Corriegarth 2 Wind Farm

Supplementary Environmental Information Report

Volume 3 - Technical Appendices

April 2022

CORRIEGARTH 2 WIND FARM

SEI Report – Volume 3 – Technical Appendices

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CORRIEGARTH 2 WIND FARM

SEI Report – Volume 3 – Technical Appendices

TA A5.1 Applicant Final Response to SEPA

Suite 3/1 | 58 Waterloo Street | Glasgow | G2 7DA I BayWa r.e. UK Limited

Laura Wilson
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SEPA
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Dingwall Business Park
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Dingwall IV15 9XB

Letter Reference: BAY-L-0451

Contact person	Email	Phone	Date
Jillian Adams	jillianadams@baywa-re.co.uk	+44 (0)141 468 0585	09/02/2022

Corriegarth 2 Windfarm
ECU Ref: ECU00002175

Dear Laura

I am writing to confirm the changes that have been made to the Corriegarth 2 Windfarm layout to fulfil SEPA's requirements as set out in your various consultation responses. In particular, following additional peat probing, Turbine 13 has been relocated into an area of shallower peat enabling a direct reduction in peat excavation from 14,899m^3 to 7,376 m^3.

As well as providing detail on T13, I have taken the opportunity to summarise the steps that the Corriegarth 2 Wind Farm ('the Development') project team has taken to substantially reduce the impacts on peat and provide information on the revised layout which we now propose to submit to the Scottish Government as Supplementary Environmental Information (SEI). For the record this letter also addresses the points made by SEPA in their various consultation responses. I am confident that the steps we have taken - removing and relocating turbines and reducing new track length - has resulted in an acceptable solution that achieves the correct balance between minimising environmental impacts, maximising output, and continuing to provide a meaningful contribution to the Scottish Governments renewable energy targets.

With respect to the Corriegarth 2 Wind Farm's impacts on peat, we welcome the engagement from SEPA to date to shape the project. As a direct result of this engagement, significant changes have

been made to re-use the existing infrastructure of Corriegarth 1 Wind Farm and reduce the extent of infrastructure on deeper peat.

Finally, when considering the impacts of this project, it is important that decisionmakers and stakeholders such as SEPA balance the associated environmental effects with the recognised, urgent need for a large increase in the deployment of onshore wind in Scotland. This need is set out in a number of UK level policy documents including the latest UK Energy White Paper and Net Zero Strategy. Scottish Government's Net Zero policy commitments are being strengthened as set out in the draft Onshore Wind Policy Statement and the draft NPF4. These updated policy documents will be finalised in the very near future and are material to the energy and national planning policy context considered in the determination of this application. Emerging policy clearly recognises that proposals to expand existing wind farms should be supported and the relative weight to be attached to the renewable energy benefits of any application has also increased.

1. Changes to Design

Figure 2 shows the revised layout overlain on the Section 36 application layout submitted in January 2021. The revised layout is also provided on Figure 1. The following revisions have been made (since submission of the s36 application in January 2021):

- Removal of turbines T10 and T12
- Relocation of turbines T1, T2, T8, T9, T11, T13, T14, and T15
- Reduction in new track length from approximately 10,000 m to approximately 6,000 m

The main drivers for the redesign are the reduction of peat impacts required by SEPA and reduced landscape and visual impacts driven by The Highland Council's consultation response. The revised layout successfully balances both these requirements whilst maintaining a viable scheme and achieving an appropriate output of renewable electricity.

With respect to the relocation of turbine 13 and the comments received from SEPA during the consultation process, six alternative locations have now been considered and additional peat probing carried out for each of those (Figure 5). This work has resulted in identification of a preferred location of shallower peat as indicted as position 13f (National Grid Reference: 257722, 814277). This location will now be taken forward for assessment within the SEI and will be represented by T13.

2. Assessment of Effects – Peat

Quantity: The spreadsheet provided at Appendix A sets out the estimated quantities of peat which require to be excavated during construction of the windfarm. This demonstrates that the final position of T13 has reduced the quantity of (associated) excavated from 14,899m^3 to 7375 m^3.
Overall, the redesign has resulted in a reduction of 49% of peat excavation from 355,284 m^3 (EIA submission) to 179,770 m^3 (SEI).

Figures 3 and 4 show the layout and peat depth data.

Quality and Peat Properties: The dominant peatland habitat recorded on Site is blanket bog, which is present extensively across the site. Although the Development will result in direct loss of peat within this habitat, it is important consider that as result of historical and existing drainage, grazing, burning, and erosion, peatland within the Site is now considered to be of low ecological value; and has very limited hydrological, carbon sequestration functionality.

As detailed in TA7.2 of the Environmental Impact Assessment (EIA) Report, no natural or near natural blanket bog habitats are present within the site. Indeed, approximately 82% of peatland recorded was actively eroding, with the remainder either drained or notably modified beyond its natural condition. As a result, all blanket bog habitats recorded, including drained and eroded bog habitat present in the vicinity of T13, have limited hydrological, peat forming, and carbon sequestration functionality. This is evident in the extensive drainage ditches, gullies, hags, and bare peat visible in: aerial images, site photography, and the peatland assessment presented in TA7.1.
The assessment of the impacts on peat will consider that although the Development will result in a direct loss of degraded peat, peatland restoration proposals will aim to restore the hydrological, ecological, and carbon sequestration potential of remaining peat within the site to an extent greater that what will be lost.

Payback Period: The estimated payback period for the Development is less than 2 years compared to grid-mix electricity generation. This information will be presented in more detail in the SEI.

3. Mitigation Proposed

The SEI will provide details of the proposals for peatland restoration, these are currently being assessed and agreed with the landholder and NatureScot; however, it will be demonstrated that the excavated peat can be successfully used both in the restoration of the worked areas and to enable the peatland restoration.

4. Summary

This layout has been reached following analysis of competing environmental constraints and extensive consultation with stakeholders including the Highland Council and SEPA. There have been significant changes made to minimise environmental effects. When considering this application decision makers have a duty to balance the environmental effects with the recognised, and urgent, need for a large increase in the deployment of onshore wind in Scotland and this is promoted through the expansion of existing wind farms. As stated above this need is set out and supported through a growing number of UK and Scottish policy documents which are material to the energy and national planning policy positions to be considered in the determination of this application.

The information presented in this letter fulfils SEPA's stated requirements to a) justify why the layout represents an acceptable environmental solution and b) clearly demonstrate that every effort has been taken to minimise peat disturbance and carbon loss.

The revised design represents an acceptable environmental solution as it has managed to minimise the impacts on peat (by maximising the use of the existing Corriegarth 1 tracks, removing two turbines and relocating eight turbine) whilst retaining an acceptable design in landscape and visual terms and delivering approximately 70 MW of clean renewable energy in support of the UK and Scottish Governments climate change policies.

I trust you recognise the positive changes we have put forward in response to your consultation responses and that you are now in a position to remove your objection.

Yours sincerely,

Jilly Adams
Senior Development Manager

For and on behalf of Corriegarth 2 Windfarm Limited

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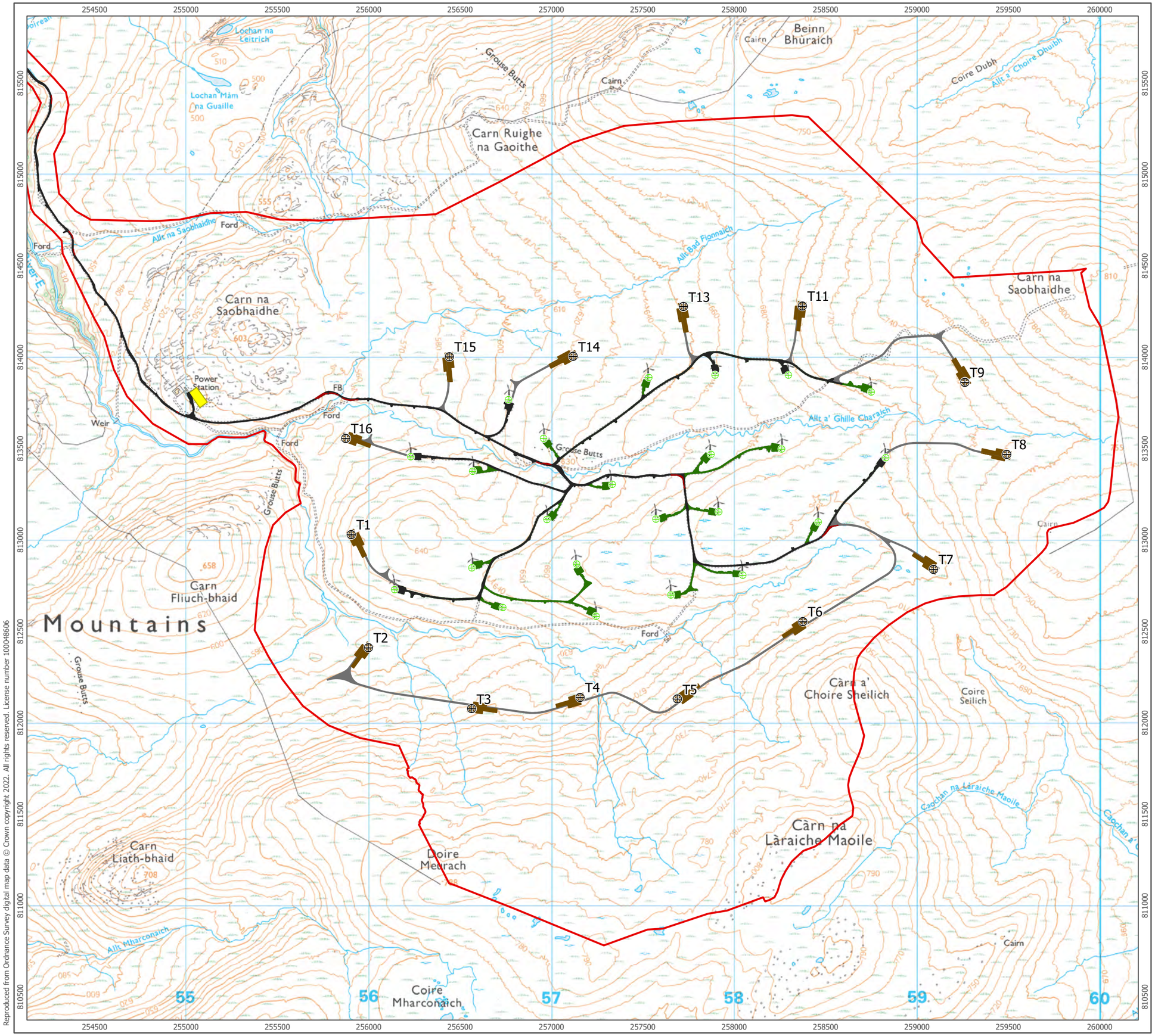
Figure 1: SEI Layout
Figure 2: EIA v SEI Layout
Figure 3: Layout with Peat Probe Depths
Figure 4: Layout with Peat Depth Interpolation
Figure 5: Turbine 13 Alternatives
Appendix A : Peat excavation calculations

3369 - Corriegarth SEI - Peat and Borrow Pit Excavation and Re-Use Calculations

	Peat Excavation				Peat Reinstatement and Re-use			
Infrastructure	**Total Area of Infrastructure inc EW.**	**Peat Cut Volume**	**Total Acrotelm Excavation Est.**	**Total Catotelm Excavation Est.**	**Areas of Reinstament**	**Total Peat Re-use Est.**	**Total Acrotelm Re-use Est.**	**Total Catotelm Re-use Est.**
Turbines								
T1	9229	6203	4614.5	1588.5	3771	3016.8	1508.4	1508.4
T2	8148	9852	4074	5778	2690	2152	1076	1076
T3	9749	9986	4874.5	5111.5	4291	3432.8	1716.4	1716.4
T4	9749	12146	4874.5	7271.5	4291	3432.8	1716.4	1716.4
T5	11025	8340	5512.5	2827.5	5567	4453.6	2226.8	2226.8
T6	13430	11862	6715	5147	7972	6377.6	3188.8	3188.8
T7	7375	9081	3687.5	5393.5	1917	1533.6	766.8	766.8
T8	9043	13595	4521.5	9073.5	3585	2868	1434	1434
T9	8204	8223	4102	4121	2746	2196.8	1098.4	1098.4
T11	8153	5071	4076.5	994.5	2695	2156	1078	1078
T13	6770	7376	3385	3991	1312	1049.6	524.8	524.8
T14	7724	6510	3862	2648	2266	1812.8	906.4	906.4
T15	7216	4150	3608	542	1758	1406.4	703.2	703.2
T16	9083	10728	4541.5	6186.5	3625	2900	1450	1450
SUB-TOTAL	**124898**	**123123**	**62449**	**60674**	**48486**	**38788.8**	**19394.4**	**19394.4**
Tracks								
Track - T1	3983	2421	1991.5	429.5	2733	2186.4	1093.2	1093.2
Track- T2-T3 and Turning Area CUT	5542	5929	2771	3158	4542	3633.6	1816.8	1816.8
Track - T2-T3	3435	Floating Tracks	0	0	2556	2044.8	1022.4	1022.4
Track - T3-T4	2031.25	Floating Tracks	0	0	1944	1555.2	777.6	777.6
Track - T4-T5	4050	Floating Tracks	0	0	2340	1872	936	936
Track - T5-T6	4687.5	Floating Tracks	0	0	2532	2025.6	1012.8	1012.8
Track - T6	4006.25	Floating Tracks	0	0	6180	4944	2472	2472
Track - T7	4031.25	Floating Tracks	0	0	1170	936	468	468
Track - T8	4425	Floating Tracks	0	0	3540	2832	1416	1416
Track - T9 (Partial Upgrade)	7262	6725	3631	3094	6762	5409.6	2704.8	2704.8
Track - T11	2446	1038	1038.0	0.0	1946	1556.8	778.4	778.4
Track - T13	2150	Floating Tracks	0	0	1740	1392	696	696
Track - T14	2947	1285	1285.0	0.0	2447	1957.6	978.8	978.8
Track - T15	805	436	402.5	33.5	305	244	122	122
Track - T16	1406.25	Floating Tracks	0	0	1260	1008	504	504
SUB-TOTAL	**53208**	**17834**	**11119**	**6715**	**41997**	**33598**	**16799**	**16799**
Construction Compound								
Construction Compound	5000	1500	1500	0	5000	1500	1500	0
SUB-TOTAL	**5000**	**1500**	**1500**	**0**	**5000**	**1500**	**1500**	**0**
Substation								
Substation Compound	0	0	0	0	0	0	0	0
SUB-TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Borrow Pits								
BP1 (Unchanged from EIA but TBC for SEI)	25460	12730	12730	0	25460	25460	12730	12730
BP2 (Unchanged from EIA but TBC for SEI)	16480	8240	8240	0	32960	32960	16480	16480
SUB-TOTAL	**41940**	**20970**	**20970**	**0**	**58420**	**58420**	**29210**	**29210**
TOTAL Excavation Volume		**163427**	**96038**	**67389**	**153903**	**132306**	**66903**	**65403**
. +10% contingency for Bullking		**16343**	**9604**	**6739**				
TOTAL		**179770**	**105642**	**74128**				
Peat Re-use in Habitat Management Plan						47463	38739	8725
SUB-TOTAL						47463.3	38738.6	8724.7
TOTAL PEAT EXCAVATION and REUSE		**179770**	**105642**	**74128**		**179770**	**105642**	**74128**



