
275	196125	697511	171.152812	7.753958	4	2.9	168.252812	3	G	1	12	2	Site Infrastructure	3	163.761588	136.448764	3	7.391224	1	9	1	2
276	196175	697511	164.803976	6.286468	4	3	161.803976	3	G	1	12	2	Site Infrastructure	3	163.709436	144.396043	3	1.09454	1	9	1	2
277	196175	697486	167.478291	3.737497	2	3.1	164.378291	8	G	1	16	3	Site Infrastructure	3	174.622082	148.751529	3	-7.143791	1	9	1	3
278	196175	697461	169.251435	7.44485	4	2	167.251435	3	G	1	12	2	Site Infrastructure	3	175.50332	148.751171	3	-6.251885	1	9	1	2
279	196200	697461	171.021439	8.034563	6	2.4	168.621439	3	R	1.5	27	3	Site Infrastructure	3	175.50332	123.751306	3	-4.481881	1	9	1	3
280	196200	697486	168.258919	4.525394	4	1.8	166.458919	3	R	1.5	18	3	Site Infrastructure	3	174.622082	123.751737	3	-6.363163	1	9	1	3
281	196225	697511	166.179942	8.86169	6	0.8	165.379942	2	G	1	12	2	Site Infrastructure	3	173.726562	98.75151	3	-7.54662	1	9	1	2
282	196225	697486	170.059276	9.433248	6	0.5	169.559276	1	G	1	6	2	Site Infrastructure	3	174.622082	98.75205	3	-4.562806	1	9	1	2
283	196250	697511	169.369665	13.573869	6	0.1	169.269665	1	R	1.5	9	2	Site Infrastructure	3	173.726562	73.751853	3	-4.356897	1	9	1	2
284	196200	697511	165.207116	7.994491	4	0.5	164.707116	1	G	1	4	1	Site Infrastructure	3	173.726562	123.751306	3	-8.519446	1	9	1	1
285	196225	697536	162.976799	6.214751	4	1.5	161.476799	3	R	1.5	18	3	Site Infrastructure	3	172.485645	98.75205	3	-9.508846	1	9	1	3
286	196200	697536	162.42101	3.214287	2	1	161.42101	2	G	1	4	1	Site Infrastructure	3	172.485645	123.751737	3	-10.064635	1	9	1	1
287	196175	697536	164.329159	7.235045	4	0.5	163.829159	1	G	1	4	1	Site Infrastructure	3	163.709436	121.04909	3	0.619723	1	9	1	1
288	196156	697532	167.280931	18.323447	8	0.1	167.180931	1	G	1	8	2	Site Infrastructure	3	163.709436	119.226355	3	3.571495	1	9	1	2
289	196175	697561	167.860896	13.148465	6	0.2	167.660896	1	G	1	6	2	Site Infrastructure	3	163.709436	98.516736	3	4.15146	1	9	1	2
290	196200	697561	162.78741	8.104316	6	0.1	162.68741	1	R	1.5	9	2	Site Infrastructure	3	163.709436	112.663313	3	-0.922026	1	9	1	2
291	196225	697586	160.467668	4.634704	4	0.1	160.367668	1	G	1	4	1	Site Infrastructure	3	165.890429	98.75205	3	-5.422761	1	9	1	1
292	196250	697611	158.943194	2.301076	2	3.4	155.543194	8	G	1	16	3	Site Infrastructure	3	165.28564	75.372683	3	-6.342446	1	9	1	3
293	196225	697611	160.691327	9.318547	6	0.9	159.791327	2	C	2	24	3	Site Infrastructure	3	160.456948	78.933238	3	0.234379	1	9	1	3
294	196200	697611	167.80955	18.367183	8	0.1	167.70955	1	G	1	8	2	Site Infrastructure	3	163.709436	80.921889	3	4.100114	1	9	1	2
295	196200	697586	165.542309	16.935834	8	0.1	165.442309	1	G	1	8	2	Site Infrastructure	3	163.709436	94.845597	3	1.832873	1	9	1	2
296	196175	697586	171.84565	12.462731	6	0.1	171.74565	1	R	1.5	9	2	Site Infrastructure	3	163.709436	77.512658	3	8.136214	1	9	1	2