P:\GIS\Environment\4643 Corriegarth 2 Wind Farm SEI\4643 Corriegarth 2 Wind Farm SEI.aprx\4643-REP-015 Fig1 Final SEI Layout

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- Planning Boundary
- Operational Corriegarth 1 Wind Turbine
- Proposed Corriegarth 2 Wind Farm

Site Infrastructure

- Crane Hardstanding
- Proposed New Access Tracks
- Existing Tracks to be Utilised
- Track Widening Area
- Construction Compound
- Existing Wind Farm Tracks

1:20,000 Scale @ A3

0 0.25 0.5 km

NORTH

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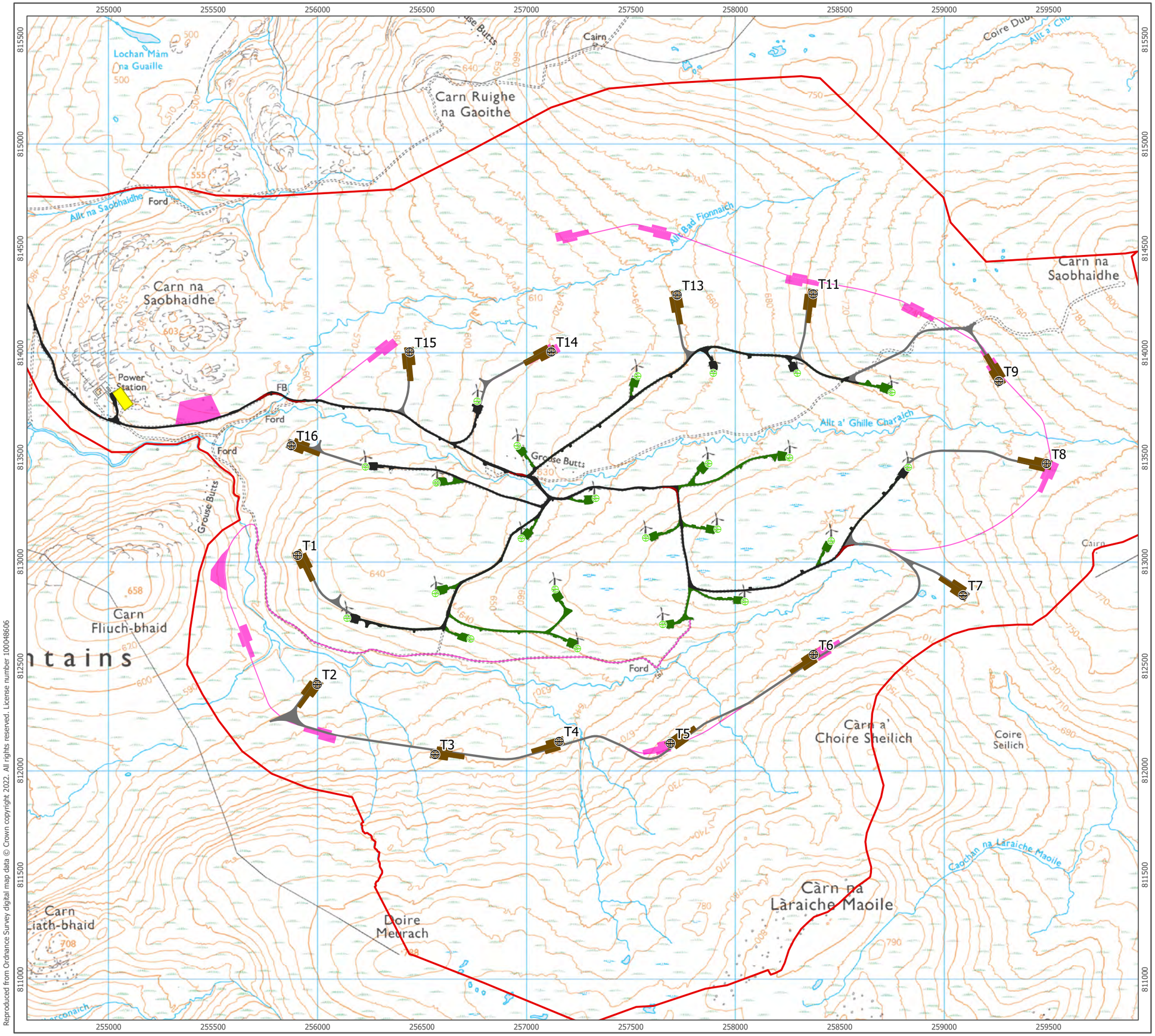
Proposed SEI Layout Figure 1

Corriegarth 2 Wind Farm SEPA Consultation



P:\GIS\Environment\4643 Corriegarth 2 Wind Farm SEI\4643 Corriegarth 2 Wind Farm SEI.aprx\4643-REP-014 Fig2 EIA vs SEI Layout Comparison

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- Planning Boundary
- Operational Corriegarth 1 Wind Turbine
- Proposed Corriegarth 2 Wind Turbine

Site Infrastructure

- Crane Hardstanding
- Proposed New Access Tracks
- Existing Tracks to be Utilised
- Track Widening Area
- Construction Compound
- Existing Wind Farm Tracks
- Previous EIA Site Design

1:17,500 Scale @ A3

0 0.25 0.5 km

NORTH

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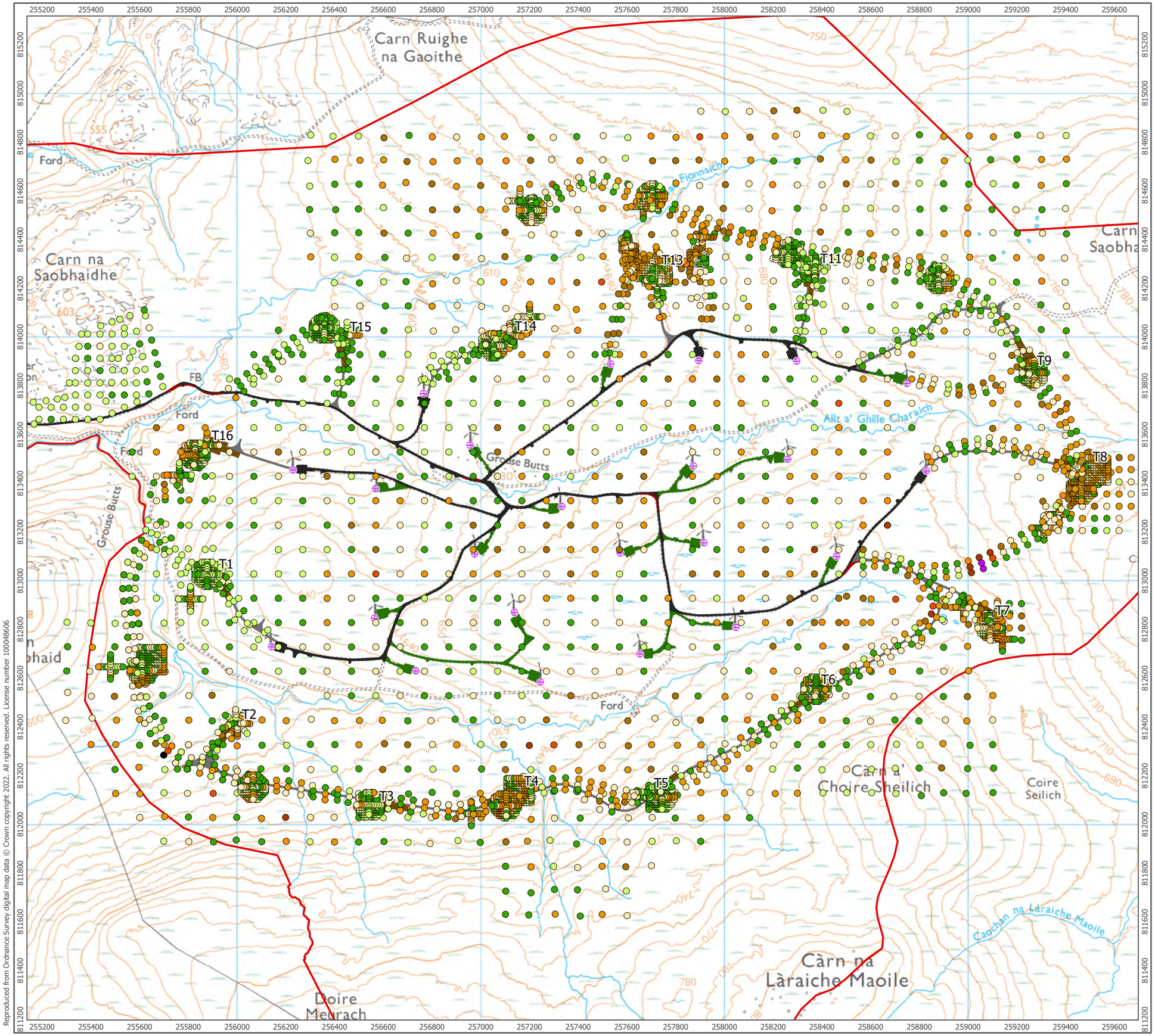
EIA vs SEI Layout Comparison
Figure 2

Corriegarth 2 Wind Farm
SEPA Consultation



P:\GIS\Environment\4643 Corriegarth 2 Wind Farm SEI\4643 Corriegarth 2 Wind Farm SEI.aprx\4643-REP-013 Fig3 Final SEI Layout with Peat Probe Depths

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- Planning Boundary

Site Infrastructure

- Crane Hardstanding
- Proposed New Access Tracks
- Existing Tracks to be Utilised
- Track Widening Area
- Existing Wind Farm Tracks
- Proposed Corriegarth 2 Tubrine
- Operational Corriegarth 1 Wind Turbine

Peat Depth (m)

- 0.00 - 0.50
- 0.51 - 1.00
- 1.01 - 1.50
- 1.51 - 2.00
- 2.01 - 2.50
- 2.51 - 3.00
- 3.01 - 3.50
- 3.51 - 4.00
- 4.01 - 4.50
- 5.01 - 5.50

1:15,000 Scale @ A3

0 0.25 0.5 km

NORTH

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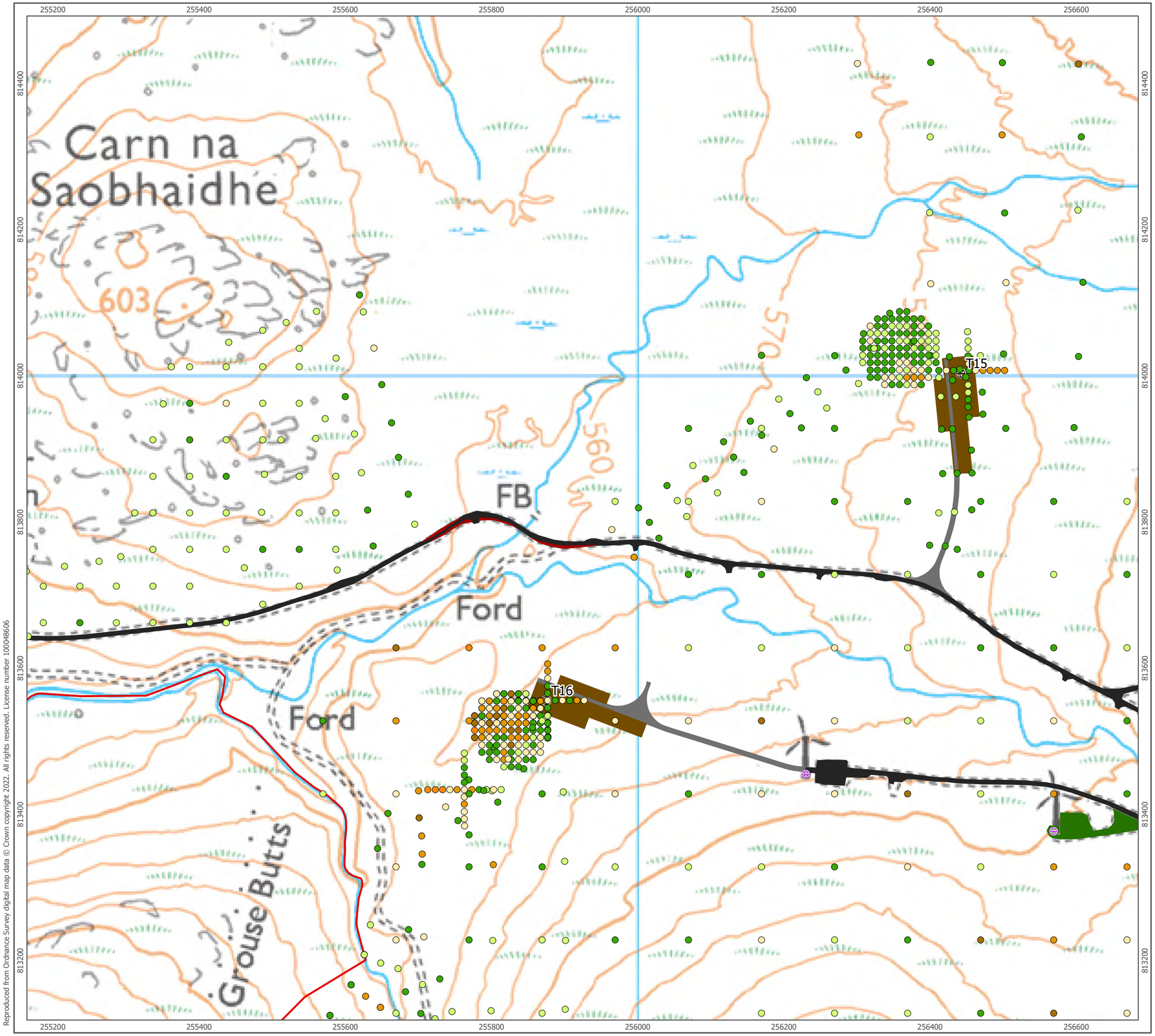
Final SEI layout with Peat Probe Depths
Figure 3a

Corriegarth 2 Wind Farm SEPA Consultation



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- Planning Boundary

Site Infrastructure

- Crane Hardstanding
- Proposed New Access Tracks
- Existing Tracks to be Utilised
- Track Widening Area
- Existing Wind Farm Tracks
- ⊕ Proposed Corriegarth 2 Tubrine
- ⊕ Operational Corriegarth 1 Wind Turbine

Peat Depth (m)

- 0.00 - 0.50
- 0.51 - 1.00
- 1.01 - 1.50
- 1.51 - 2.00
- 2.01 - 2.50
- 2.51 - 3.00

1:5,000 Scale @ A3

0 0.1 0.2 km

NORTH

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Final SEI layout with Peat Probe Depths
Figure 3b

Corriegarth 2 Wind Farm SEPA Consultation

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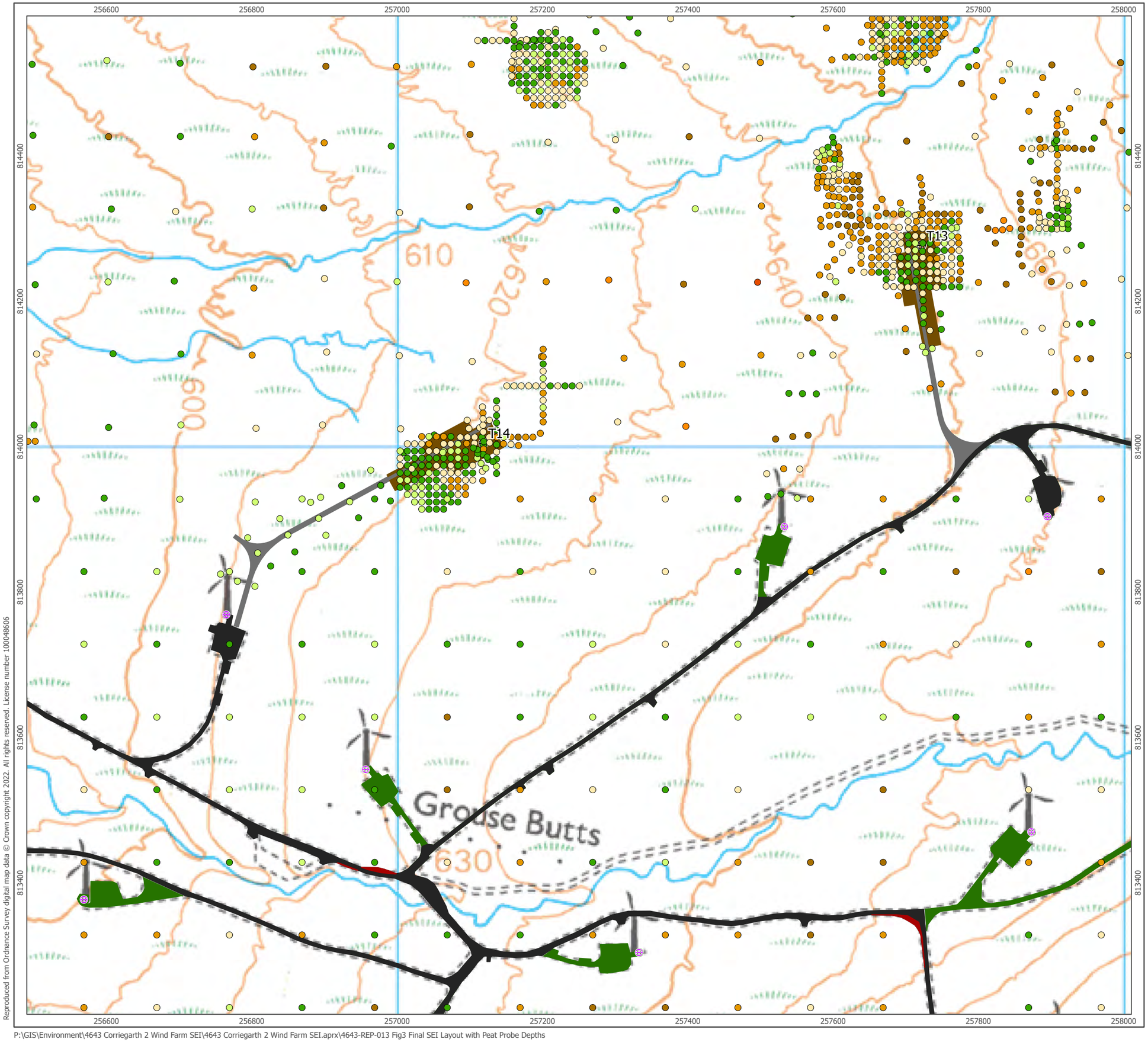

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- Planning Boundary

Site Infrastructure

- Crane Hardstanding
- Proposed New Access Tracks
- Existing Tracks to be Utilised
- Track Widening Area
- Existing Wind Farm Tracks
- Proposed Corriegarth 2 Tubrine
- Operational Corriegarth 1 Wind Turbine

Peat Depth (m)

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

1:5,000 Scale @ A3

0 0.1 0.2 km

NORTH

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Final SEI layout with Peat Probe Depths
Figure 3c

Corriegarth 2 Wind Farm SEPA Consultation

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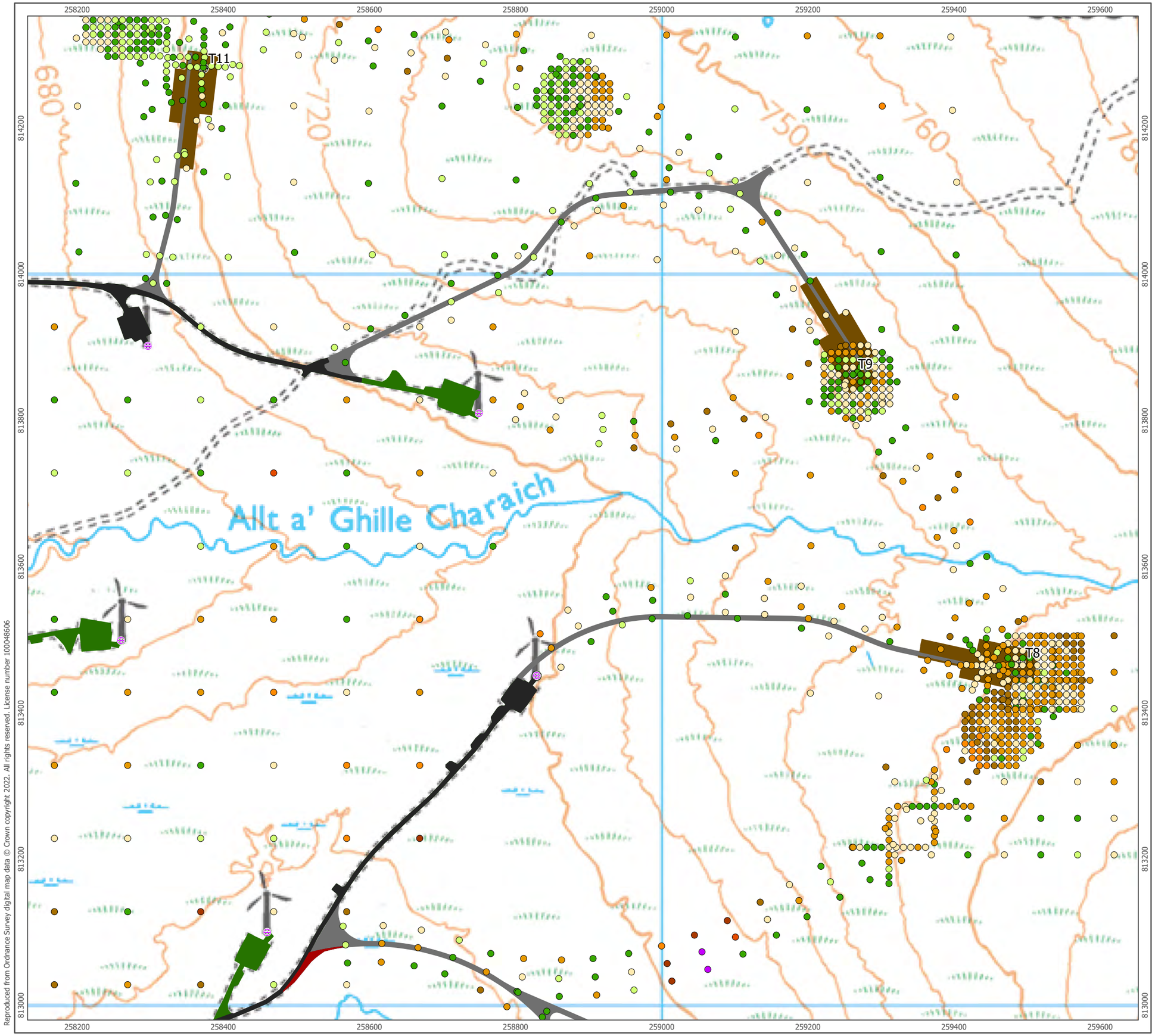

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- Planning Boundary

Site Infrastructure

- Crane Hardstanding
- Proposed New Access Tracks
- Existing Tracks to be Utilised
- Track Widening Area
- Existing Wind Farm Tracks
- Proposed Corriegarth 2 Tubrine
- Operational Corriegarth 1 Wind Turbine

Peat Depth (m)

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

1:5,000 Scale @ A3

0 0.1 0.2 km

NORTH

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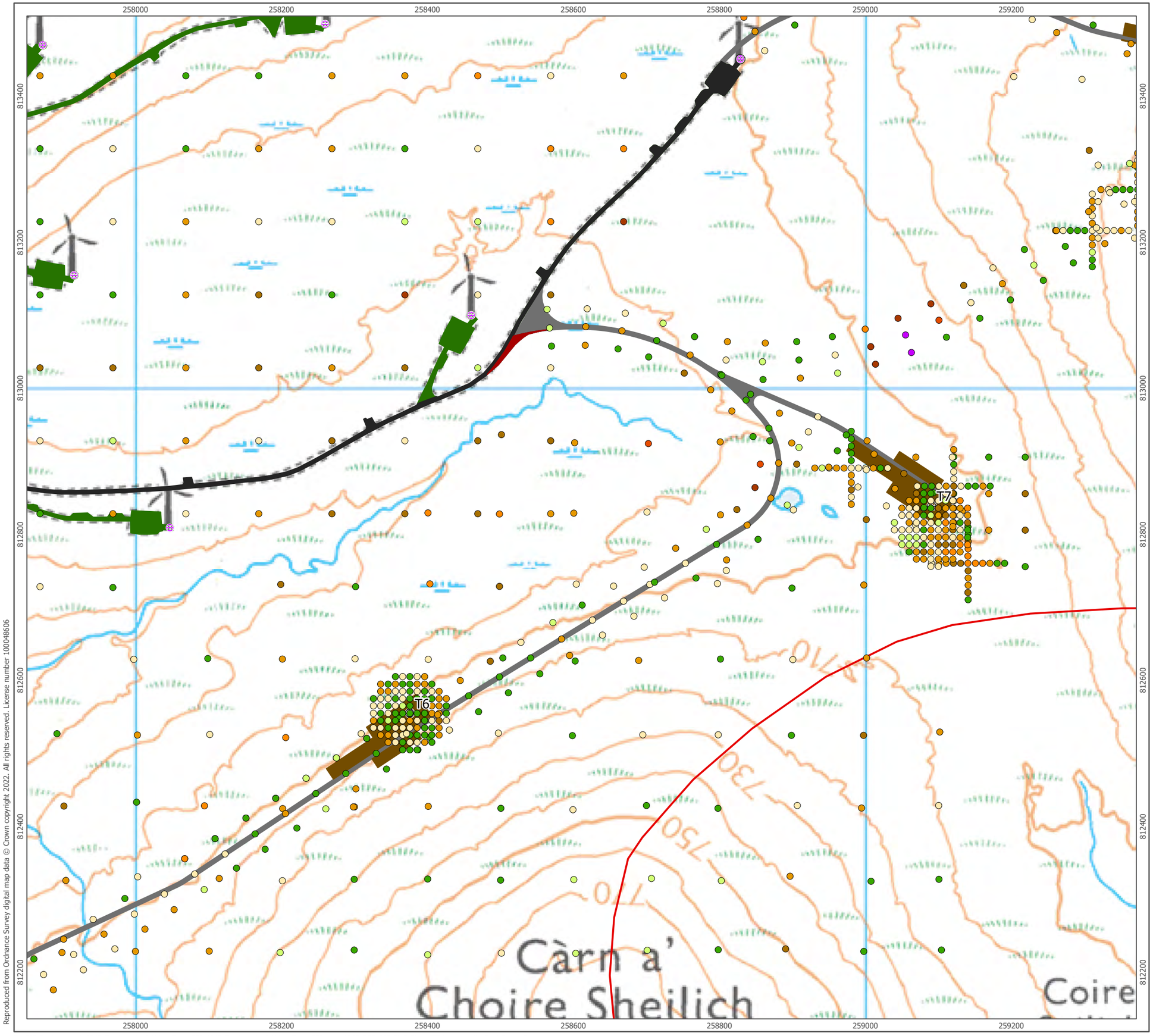
Final SEI layout with Peat Probe Depths
Figure 3d