297	196174	697610	174.312427	4.660961	4	0.1	174.212427	1	G	1	4	1	Site Infrastructure	3	163.709436	59.478963	3	10.602991	2	18	2	2
298	196150	697611	173.69786	10.414222	6	0.2	173.49786	1	G	1	6	2	Site Infrastructure	3	163.709436	42.701314	3	9.988424	1	9	1	2
299	196150	697636	167.131949	20.252308	8	0.1	167.031949	1	G	1	8	2	Site Infrastructure	3	163.709436	25.021335	3	3.422513	1	9	1	2
300	196126	697613	169.922286	15.891296	8	0.2	169.722286	1	R	1.5	12	2	Site Infrastructure	3	163.761588	34.223397	3	6.160698	1	9	1	2
301	196150	697586	173.469445	8.894089	6	0.2	173.269445	1	R	1.5	9	2	Site Infrastructure	3	163.709436	65.350878	3	9.760009	1	9	1	2
302	196125	697586	173.225475	3.984316	2	0.1	173.125475	1	R	1.5	3	1	Site Infrastructure	3	163.761588	61.451283	3	9.463887	1	9	1	1
303	196100	697611	166.04887	15.271219	8	0.1	165.94887	1	G	1	8	2	Site Infrastructure	3	163.761588	44.625667	3	2.287282	1	9	1	2
304	196100	697636	163.556731	3.968466	2	0.01	163.546731	1	G	1	2	1	Site Infrastructure	3	163.761588	28.18005	3	-0.204857	1	9	1	1
305	196125	697687	158.95341	10.280852	6	0.1	158.85341	1	G	1	6	2	Site Infrastructure	3	158.688022	1.578024	4	0.265388	1	12	2	4
306	196150	697662	161.462321	7.634131	4	0.1	161.362321	1	G	1	4	1	Site Infrastructure	3	161.084743	15.79011	3	0.377578	1	9	1	1
307	196150	697687	159.568146	4.259547	4	0.1	159.468146	1	R	1.5	6	2	Site Infrastructure	3	158.008094	11.758536	3	1.560052	1	9	1	2
308	196175	697687	160.348782	6.76767	4	0.6	159.748782	2	G	1	8	2	Site Infrastructure	3	160.012037	10.989457	3	0.336745	1	9	1	2
309	196200	697687	162.262583	3.732058	2	0.1	162.162583	1	R	1.5	3	1	Site Infrastructure	3	162.675181	6.968268	4	-0.412598	1	12	2	2
310	196175	697662	161.713735	3.189147	2	1	160.713735	2	R	1.5	6	2	Site Infrastructure	3	161.359432	34.628153	3	0.354303	1	9	1	2
311	196175	697636	169.125932	23.532668	8	0.1	169.025932	1	G	1	8	2	Site Infrastructure	3	163.709436	48.616275	3	5.416496	1	9	1	2
312	196200	697661	163.162647	14.698498	6	1.5	161.662647	3	G	1	18	3	Site Infrastructure	3	162.675181	32.447659	3	0.487466	1	9	1	3
313	196200	697636	168.955153	13.073451	6	0.2	168.755153	1	G	1	6	2	Site Infrastructure	3	162.675181	57.447242	3	6.279972	1	9	1	2
314	196225	697684	161.319854	7.658259	4	0.2	161.119854	1	G	1	4	1	Site Infrastructure	3	161.74312	7.118672	4	-0.423266	1	12	2	2
315	196225	697662	163.369514	10.699241	6	0.1	163.269514	1	G	1	6	2	Site Infrastructure	3	160.456948	29.300945	3	2.912566	1	9	1	2
316	196225	697634	162.759357	12.867524	6	0.5	162.259357	1	G	1	6	2	Site Infrastructure	3	160.456948	55.769772	3	2.302409	1	9	1	2
317	196250	697659	159.731611	6.044097	4	0.3	159.431611	1	R	1.5	6	2	Site Infrastructure	3	158.894717	28.133512	3	0.836894	1	9	1	2
318	196250	697684	159.109282	4.733848	4	1.8	157.309282	3	G	1	12	2	Site Infrastructure	3	158.894717	3.54182	4	0.214565	1	12	2	4