Corriegarth 2 Wind Farm SEPA Consultation

P:\GIS\Environment\4643 Corriegarth 2 Wind Farm SEI\4643 Corriegarth 2 Wind Farm SEI.aprx\4643-REP-013 Fig3 Final SEI Layout with Peat Probe Depths



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- Planning Boundary

Site Infrastructure

- Crane Hardstanding
- Proposed New Access Tracks
- Existing Tracks to be Utilised
- Track Widening Area
- Existing Wind Farm Tracks
- Proposed Corriegarth 2 Tubrine
- Operational Corriegarth 1 Wind Turbine

Peat Depth (m)

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

1:5,000 Scale @ A3

0 0.1 0.2 km

NORTH

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Final SEI layout with Peat Probe Depths
Figure 3e

Corriegarth 2 Wind Farm SEPA Consultation

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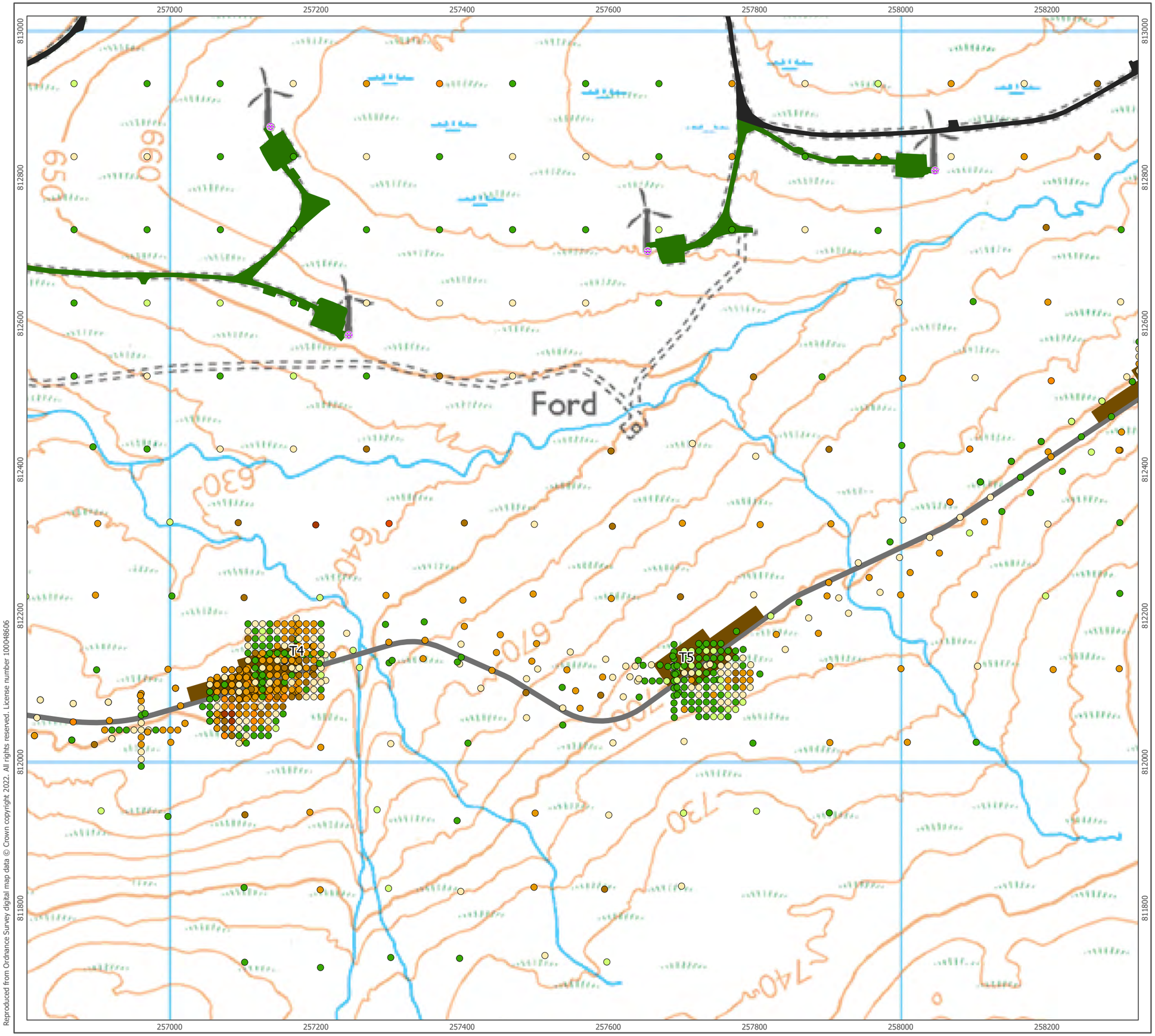

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- Planning Boundary

Site Infrastructure

- Crane Hardstanding
- Proposed New Access Tracks
- Existing Tracks to be Utilised
- Existing Wind Farm Tracks
- Proposed Corriegarth 2 Tubrine
- Operational Corriegarth 1 Wind Turbine

Peat Depth (m)

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

1:5,000 Scale @ A3

0 0.1 0.2 km

NORTH

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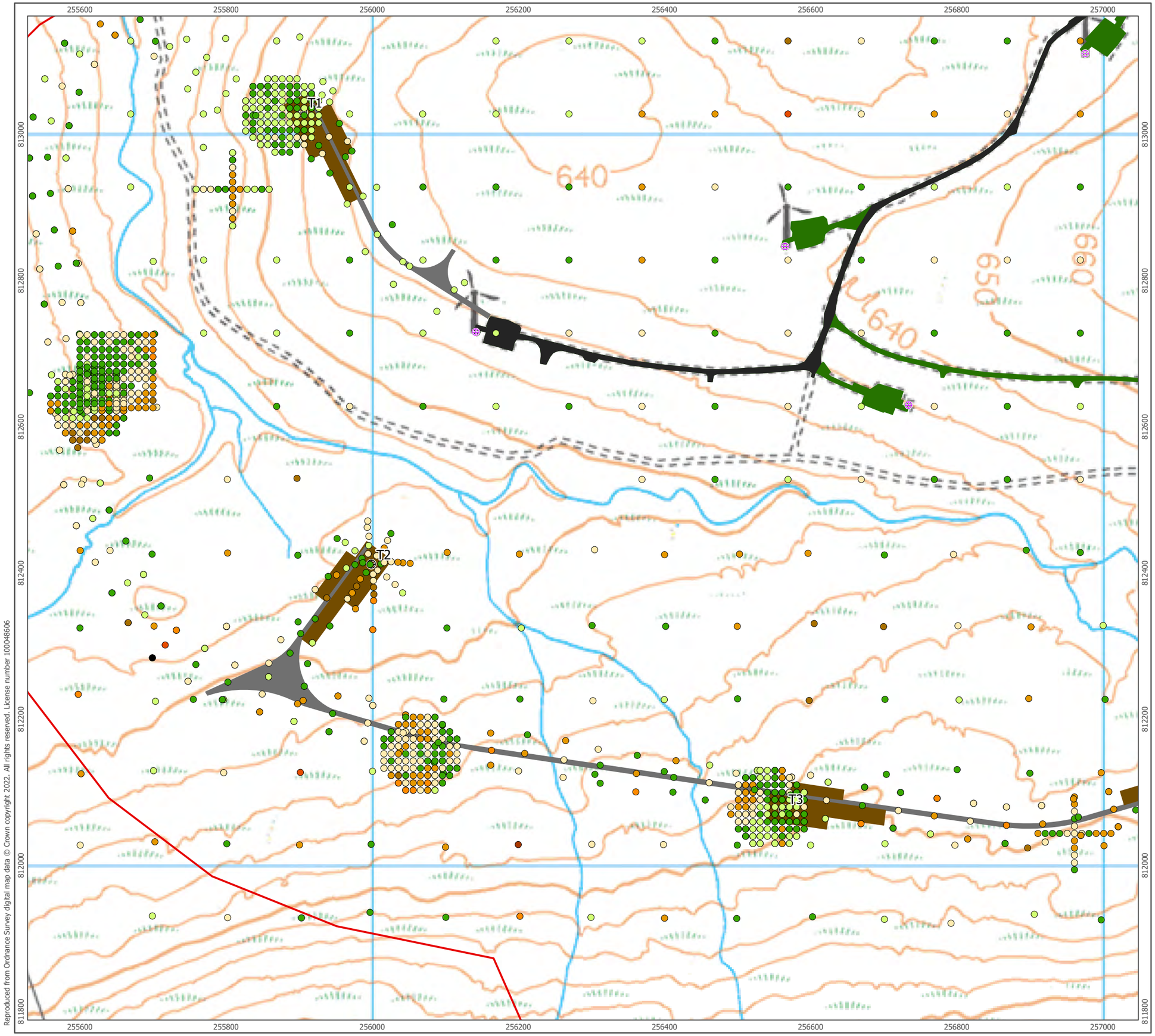
Proposed SEI layout with Peat Probe Depths Figure 3f

Corriegarth 2 Wind Farm SEPA Consultation

P:\GIS\Environment\4643 Corriegarth 2 Wind Farm SEI\4643 Corriegarth 2 Wind Farm SEI.aprx\4643-REP-013 Fig3 Final SEI Layout with Peat Probe Depths



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- Planning Boundary

Site Infrastructure

- Crane Hardstanding
- Proposed New Access Tracks
- Existing Tracks to be Utilised
- Existing Wind Farm Tracks
- Proposed Corriegarth 2 Tubrine
- Operational Corriegarth 1 Wind Turbine

Peat Depth (m)

- 0.00 - 0.50
- 0.51 - 1.00
- 1.01 - 1.50
- 1.51 - 2.00
- 2.01 - 2.50
- 2.51 - 3.00
- 3.01 - 3.50
- 3.51 - 4.00
- 5.01 - 5.50

1:5,000 Scale @ A3

0 0.1 0.2 km

NORTH

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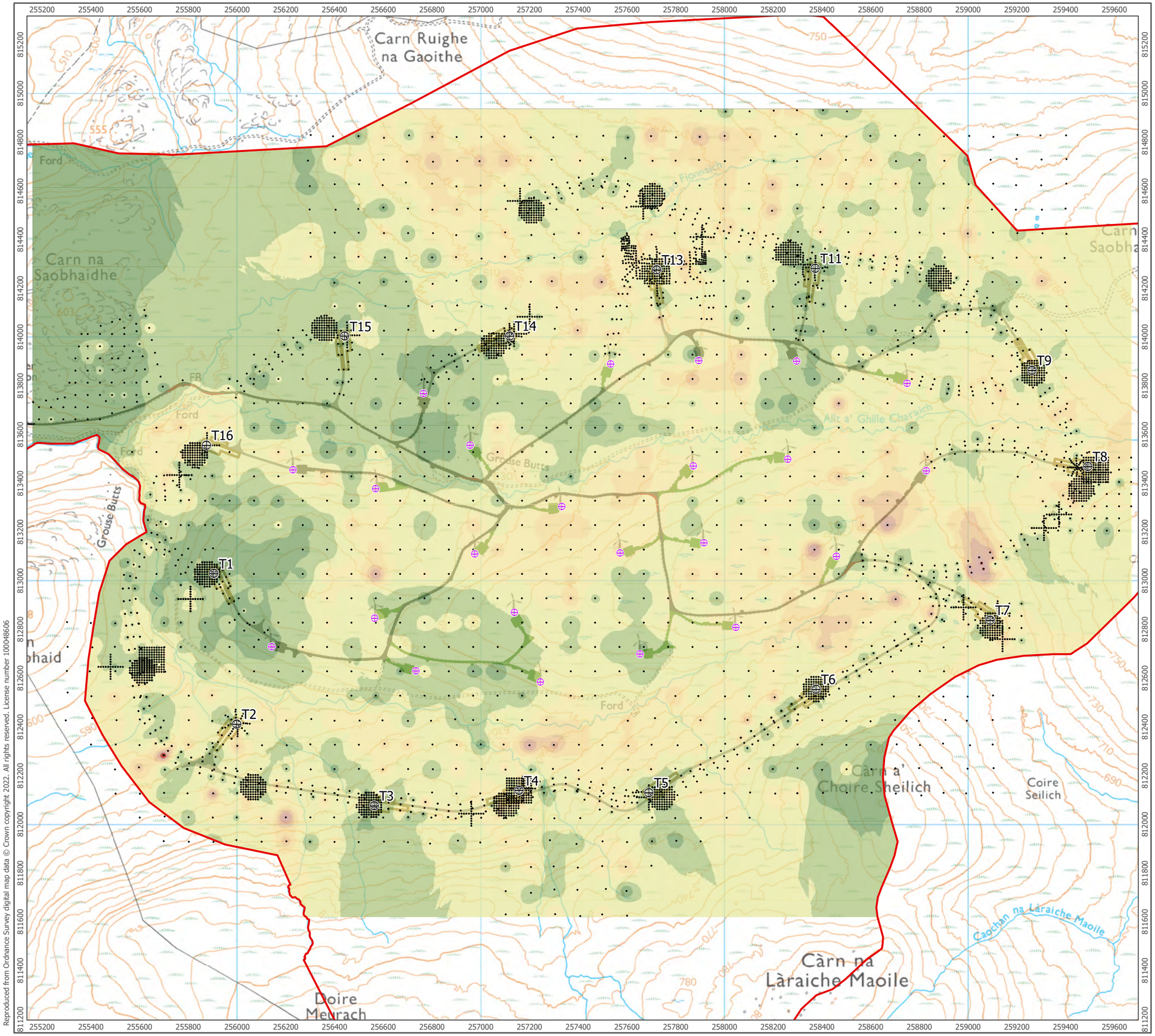
Final SEI layout with Peat Probe Depths
Figure 3g

Corriegarth 2 Wind Farm SEPA Consultation



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- Planning Boundary
- Operational Corriegarth 1 Wind Turbine
- Proposed Corriegarth 2 Tubrine

Site Infrastructure

- Crane Hardstanding
- Proposed New Access Tracks
- Existing Tracks to be Utilised
- Track Widening Area
- Existing Wind Farm Tracks

Peat Depth (m)

VALUE

- 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
- Peat Probe Location

1:15,000 Scale @ A3

0 0.25 0.5 km

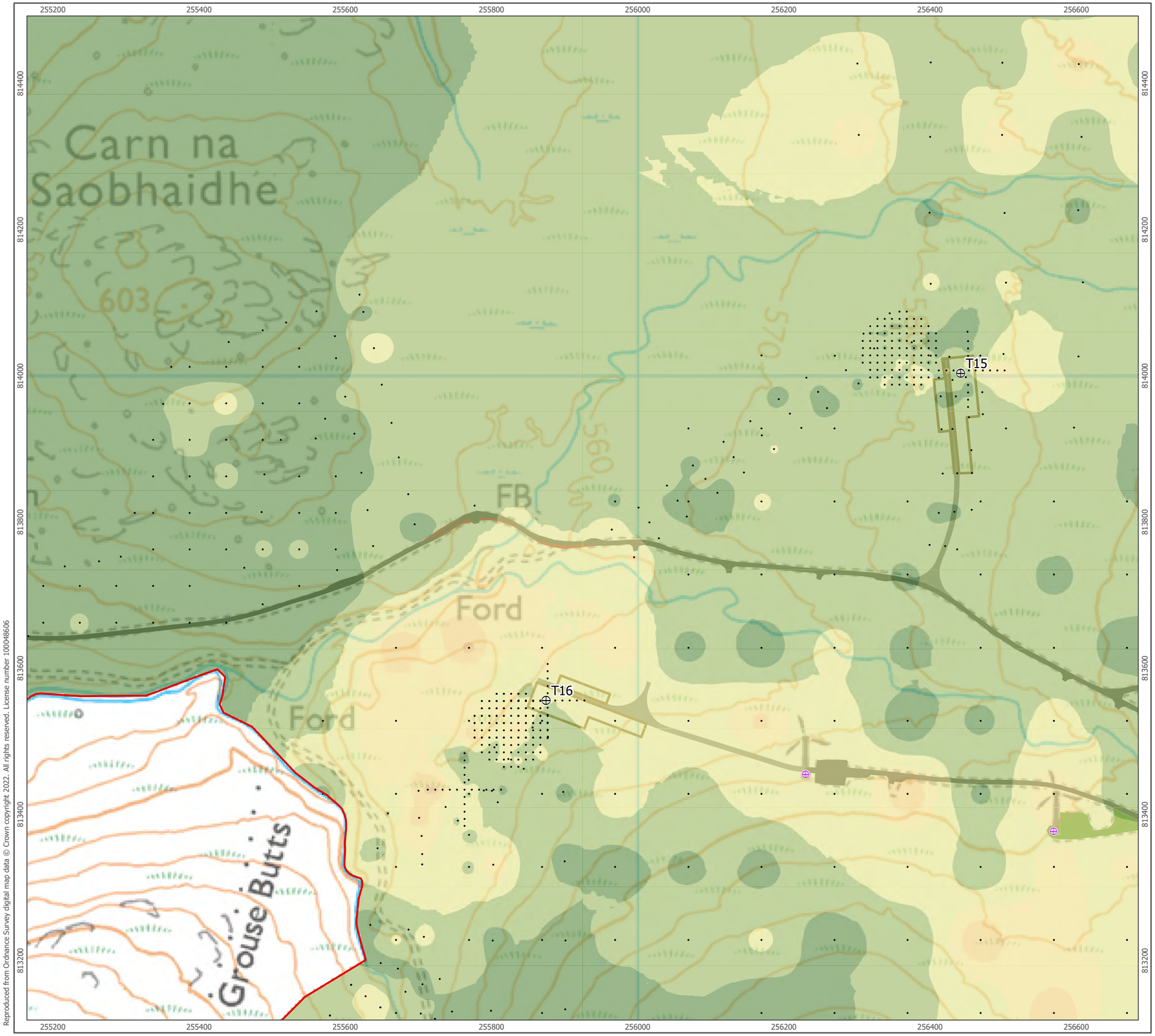
NORTH

Produced By: FC	Ref: 4643-REP-017
Checked By: DB	Date: 08/02/2022

Proposed SEI layout with Peat Depth Interpolation
Figure 4a

Corriegarth 2 Wind Farm SEPA Consultation

P:\GIS\Environment\4643 Corriegarth 2 Wind Farm SEI\4643 Corriegarth 2 Wind Farm SEI.aprx\4643-REP-017 Fig4 Final SEI Layout with Peat Depth Interpolation



BayWa r.e.

ARCUS

- Planning Boundary
- Operational Corriegarth 1 Wind Turbine
- Proposed Corriegarth 2 Tubrine

Site Infrastructure

- Crane Hardstanding
- Proposed New Access Tracks
- Existing Tracks to be Utilised
- Track Widening Area
- Existing Wind Farm Tracks

Peat Depth (m)

VALUE

- 0.00 - 0.50
- 0.51 - 1.00
- 1.01 - 1.50
- 1.51 - 2.00
- 2.01 - 2.50
- 2.51 - 3.00
- Peat Probe Location

1:5,000 Scale @ A3

0 0.1 0.2 km

NORTH

Produced By: FC	Ref: 4643-REP-017
Checked By: DB	Date: 08/02/2022

Final SEI layout with Peat Depth Interpolation
Figure 4b

Corriegarth 2 Wind Farm SEPA Consultation

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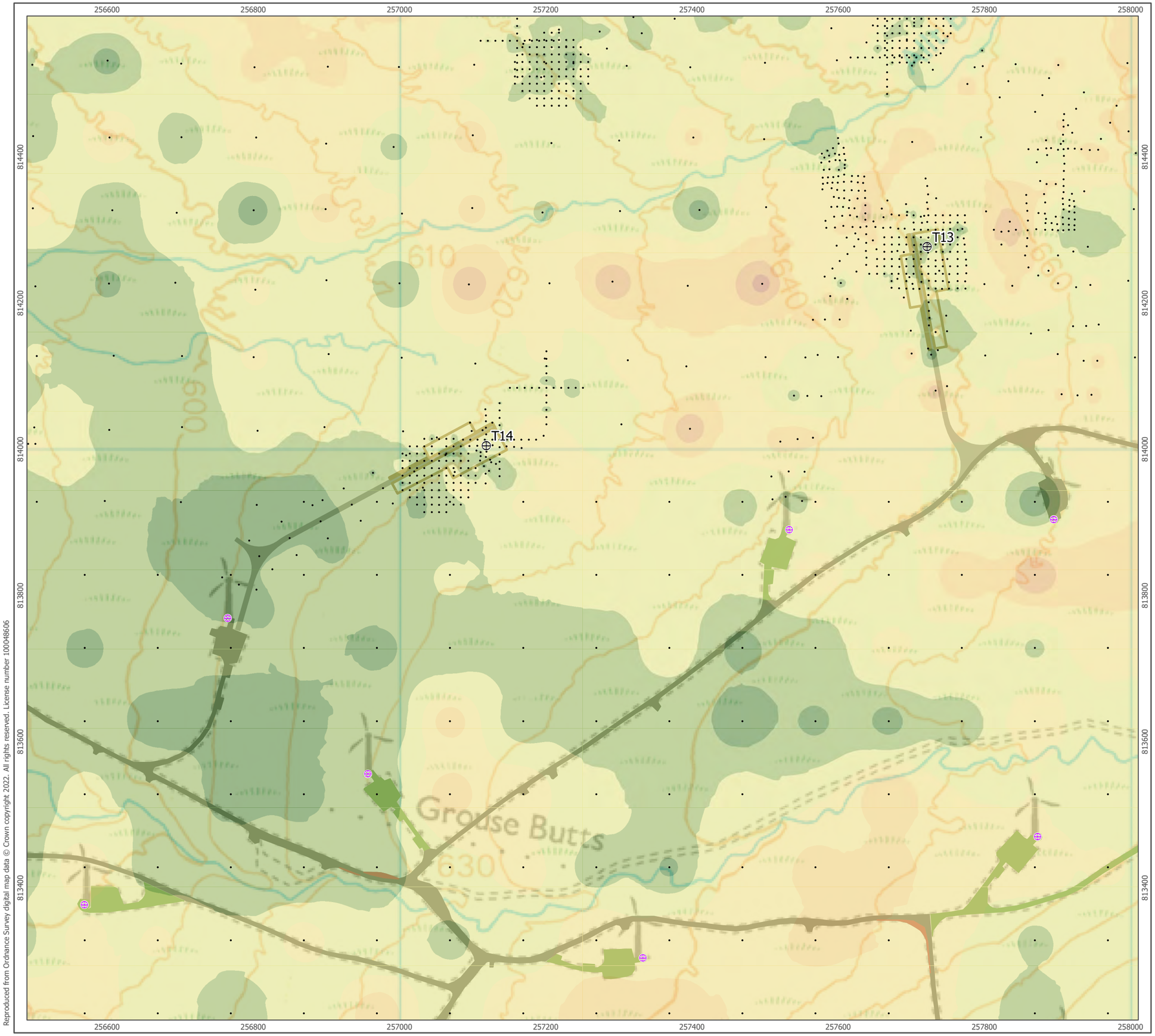


P:\GIS\Environment\4643 Corriegarth 2 Wind Farm SEI\4643 Corriegarth 2 Wind Farm SEI.aprx\4643-REP-017 Fig4 Final SEI Layout with Peat Depth Interpolation

BayWa r.e.

ARCUS

- Planning Boundary
- Operational Corriegarth 1 Wind Turbine
- Proposed Corriegarth 2 Tubrine

Site Infrastructure

- Crane Hardstanding
- Proposed New Access Tracks
- Existing Tracks to be Utilised
- Track Widening Area
- Existing Wind Farm Tracks

Peat Depth (m)

VALUE

- 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
- Peat Probe Location

1:5,000 Scale @ A3

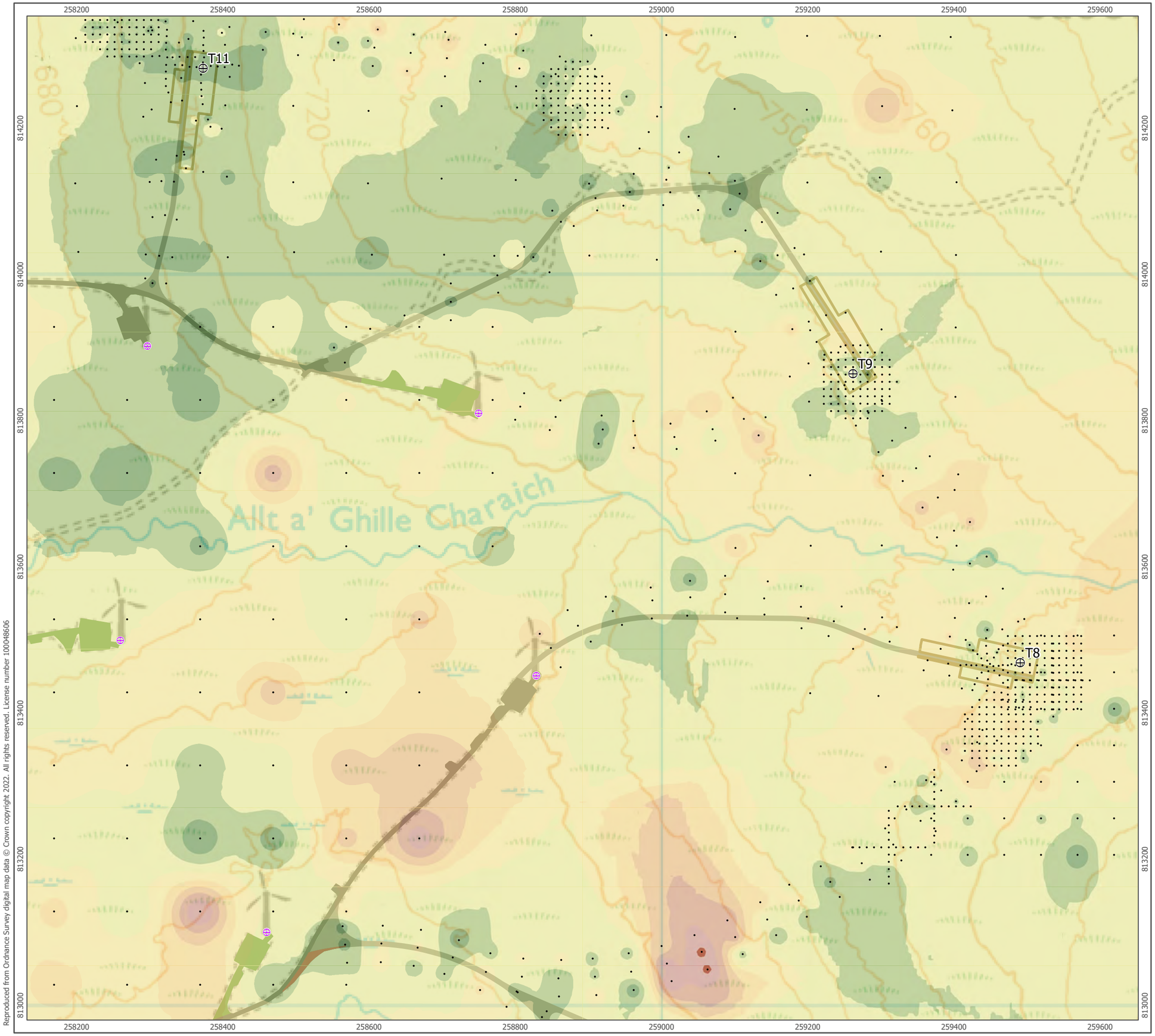
0 0.1 0.2 km

NORTH

Produced By: FC	Ref: 4643-REP-017
Checked By: DB	Date: 08/02/2022

Final SEI layout with Peat Depth Interpolation
Figure 4c

Corriegarth 2 Wind Farm SEPA Consultation



BayWa r.e.