319	196275	697684	157.366509	4.039489	4	1.5	155.866509	3	G	1	12	2	Site Infrastructure	3	157.324872	1.314341	4	0.041637	1	12	2	4
320	196275	697659	157.66007	2.415709	2	3.3	154.36007	8	G	1	16	3	Site Infrastructure	3	157.324872	26.089797	3	0.335198	1	9	1	3
321	196250	697636	159.006084	3.796928	2	3.3	155.706084	8	G	1	16	3	Site Infrastructure	3	158.894717	51.476472	3	0.111367	1	9	1	3
322	196275	697634	158.417205	3.920557	2	3.8	154.617205	8	G	1	16	3	Site Infrastructure	3	157.390598	50.242626	3	1.026607	1	9	1	3
323	196275	697611	159.508473	3.619008	2	4.8	154.708473	8	R	1.5	24	3	Site Infrastructure	3	165.28564	51.171441	3	-5.777167	1	9	1	3
324	196250	697586	160.099828	3.857521	2	4.4	155.699828	8	G	1	16	3	Site Infrastructure	3	165.890429	73.752575	3	-5.790601	1	9	1	3
325	196225	697561	161.472857	2.551248	2	3.8	157.672857	8	G	1	16	3	Site Infrastructure	3	169.772724	98.75151	3	-8.299867	1	9	1	3

491	196555	697700	172.081213	8.104776	6	0.2	171.881213	1	R	1.5	9	2	Site Infrastructure	3	166.737165	123.142909	3	5.344048	1	9	1	2
492	196550	697700	171.992602	6.503016	4	0.01	171.982602	1	G	1	4	1	Site Infrastructure	3	166.737165	126.781115	3	5.255437	1	9	1	1
493	196544	697700	171.561632	5.398604	4	0.01	171.551632	1	G	1	4	1	Site Infrastructure	3	166.737165	130.557105	3	4.824467	1	9	1	1
494	196539	697701	171.090213	4.423597	4	1.8	169.290213	3	G	1	12	2	Site Infrastructure	3	166.737165	134.459276	3	4.353048	1	9	1	2
495	196533	697701	170.754031	3.732403	2	2.7	168.054031	3	R	1.5	9	2	Site Infrastructure	3	166.737165	138.476806	3	4.016866	1	9	1	2
496	196540	697706	171.119415	5.686449	4	1.3	169.819415	3	R	1.5	18	3	Site Infrastructure	3	166.737165	137.534289	3	4.38225	1	9	1	3
497	196545	697706	171.724991	7.107126	4	1.4	170.324991	3	R	1.5	18	3	Site Infrastructure	3	166.737165	134.660572	3	4.987826	1	9	1	3
498	196550	697706	172.464526	7.457906	4	0.3	172.164526	1	G	1	4	1	Site Infrastructure	3	166.737165	131.002915	3	5.727361	1	9	1	1
499	196556	697706	173.020093	8.093711	6	0.4	172.620093	1	G	1	6	2	Site Infrastructure	3	166.737165	127.48517	3	6.282928	1	9	1	2
500	196561	697705	173.112823	9.867761	6	0.5	172.612823	1	R	1.5	9	2	Site Infrastructure	3	166.737165	124.119455	3	6.375658	1	9	1	2
501	196567	697705	173.046623	11.414602	6	0.3	172.746623	1	G	1	6	2	Site Infrastructure	3	166.737165	120.918263	3	6.309458	1	9	1	2
502	196559	697666	169.956512	3.268912	2	2.2	167.756512	3	G	1	6	2	Site Infrastructure	3	166.556408	95.289228	3	3.400104	1	9	1	2
503	196554	697667	169.900695	3.105101	2	3	166.900695	3	G	1	6	2	Site Infrastructure	3	166.20036	99.424097	3	3.700335	1	9	1	2
504	196548	697667	170.067862	3.425237	2	4.4	165.667862	8	G	1	16	3	Site Infrastructure	3	166.024359	103.552645	3	4.043503	1	9	1	3