ARCUS

- Planning Boundary
- Operational Corriegarth 1 Wind Turbine
- Proposed Corriegarth 2 Tubrine

Site Infrastructure

- Crane Hardstanding
- Proposed New Access Tracks
- Existing Tracks to be Utilised
- Track Widening Area
- Existing Wind Farm Tracks

Peat Depth (m)

VALUE

- 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
- Peat Probe Location

1:5,000 Scale @ A3

0 0.1 0.2 km

NORTH

Produced By: FC	Ref: 4643-REP-017
Checked By: DB	Date: 08/02/2022

Final SEI layout with Peat Depth Interpolation
Figure 4d

Corriegarth 2 Wind Farm SEPA Consultation

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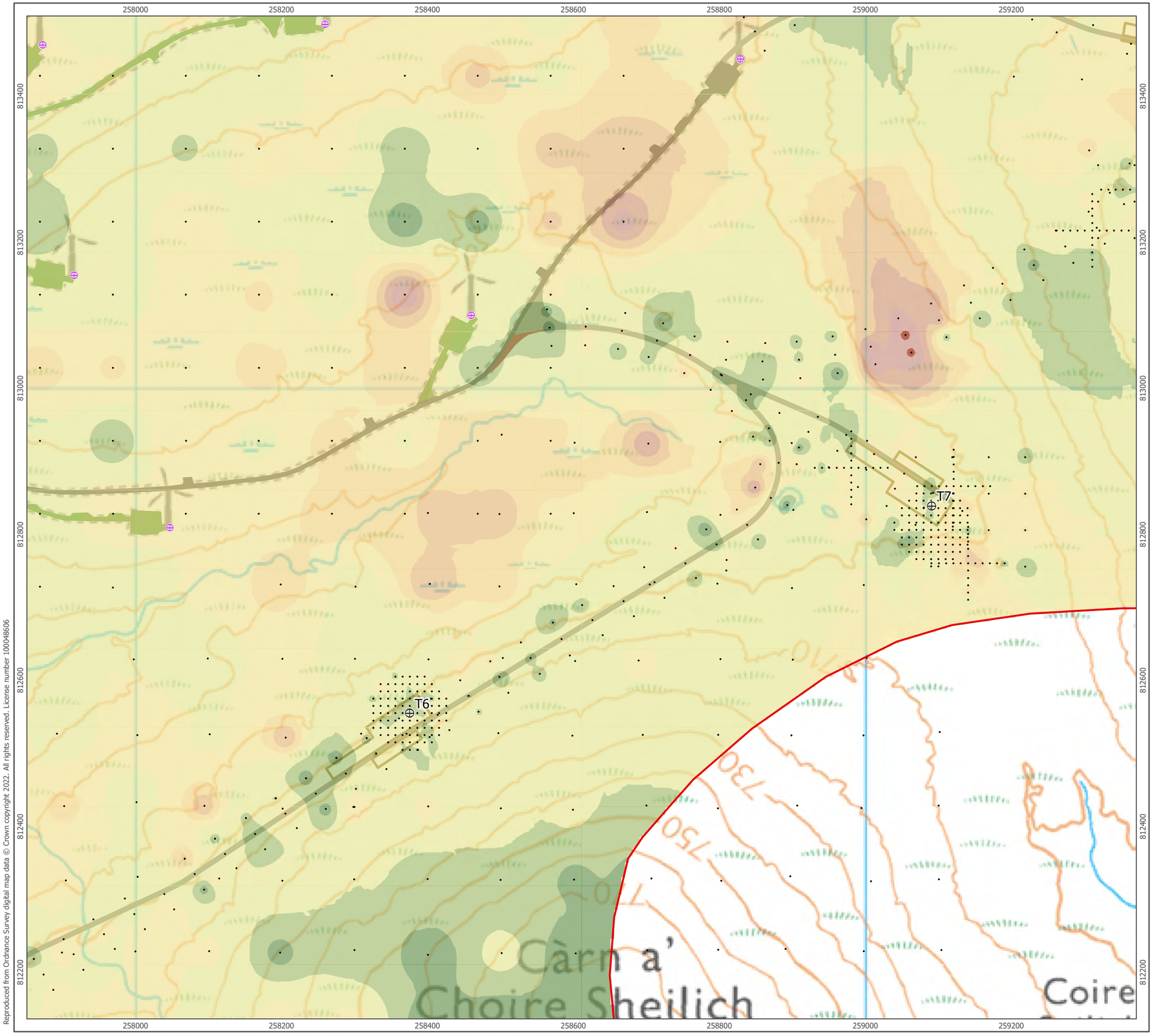


P:\GIS\Environment\4643 Corriegarth 2 Wind Farm SEI\4643 Corriegarth 2 Wind Farm SEI.aprx\4643-REP-017 Fig4 Final SEI Layout with Peat Depth Interpolation

BayWa r.e.

ARCUS

- Planning Boundary
- Operational Corriegarth 1 Wind Turbine
- Proposed Corriegarth 2 Tubrine

Site Infrastructure

- Crane Hardstanding
- Proposed New Access Tracks
- Existing Tracks to be Utilised
- Track Widening Area
- Existing Wind Farm Tracks

Peat Depth (m)

VALUE

- 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
- Peat Probe Location

1:5,000 Scale @ A3

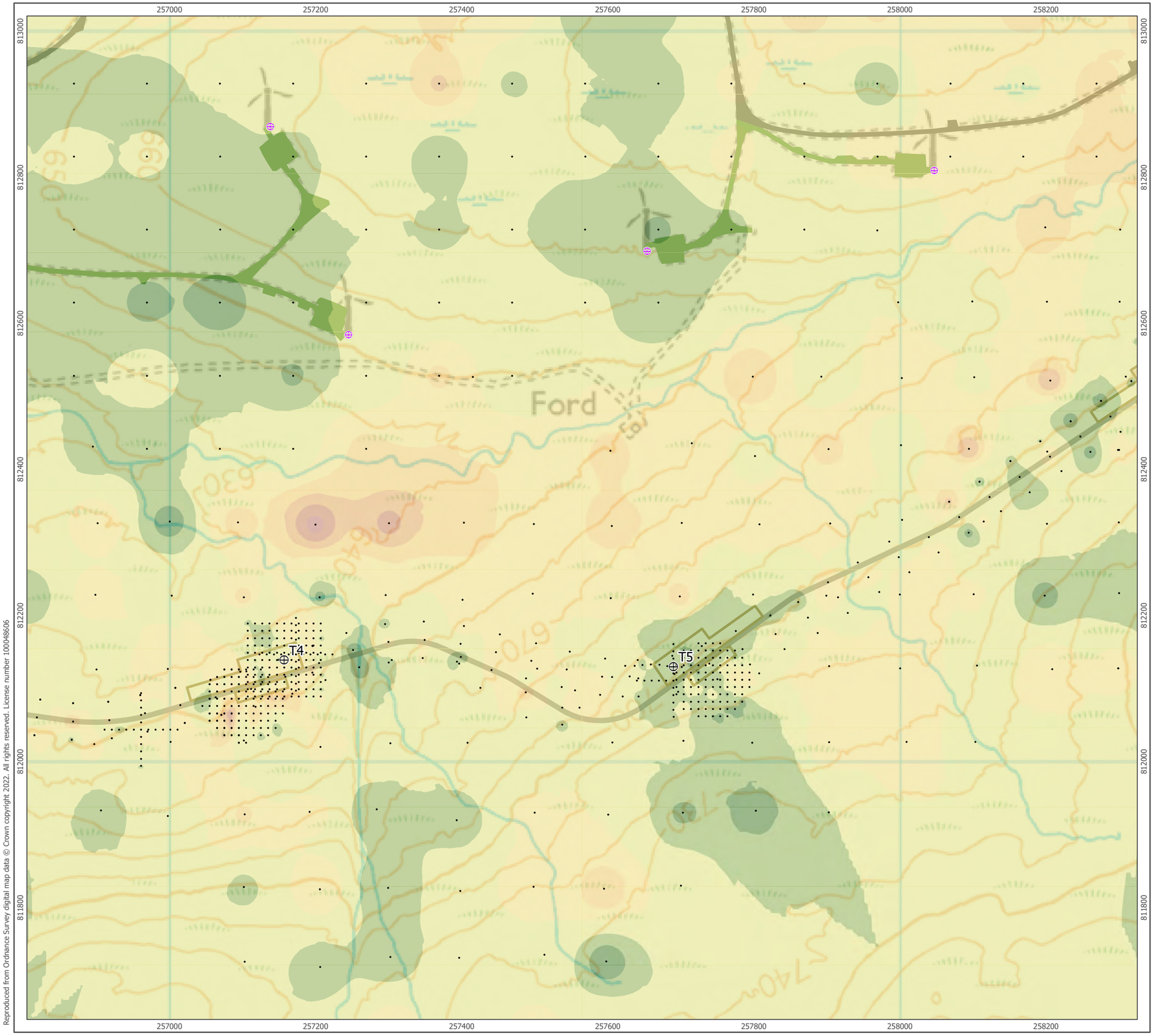
0 0.1 0.2 km

NORTH

Produced By: FC	Ref: 4643-REP-017
Checked By: DB	Date: 08/02/2022

Final SEI layout with Peat Depth Interpolation
Figure 4e

Corriegarth 2 Wind Farm SEPA Consultation



BayWa r.e.

ARCUS

- Planning Boundary
- Operational Corriegarth 1 Wind Turbine
- Proposed Corriegarth 2 Tubrine

Site Infrastructure

- Crane Hardstanding
- Proposed New Access Tracks
- Existing Tracks to be Utilised
- Existing Wind Farm Tracks

Peat Depth (m)

VALUE

- 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
- Peat Probe Location

1:5,000 Scale @ A3

0 0.1 0.2 km

NORTH

Produced By: FC	Ref: 4643-REP-017
Checked By: DB	Date: 08/02/2022

Final SEI layout with Peat Depth Interpolation

Figure 4f

Corriegarth 2 Wind Farm SEPA Consultation

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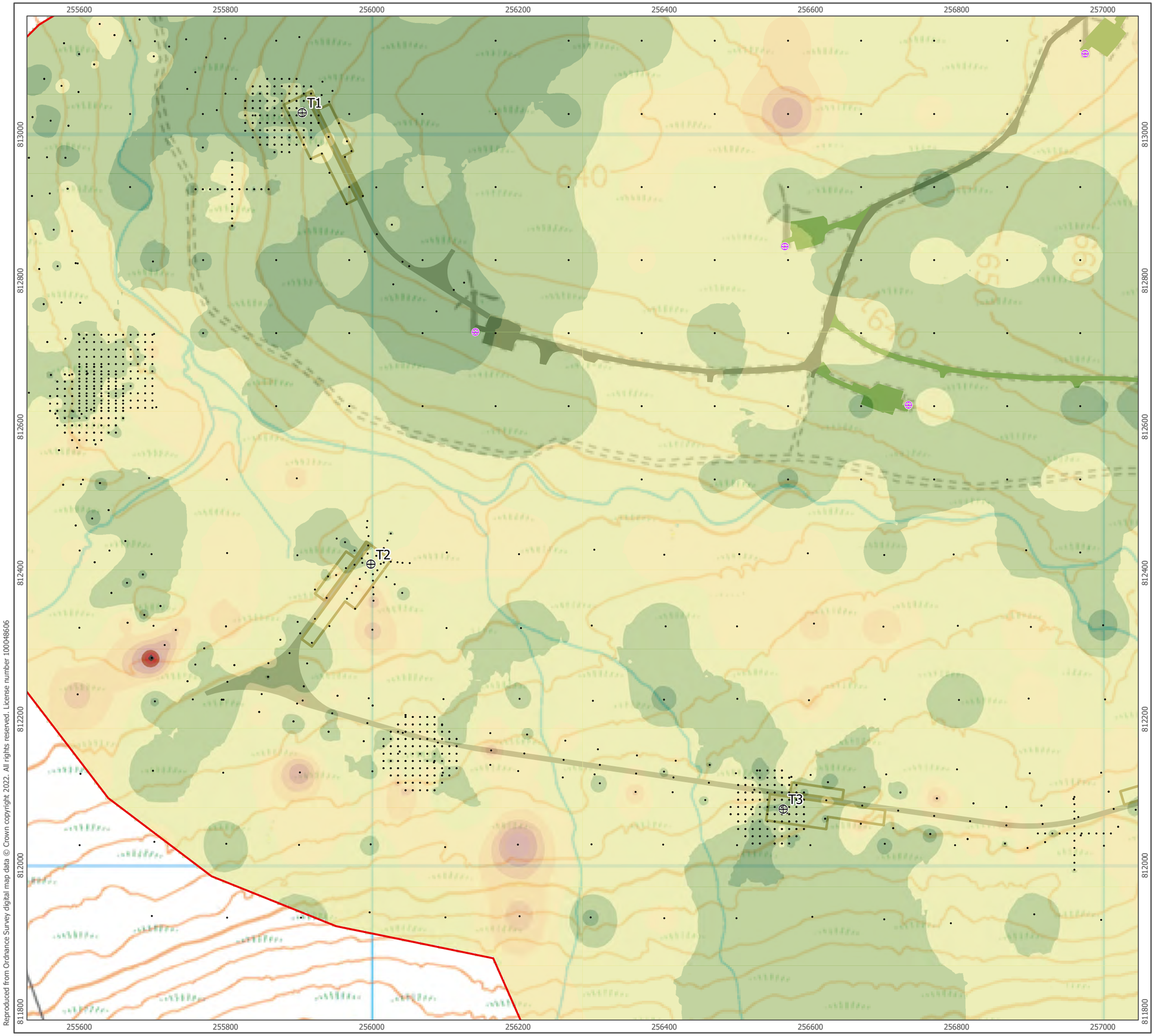


BayWa r.e.

ARCUS

- Planning Boundary
- Operational Corriegarth 1 Wind Turbine
- Proposed Corriegarth 2 Tubrine

Site Infrastructure

- Crane Hardstanding
- Proposed New Access Tracks
- Existing Tracks to be Utilised
- Existing Wind Farm Tracks

Peat Depth (m)

VALUE

- 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
- Peat Probe Location

1:5,000 Scale @ A3

0 0.1 0.2 km

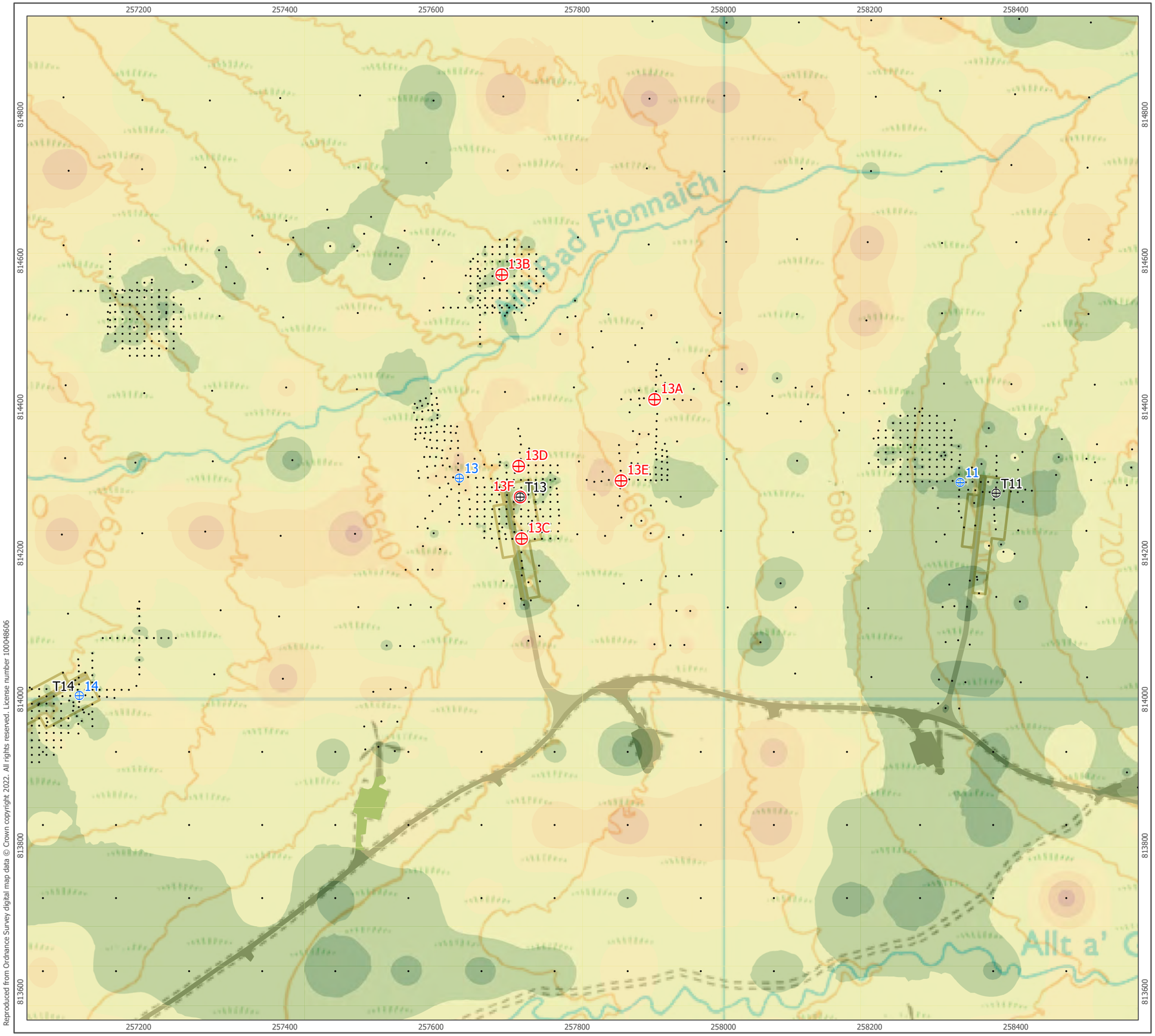
NORTH

Produced By: FC	Ref: 4643-REP-017
Checked By: DB	Date: 08/02/2022

Final SEI layout with Peat Depth Interpolation
Figure 4g

Corriegarth 2 Wind Farm SEPA Consultation

P:\GIS\Environment\4643 Corriegarth 2 Wind Farm SEI\4643 Corriegarth 2 Wind Farm SEI.aprx\4643-REP-017 Fig4 Final SEI Layout with Peat Depth Interpolation



P:\GIS\Environment\4643 Corriegarth 2 Wind Farm SEI\4643 Corriegarth 2 Wind Farm SEI.aprx\4643-REP-016 Fig5 Turbine 13 Alternatives with Peat Depth Interpolation

BayWa r.e.

ARCUS

Site Infrastructure

- Crane Hardstanding
- Proposed New Access Tracks
- Existing Tracks to be Utilised
- Existing Wind Farm Tracks

Peat Depth (m)

VALUE

- 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
- Peat Probe Location
- T13 Alternative Locations
- Proposed Corriegarth 2 Tubrine
- Previous Corriegarth 2 Turbine Location

1:5,000 Scale @ A3

0 50 100 Meters

NORTH

Produced By: FC	Ref: 4643-REP-016
Checked By: DB	Date: 08/02/2022

Turbine 13 Alternatives with Peat Data

Figure 5

Corriegarth 2 Wind Farm SEPA Consultation

CORRIEGARTH 2 WIND FARM

SEI Report – Volume 3 – Technical Appendices

TA A11.1 Construction Development Programme

CORRIEGARTH 2 WIND FARM

SEI APPENDIX A11.2

PROGRAMME OF VEHICLE MOVEMENTS

APRIL 2022

SEI Technical Appendix A11.1: - Construction Development Programme																			
Activity	Month																		Total**
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
	HGV Excluding Concrete																		
Site Mobilisation	60																		60
Access Track / Hardstanding Construction		634	621	611	611	611	611	611											4,310
Control Building / Substation			12	12	12	12	12	12	12	10									94
Cabling and Electrical Works										9	9	9							27
Crane Delivery										27							27		54
Steet Import etc. for Turbine Foundations					48	48	48	48											192
Agrregate Import for Concrete						318	318	317	317	317	317								1,904
Turbine Delivery / Erection										80	80	80	80	80	80	78	78		636
Fuel Delivery	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	36
Demobilisation																		60	60
Sub-Total	62	636	635	625	673	991	991	990	331	445	408	91	82	82	82	80	107	62	7,373
	Concrete Delivery																		
Concrete Delivery for Turbine Foundations						0	0	0	0	0	0								
Subtotal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Staff Cars and Vans																		
Site Mobilisation/Demobilisation	16																	16	32
Substation Escort			8																8
Crane Delivery Escort										4							4		8
Turbine Escort Vehicles										77	77	77	77	77	77	77	77		616
Staff	1,326	1,326	1,326	1,326	1,326	1,326	1,326	1,326	1,326	1,326	1,326	1,326	1,326	1,326	1,326	1,326	1,326	1,326	23,868
Sub-Total	1,342	1,326	1,334	1,326	1,326	1,326	1,326	1,326	1,326	1,407	1,403	1,403	1,403	1,403	1,403	1,403	1,407	1,342	24,532
Total (All Vehiclles)	1,404	1,962	1,969	1,951	1,999	2,317	2,317	2,316	1,657	1,852	1,811	1,494	1,485	1,485	1,485	1,483	1,514	1,404	31,905
Average Total Traffic per Day (26-day working Month)	54	75	76	75	77	89	89	89	64	71	70	57	57	57	57	57	58	54	
Average HGV Traffic per Day (26-day working Month)	2	24	24	24	26	38	38	38	13	17	16	4	3	3	3	3	4	2	

CORRIEGARTH 2 WIND FARM

SEI Report – Volume 3 – Technical Appendices

TA A12.1 Outline Water Construction Environmental Management Plan

ARCUS

CORRIEGARTH 2 WIND FARM

VOLUME 3: SEI REPORT TECHNICAL APPENDICES

SEI TECHNICAL APPENDIX A12.1:
WATER CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

APRIL 2022

Prepared By:

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TABLE OF CONTENTS

1 INTRODUCTION

This outline Water and Construction Environmental Management Plan (WCEMP) forms an appendix to the Supplementary Environmental Information Report (SEI Report) Chapter 12: Hydrology and Hydrogeology (SEI Report Chapter) for revised Corriegarth 2 Wind Farm (the Revised Development).

1.1 Guidance and Legislation

The following legislation and guidance documents have been used to inform the overall WCEMP:

- The Water Environment (Controlled Activities) (Scotland) Amendment Regulations 2021 (CAR)[1];
- The Water Quality (Scotland) Regulations 2010[2];
- Good practice during wind farm construction[3];
- Groundwater Protection Policy for Scotland Version 3 (2009)[4];
- SEPA Planning guidance on on-shore windfarm developments (LUPS-GU4)[5];
- The Construction Industry Research and Information Association (CIRIA) (2015), Environmental Good Practice on Site (C741)[6];
- Guidance for Pollution Prevention (GPP1: Understanding your environmental responsibilities[7]; and
- Planning Advice Note (PAN) 61 – Planning and Sustainable Urban Drainage Systems[8].

Relevant guidance and best practice document are subsequently provided in the relevant sections of this report.

2 REVISED DEVELOPMENT REQUIREMENTS

The WCEMP takes into account specific activities during the construction and operational phases of the Revised Development, including:

- Access roads;
- Borrow pit workings;
- Turbine foundations; and
- Hardstanding areas and buildings (including crane hardstanding, construction compounds and associated infrastructure).

[1] UK Government (2021) The Water Environment (Controlled Activities) (Scotland) Amendment Regulations 2021 [Online] Available at: https://www.legislation.gov.uk/ssi/2021/412/body/made (Accessed 10/03/2022)
[2] The Scottish Government (2010) *The Water Quality (Scotland) Regulations 2010* [Online] Available at: http://www.legislation.gov.uk/ssi/2010/95/contents/made (Accessed: 10/03/2022)
[3] Scottish Renewables, Scottish Natural Heritage, SEPA, Forestry Commission Scotland, Historic Environment Scotland, Marine Science Scotland (2019) *Good Practice during Wind Farm Construction 4th Edition* [Online] Available at: https://www.nature.scot/guidance-good-practice-during-wind-farm-construction (Accessed: 10/03/2022)
[4] SEPA (2009) *Groundwater protection policy for Scotland Version 3* [Online] Available at: https://www.sepa.org.uk/media/60033/policy-19_groundwaternov09.pdf (Accessed: 10/03/2022)
[5] SEPA (2017) *Land Use Planning System SEPA Guidance Note 4: Planning guidance on on-shore windfarm developments* [Online] Available at: https://www.sepa.org.uk/media/136117/planning-guidance-on-on-shore-windfarms-developments.pdf (Accessed: 10/03/2022)
[6] CIRIA (2015) *Environmental good practice on site guide* (fourth edition) (C741)
[7] NetRegs (n.d.) PPG1: Understanding your environmental responsibilities – good environmental practices [Online] Available at: https://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgs-and-replacement-series/guidance-for-pollution-prevention-gpps-full-list/ (Accessed: 10/03/2022)
[8] Scottish Government (2001) Planning Advice Note 61: Planning and Sustainable Urban Drainage Systems [Online] Available at: https://www2.gov.scot/Publications/2001/07/pan61 (Accessed: 10/03/2022)

2.1 Potential Sources of Pollution

The identified potential sources of pollution as a result of the construction, operational and decommissioning phases of the Revised Development, based on the findings of the EIA Report Chapter, are as follows:

- Direct disturbance of banks and bed of river and lochs;
- De-watering of excavations;
- Run-off from exposed ground and material stockpiles;
- Run-off from roads and haul routes and river crossings;
- Plant washings/ washing areas;
- Fuel and chemical storage/ refuelling areas; and
- Leaking/ vandalised equipment.