505	196543	697667	170.322383	2.670825	2	3.6	166.722383	8	G	1	16	3	Site Infrastructure	3	165.848794	107.689629	3	4.473589	1	9	1	3
506	196228	697680	160.864733	5.107268	4	0.01	160.854733	1	G	1	4	1	Site Infrastructure	3	160.456948	11.014273	3	0.407785	1	9	1	1
507	196221	697681	161.567783	6.455284	4	0.4	161.167783	1	G	1	4	1	Site Infrastructure	3	162.290764	10.973304	3	-0.722981	1	9	1	1
508	196216	697681	162.123034	4.843814	4	0.2	161.923034	1	G	1	4	1	Site Infrastructure	3	162.757185	11.060154	3	-0.634151	1	9	1	1
509	196211	697681	162.267066	3.084505	2	0.4	161.867066	1	R	1.5	3	1	Site Infrastructure	3	162.757185	12.574954	3	-0.490119	1	9	1	1
510	196205	697681	162.150428	3.184116	2	0.8	161.350428	2	G	1	4	1	Site Infrastructure	3	162.830685	12.044626	3	-0.680257	1	9	1	1
511	196200	697681	161.968386	2.489169	2	1.4	160.568386	3	G	1	6	2	Site Infrastructure	3	162.675181	12.417809	3	-0.706795	1	9	1	2
512	196193	697681	161.832775	1.372537	1	1	160.832775	2	G	1	2	1	Site Infrastructure	3	162.675181	14.102618	3	-0.842406	1	9	1	1
513	196193	697676	161.83621	0.377183	1	1.3	160.53621	3	G	1	3	1	Site Infrastructure	3	162.675181	18.773014	3	-0.838971	1	9	1	1
514	196199	697675	161.85923	0.945473	1	1.6	160.25923	3	G	1	3	1	Site Infrastructure	3	162.675181	18.034208	3	-0.815951	1	9	1	1
515	196205	697676	161.912723	1.971934	1	1.4	160.512723	3	G	1	3	1	Site Infrastructure	3	162.830685	17.668071	3	-0.917962	1	9	1	1
516	196210	697676	162.015944	2.628271	2	1.5	160.515944	3	G	1	6	2	Site Infrastructure	3	162.757185	17.462359	3	-0.741241	1	9	1	2
517	196216	697675	161.89456	4.310027	4	0.8	161.09456	2	G	1	8	2	Site Infrastructure	3	162.757185	16.341295	3	-0.862625	1	9	1	2
518	196221	697676	161.49261	5.508284	4	0.8	160.69261	2	G	1	8	2	Site Infrastructure	3	162.290764	15.969629	3	-0.798154	1	9	1	2
519	196227	697674	161.296354	5.945339	4	0.5	160.796354	1	G	1	4	1	Site Infrastructure	3	160.456948	16.50238	3	0.839406	1	9	1	1
520	196227	697670	161.87386	8.321284	6	0.5	161.37386	1	G	1	6	2	Site Infrastructure	3	160.456948	21.08958	3	1.416912	1	9	1	2
521	196221	697670	162.072378	8.40789	6	0.7	161.372378	2	G	1	12	2	Site Infrastructure	3	162.290764	21.532891	3	-0.218386	1	9	1	2
522	196216	697670	162.297402	7.565593	4	0.5	161.797402	1	G	1	4	1	Site Infrastructure	3	162.757185	21.846224	3	-0.459783	1	9	1	1
523	196210	697671	162.151128	5.192524	4	0.4	161.751128	1	G	1	4	1	Site Infrastructure	3	162.757185	22.095561	3	-0.606057	1	9	1	1
524	196204	697670	161.970235	4.165678	4	0.2	161.770235	1	G	1	4	1	Site Infrastructure	3	162.797239	23.350891	3	-0.827004	1	9	1	1
525	196199	697670	161.871462	2.201532	2	0.7	161.171462	2	G	1	4	1	Site Infrastructure	3	162.675181	23.065599	3	-0.803719	1	9	1	1
526	196193	697671	161.845886	0.89932	1	1.3	160.545886	3	G	1	3	1	Site Infrastructure	3	162.675181	23.207014	3	-0.829295	1	9	1	1
527	196193	697665	162.032203	6.84455	4	0.1	161.932203	1	G	1	4	1	Site Infrastructure	3	162.675181	28.96947	3	-0.642978	1	9	1	1
528	196199	697665	162.261226	9.187427	6	0.2	162.061226	1	G	1	6	2	Site Infrastructure	3	162.675181	28.630147	3	-0.413955	1	9	1	2
529	196205	697665	162.611805	9.717625	6	0.1	162.511805	1	G	1	6	2	Site Infrastructure	3	162.830685	28.559077	3	-0.21888	1	9	1	2
530	196211	697665	163.036448	9.941957	6	0.1	162.936448	1	G	1	6	2	Site Infrastructure	3	162.757185	27.625176	3	0.279263	1	9	1	2
531	196215	697664	163.255445	10.38058	6	0.4	162.855445	1	G	1	6	2	Site Infrastructure	3	162.757185	27.205189	3	0.49826	1	9	1	2
532	196221	697664	163.14393	10.704394	6	0.4	162.74393	1	G	1	6	2	Site Infrastructure	3	162.290764	27.418535	3	0.853166	1	9	1	2
533	196221	697659	164.244266	10.330358	6	0.2	164.044266	1	G	1	6	2	Site Infrastructure	3	162.290764	32.949313	3	1.953502	1	9	1	2
534	196226	697658	163.611974	11.529981	6	0.1	163.511974	1	G	1	6	2	Site Infrastructure	3	160.456948	32.260043	3	3.155026	1	9	1	2
535	196215	697659	164.278484	11.178348	6	0.1	164.178484	1	G	1	6	2	Site Infrastructure	3	162.757185	32.801887	3	1.521299	1	9	1	2
536	196209	697659	164.043555	12.997204	6	0.2	163.843555	1	G	1	6	2	Site Infrastructure	3	162.757185	33.820209	3	1.28637	1	9	1	2
537	196204	697659	163.839185	15.119047	8	0.1	163.739185	1	G	1	8	2	Site Infrastructure	3	162.797239	34.427962	3	1.041946	1	9	1	2
538	196193	697660	163.130674	16.091606	8	0.1	163.030674	1	G	1	8	2	Site Infrastructure	3	162.675181	34.094769	3	0.455493	1	9	1	2
539	196192	697653	165.700364	21.471923	8	0.2	165.500364	1	G	1	8	2	Site Infrastructure	3	162.675181	40.848885	3	3.025183	1	9	1	2
540	196198	697653	165.89565	19.536104	8	0.3	165.59565	1	G	1	8	2	Site Infrastructure	3	162.675181	40.325389	3	3.220469	1	9	1	2
541	196203	697653	165.711491	18.259108	8	0.3	165.411491	1	G	1	8	2	Site Infrastructure	3	162.797239	40.255398	3	2.914252	1	9	1	2
542	196209	697653	165.688123	15.67178	8	0.2	165.488123	1	G	1	8	2	Site Infrastructure	3	162.757185	39.649528	3	2.930938	1	9	1	2
543	196215	697652	165.621147	11.020702	6	0.1	165.521147	1	G	1	6	2	Site Infrastructure	3	162.757185	39.208031	3	2.863962	1	9	1	2
544	196220	697652	164.996999	10.696241	6	0.1	164.896999	1	G	1	6	2	Site Infrastructure	3	162.527253	39.20315	3	2.469746	1	9	1	2
545	196226	697653	163.753822	13.633582	6	0.1	163.653822	1	G	1	6	2	Site Infrastructure	3	160.456948	37.69561	3	3.296874	1	9	1	2
546	196372	697673	168.848801	11.760696	6	0.01	168.838801	1	G	1	6	2	Site Infrastructure	3	168.88225	1.338822	4	-0.033449	1	12	2	4
547	196366	697673	167.272999	16.837341	8	0.01	167.262999	1	G	1	8	2	Site Infrastructure	3	166.552086	2.320419	4	0.720913	1	12	2	4
548	196378	697673	169.342714	7.471561	4	0.01	169.332714	1	G	1	4	1	Site Infrastructure	3	168.692527	3.495692	4	0.650187	1	12	2	2
549	196389	697673	170.235665	4.909815	4	0.01	170.225665	1	G	1	4	1	Site Infrastructure	3	168.692527	13.653719	3	1.543138	1	9	1	1
550	196383	697678	169.313411	11.867809	6	0.01	169.303411	1	G	1	6	2	Site Infrastructure	3	168.692527	8.534417	4	0.620884	1	12	2	4
551	196378	697679	168.516852	13.413455	6	0.01	168.506852	1	G	1	6	2	Site Infrastructure	3	168.692527	4.151441	4	-0.175675	1	12	2	4
552	196384	697673	169.815592	6.149553	4	0.01	169.805592	1	G	1	4	1	Site Infrastructure	3	168.692527	8.525366	4	1.123065	1	12	2	2
553	196389	697678	170.055877	9.729094	6	0.01	170.045877	1	G	1	6	2	Site Infrastructure	3	168.692527	13.856793	3	1.36335	1	9	1	2
554	196395	697678	170.633977	7.505637	4	0.3	170.333977	1	G	1	4	1	Site Infrastructure	3	168.692527	20.120716	3	1.94145	1	9	1	1
555	196400	697678	171.087067	5.76225	4	0.2	170.887067	1	G	1	4	1	Site Infrastructure	3	168.692527	24.90077	3	2.39454	1	9	1	1
556	196396	697683	169.980063	12.47871	6	0.1	169.880063	1	G	1	6	2	Site Infrastructure	3	168.692527	21.429046	3	1.287536	1	9	1	2
557	196390	697683	169.204032	14.208207	6	0.2	169.004032	1	G	1	6	2	Site Infrastructure	3	168.692527	16.079659	3	0.511505	1	9	1	2
558	196384	697683	168.261932	15.168987	8	0.1	168.161932	1	G	1	8	2	Site Infrastructure	3	168.692527	11.467632	3	-0.430595	1	9	1	2
559	196378	697684	167.220728	14.97875	6	0.2	167.020728	1	G	1	6	2	Site Infrastructure	3	168.692527	9.026589	4	-1.471799	1	12	2	4
560	196372	697685	166.154652	14.68708	6	0.01	166.144652	1	G	1	6	2	Site Infrastructure	3	167.634386	7.363728	4	-1.479734	1	12	2	4
561	196372	697679	167.466032	16.324164	8	0.01	167.456032	1	G	1	8	2	Site Infrastructure	3	167.634386	1.693978	4	-0.168354	1	12	2	4
562	196367	697679	166.163855	17.443558	8	0.01	166.153855	1	G	1	8	2	Site Infrastructure	3	166.648156	1.763545	4	-0.484301	1	12	2	4
563	196367	697685	165.067962	12.917849	6	0.3	164.767962	1	G	1	6	2	Site Infrastructure	3	166.648156	7.288046	4	-1.580194	1	12	2	4
564	196368	697690	164.563775	8.720374	6	0.9	163.663775	2	G	1	12	2	Site Infrastructure	3	166.648156	12.592757	3	-2.084381	1	9	1	2
565	196373	697689	165.311846	11.290962	6	0.1	165.211846	1	G	1	6	2	Site Infrastructure	3	167.634386	11.969803	3	-2.32254	1	9	1	2
566	196378	697689	166.143454	12.834522	6	0.1	166.043454	1	G	1	6	2	Site Infrastructure	3	167.634386	13.251457	3	-1.490932	1	9	1	2
567	196385	697689	167.135548	13.404312	6	0.1	167.035548	1	G	1	6	2	Site Infrastructure	3	168.692527	16.089119	3	-1.556979	1	9	1	2
568	196390	697689	167.959244	13.445744	6	0.1	167.859244	1	G	1	6	2	Site Infrastructure	3	168.692527	19.402596	3	-0.733283	1	9	1	2
569	196395	697689	168.795823	13.295767	6	0.2	168.595823	1	G	1	6	2	Site Infrastructure	3	168.692527	23.795749	3	0.103296	1	9	1	2
570	196401	697689	169.689502	12.94063	6	0.1	169.589502	1	G	1	6	2	Site Infrastructure	3	168.692527	28.760427	3	0.996975	1	9	1	2
571	196401	697695	168.741948	12.340134	6	0.1	168.641948	1	G	1	6	2	Site Infrastructure	3	168.692527	31.877534	3	0.049421	1	9	1	2
572	196396	697694	167.994323	12.337667	6	0.1	167.894323	1	G	1	6	2	Site Infrastructure	3	168.692527	27.710102	3	-0.698204	1	9	1	2
573	196390	697695	167.030927	12.195514	6	0.1	166.930927	1	G	1	6	2	Site Infrastructure	3	168.692527	24.317892	3	-1.6616	1	9	1	2
574	196384	697695	166.08726	11.253732	6	0.1	165.98726	1	G	1	6	2	Site Infrastructure	3	168.692527	21.393763	3	-2.605267	1	9	1	2
575	196379	697695	165.269579	9.289	6	0.2	165.069579	1	G	1	6	2	Site Infrastructure	3	167.634386	19.349074	3	-2.364807	1	9	1	2
576	196373	697695	164.743855	7.856089	4	0.8	163.943855	2	G	1	8	2	Site Infrastructure	3	167.634386	17.968152	3	-2.890531	1	9	1	2
577	196368	697695	164.228531	6.853424	4	1.2	163.028531	3	G	1	12	2	Site Infrastructure	3	166.648156	17.88261	3	-2.419625	1	9	1	2
578	196368	697701	163.798941	6.591845	4	0.2	163.598941	1	G	1	4	1	Site Infrastructure	3	166.648156	23.697313	3	-2.849215	1	9	1	1
579	196374	697701	164.354884	6.78537	4	0.4	163.954884	1	G	1	4	1	Site Infrastructure	3	167.634386	23.178533	3	-3.279502	1	9	1	1
580	196369	697707	163.450023	6.782322	4	0.3	163.150023	1	G	1	4	1	Site Infrastructure	3	167.142387	29.201009	3	-3.692364	1	9	1	1
581	196374	697707	163.946189	6.757239	4	0.5	163.446189	1	G	1	4	1	Site Infrastructure	3	167.634386	29.088164	3	-3.688197	1	9	1	1
582	196379	697706	164.442636	6.813784	4	0.2	164.242636	1	G	1	4	1	Site Infrastructure	3	167.634386	29.920942	3	-3.19175	1	9	1	1
583	196379	697701	164.84305	7.492682	4	0.2	164.64305	1	G	1	4	1	Site Infrastructure	3	167.634386	24.740707	3	-2.791336	1	9	1	1
584	196385	697700	165.449578	9.408498	6	0.1	165.349578	1	G	1	6	2	Site Infrastructure	3	167.634386	26.332784	3	-2.184808	1	9	1	2
585	196385	697706	164.951254	7.494633	4	0.2	164.751254	1	G	1	4	1	Site Infrastructure	3	167.634386	31.598114	3	-2.683132	1	9	1	1
586	196391	697706	165.519716	9.243366	6	0.1	165.419716	1	G	1	6	2	Site Infrastructure	3	168.692527	33.837532	3	-3.172811	1	9	1	2
587	196390	697700	166.249066	11.306254	6	0.2	166.049066	1	G	1	6	2	Site Infrastructure	3	168.692527	28.718697	3	-2.443461	1	9	1	2
588	196396	697700	167.148552	12.151362	6	0.2	166.948552	1	G	1	6	2	Site Infrastructure	3	168.692527	31.739234	3	-1.543975	1	9	1	2
589	196396	697705	166.361524	11.217776	6	0.5	165.861524	1	G	1	6	2	Site Infrastructure	3	168.692527	36.023369	3	-2.331003	1	9	1	2
590	196402	697705	167.321326	12.094793	6	0.3	167.021326	1	G	1	6	2	Site Infrastructure	3	168.692527	39.773513	3	-1.371201	1	9	1	2
591	196402	697700	168.111539	12.354019	6	0.3	167.811539	1	G	1	6	2	Site Infrastructure	3	168.692527	35.723937	3	-0.580988	1	9	1	2

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	