2.2 Schedule of Mitigation

Mitigation measures are incorporated into the EIA Report assessment of significance of effects for hydrology and hydrogeology. A summary of the mitigation measures proposed within the EIA Report Chapter, are outlined in Table 2.1. The mitigation measures proposed previously for and within the EIA Report remain valid for the SEI also.

Table 2.1: Schedule of Mitigation

Section of EIA Report	Receptor	Potential Effect	Mitigation specified
Construction Phase			
Section 12.6.1.1	Surface hydrology (watercourses) Hydrogeology (groundwater and near-surface water)	Chemical pollution as a result of chemical handling and storage and onsite vehicle fuelling and maintenance. Pollution from concrete use and washout.	Refer to Section 3.3. Chemical pollution prevention and appropriate measures for chemical storage outlined in Section 3.3.1. Details of mitigation of spillage incidents and best practice in the event of a spill outlined in Section 3.3.2. Mitigation relating to concrete use on site is provided in Section 3.3.3, and washing of vehicles on site, including concrete washout areas, detailed in Section 3.3.4. Concrete use in watercourse crossing design and construction is outlined in Section 3.4.2. It is suggested a surface water quality monitoring programme is conducted as good practice, in accordance with Section 3.7.
Section 12.6.1.2	Surface hydrology (watercourses) Hydrogeology (groundwater and near-surface water)	Erosion and Sedimentation as a result of excavation works and track construction and upgrades.	Refer to Section 3.2. Any works to be conducted within or near watercourse refer to Section 3.4. including appropriate measures for construction of watercourse crossings and culverts to prevent erosion of stream beds.

Section of EIA Report	Receptor	Potential Effect	Mitigation specified
Section 12.6.1.3	Surface hydrology (watercourses)	Impediments to surface water flows as a result of installation of watercourse crossings.	Watercourse crossing construction and culverting best practice guidance outlined in Section 3.4.2 and 3.4.3. Any works to be conducted within or near watercourse refer to Section 3.4. It is suggested a surface water quality monitoring programme is conducted as good practice, in accordance with Section 3.7.
	Hydrogeology (groundwater and near-surface water)	Diversion of near-surface flow as a result of track construction and the installation of turbine foundations / hardstanding.	Details of appropriate site drainage to maintain continuity of surface and near-surface flows is detailed in Section 3.1. Any dewatering works required for installation of turbine foundations will be conducted in line with guidance in Section 3.4.4. Details relating to protection of GWDTE in Section 3.5.
Section 12.6.1.4	Surface hydrology (watercourses)	Increase in volume of run-off and potential flood risk as a result of increased hardstanding.	Site drainage measures and Sustainable Drainage Systems (SuDS) to prevent an increase in flood risk and to maintain natural site drainage as much as possible, are detailed in Section 3.1.
Section 12.6.1.5	Groundwater Dependent Terrestrial Ecosystems (GWDTE)	Pollution as a result of track construction and uncontained spills from chemical handling / storage. Drying out or changes to groundwater interflow patterns as a result of construction.	Specific measures relating to the protection of GWDTE are provided in Section 3.5. Measures relating to chemical pollution, sedimentation and site drainage should all be considered as part of GWDTE protection.
Section 12.6.1.6	Private water supplies (PWS)	Pollution as a result of track upgrades and uncontained spills from vehicles, and chemical handing/ storage. Drying out or changes to quantity as a result of upgrades to access track.	Specific measures relating to the protection of water supplies and groundwater abstractions are provided in Section 3.6. Monitoring of PWS water quality, if required, would be incorporated into a water quality monitoring programme as outlined in Section 3.7. Measures relating to chemical pollution, sedimentation and site drainage should all be considered as part of PWS protection.

2.3 Regulation and Authorisation

All construction and engineering activities within or hydrologically connected to the water environment require authorisation under Controlled Activities Regulations (CAR). There are three levels of authorisation and the level required is site-specific and based on the level of risk of the activity to the water environment. The levels of authorisation are:

1. General Binding Rules (GBR): low risk activities. All development activities must comply with these rules. No application to SEPA is required.
2. Registration: medium risk activities. Application to SEPA is required to register an activity.
3. Licence: high risk activity. Simple or complex licences exist depending on the activity. Application to SEPA is required to obtain a licence for the activity.

Further guidance on the requirement for authorisation are outlined in the following documents:

- CAR – A Practical Guide (Controlled Activities Regulations)[9];
- Introduction to Controlled Activities Regulation[10]; and
- SEPA LUPS-GU-15: Planning guidance in relation to SEPA regulated sites and processes[11].

The requirements for authorisation of specific activities are outlined in the relevant sections of this document.

2.4 Environmental Clerk of Works (ECoW)

An Environmental (or Ecological) Clerk of Works (ECoW) will be appointed for the construction period (commencement of development to final commissioning or end of construction period). The ECoW will hold an advisory role. In relation to the water environment, the scope of the ECoW role will include:

- Monitoring compliance with the mitigation outlined in the EIA Report, CEMP and other relevant documentation relating to the planning condition and site licence, such as the Pollution Prevention Plan (PPP);
- Routine monitoring of water pollution prevention measures, such as silt management measures, and inspection following storm events; and
- Routine visual inspection and observation of watercourses for the presence of silt, discolouration and hydrocarbons.

[9] SEPA (2019) *The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) A Practical Guide* [Online] Available at: https://www.sepa.org.uk/media/34761/car_a_practical_guide.pdf (Accessed: 10/03/2022)

[10] SEPA (n.d.) *Introduction to the Controlled Activates Regulations* [Online] Available at: https://www.sepa.org.uk/media/34800/introduction-to-the-controlled-activities-regulations.pdf (Accessed: 10/03/2022)

[11] SEPA (2013) *Land Use Planning System SEPA Guidance Note 15: Planning Guidance in Relation to SEPA Regulated Sites and Processes (LUPS-GU15)* [Online] Available at: https://www.sepa.org.uk/media/136091/planning-guidance-in-relation-to-sepa-regulated-sites-and-processes.pdf (Accessed: 10/03/2022)

3 OUTLINE MITIGATION FOR THE WATER ENVIRONMENT

3.1 Site Drainage

Drainage from the site will include elements of Sustainable Drainage Systems (SuDS) design, where appropriate. SuDS is a method of controlling surface water run-off in a manner that replicates natural drainage patterns and has a number of benefits, including:

- SuDS will attenuate run-off, thus reducing peak flow and any flooding issues that might arise downstream;
- SuDS will treat run-off to a certain degree, which can reduce sediment and pollutant volumes in run-off before discharging back into natural drainage network; and
- SuDS measures, such as lagoons or retention ponds, correctly implemented will produce suitable environments for wildlife.

The following best practice guidance should be used:

- CIRIA C648 – Control of water pollution from linear construction projects[12];
- CIRIA C352 – Control of water pollution from construction sites[13];
- CIRIA SuDS Manual (C753)[14];
- CIRIA Guidance on the construction of SuDS (C768)[15];
- SEPA WAT-RM-08 Regulatory Method: SuDS[16];
- SEPA WAT-SG-75 Sector-specific Guidance – Construction Sites[17];
- Water Assessment and Drainage Guide (WADAG)[18];
- GPP5: Works and maintenance in or near water[19]; and
- GPP4: Treatment and disposal of wastewater where there is no connection to the public fowl sewer[20].

3.1.1 Authorisation

SuDS are a legal requirement for all developments draining to the water environment (other than a single dwelling or discharges to coastal water). All developments must comply with all conditions of the CAR Regulations General Binding Rules (GBR) including the requirement for SuDS.

Developments require authorisation for surface water run-off discharges under CAR regulations by a SEPA licence (Construction SuDS licence) for construction sites which:

- Exceed 4 ha area;
- Contain a road or track length in excess of 5 km; and/ or

[12] CIRIA (2006) *C648: Control of water pollution from linear construction projects: Technical Guidance* [Online] Available at: https://www.ciria.org/Search?SearchTerms=c648 (Accessed: 10/03/2022)

[13] CIRIA (2001) *C532: Control of water pollution from construction sites: Guidance for consultants and contractors* [Online] Available at: https://www.ciria.org/ProductExcerpts/C532.aspx (Accessed: 10/03/2022)

[14] CIRIA (2015) *C753: The SuDS Manual*

[15] CIRIA (2017) *C768: Guidance on the construction of SuDS*

[16] SEPA (2019) *WAT-RM-08: Regulatory Method Sustainable Drainage Systems (SUDS or SUD Systems*) *v6.4* [Online] Available at: https://www.sepa.org.uk/regulations/water/pollution-control/pollution-control-guidance/ (Accessed: 10/03/2022)

[17] SEPA (2018) *WAT-SG-75 Supporting Guidance Sector Specific Guidance: Construction Sites* [Online] Available at: https://www.sepa.org.uk/media/340359/wat-sg-75.pdf (Accessed: 10/03/2022)

[18] SUDSWP (n.d.) *Water Assessment and Drainage Assessment Guide* [Online] Available at: https://www.sepa.org.uk/media/163472/water_assessment_and_drainage_assessment_guide.pdf (Accessed: 10/06/2020)

[19] NetRegs (2018) *GPP5: Works and maintenance in or near water* [Online] Available at: https://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgs-and-replacement-series/guidance-for-pollution-prevention-gpps-full-list/ (Accessed: 10/03/2022)

[20] NetRegs (2017) *GPP4: Treatment and disposal of wastewater where there is no connection to the public fowl sewer* [Online] Available at: https://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgs-and-replacement-series/guidance-for-pollution-prevention-gpps-full-list/ (Accessed: 10/03/2022)

- Include any area with a slope gradient of more than 250 m over 1 ha or 500 m length.

If the development is below the threshold criteria, a licence is not required and the development can be authorised under GBR10 and no direct consultation with SEPA is required.

SEPA WAT-RM-08 Regulatory Method: SuDS provides further details on the licence requirements.

3.1.2 Pre-Earthworks Drainage

Pre-earthworks drainage relates to the required drainage measures to be installed prior to earthwork activities such as access track construction and borrow pit workings.

Best practice pre-earthworks drainage measures include:

- Cut-off/ diversion ditches;
- Temporary interception bunds;
- Swales; and
- Retention ponds.

Purpose/ Aim

The aim of pre-earthworks drainage is to:

- Divert 'clean' surface water run-off and stormwater away from exposed soils of earthworks preventing further erosion; and
- Prevent 'clean' water from mixing with potentially silt-laden water generated from construction works.

Installation

Pre-earthwork drainage should be installed immediately prior to earthworks and construction works commencing.

Temporary interception bunds and cut-off drainage ditches ('clean water drains') will be constructed on the 'high-side' boundary of the earthwork operations to prevent surface water run-off entering excavations. Run-off collected in the drainage ditches will be diverted along a channel which follows the natural gradient of the ground, avoiding steep gradients.

The profile of the ditch can vary from a 'v' shape to a 'u' shape but should have a constant uniform depth. The profile of the ditch will depend on the soil type and stability.

The use of 'u'-shaped vegetated ditches is preferential, these are also known as swales. The dimensions and gradient of swales will be kept to a minimum to prevent rapid flow of water. Swales to collect runoff will be placed on the downslope of earthworks and stockpiles and will be designed to treat potentially silty runoff before discharging back into the drainage system. This may include constructing check dams within the channel and employing silt management measures. The use of retention ponds allows for additional storage capacity during heavier rainfall events.

Reinstatement

All pre-earthworks drainage channels should be re-instated unless required for long-term drainage on the site. No exposed soils should remain, and turves should be emplaced to prevent erosion.

Where exposed soil is to be left for a long period before reinstatement or re-seeding, other measure to prevent erosion may be required:

- Geotextiles (biodegradable and non-biodegradable);
- Mulching/ binders/ hydro-seeding;

- Turf cut from other areas on site; and
- Surface roughening.

3.1.3 Earthworks Drainage

Drainage for permanent or semi-permanent earthworks such as access tracks is required to control surface water run-off and discharge to appropriate outlets.

Best practice pre-earthworks drainage measures include:

- Drainage ditches;
- Sumps; and
- Culverts.

Purpose/ Aim

To manage surface water run-off from earthworks e.g. access tracks, and manage and allow for continuity of the natural drainage of surface water and groundwater from higher elevations to lower.

Pre-installation

Prior to access track and earthwork construction, site operatives will identify flush areas, depressions or zones which may concentrate water flow so that site drainage design will maintain hydrological connectivity. Site drainage design will be produced in advance of construction.

Floating roads are used within the design. Further details of good practice with regards to drainage for floating roads is provided in Floating Roads on Peat[21] good practice guidance document.

Installation

All earthworks will have a gravity drainage system and all water will drain to an adequately sized sump. If dewatering of borrow pits or excavations is necessary, waste water will be treated by designed settlement lagoons and retention ponds, further details are provided in Section 3.2.5.

Trackside drainage ditches are to be constructed parallel to the access tracks and follow the same gradient as the access tracks. To allow for continuity of surface and ground water flow from the high-side of the track to low-side, culverts are required to be built crossing the track at appropriate intervals, as shown in Plate 3.1. Culverts should be built to peak river flow plus a climate change allowance of 37 % in accordance with SEPA climate change allowances for flood risk guidance[22]. Further details of culvert design are provided in Section 3.4.3.

[21] SNH and Forestry Civil Engineering (2010) *Floating Roads on Peat: A Report into Good Practice Design, Construction and Use of Floating Roads on Peat with particular refrence to Wind Farm Developments in Scotland* [Online] Available at: http://www.roadex.org/wp-content/uploads/2014/01/FCE-SNH-Floating-Roads-on-Peat-report.pdf (Accessed: 10/03/2022)

[22] SEPA (2019) *Land Use Planning System SEPA Guidance: Climate change allowances for flood risk assessment in land use planning* (LUPS-CC1).

Plate 3.1: Trackside drainage ditch and cross-drainage culvert

Permanent check dams can also be installed to slow the flow of water in ditches with steeper gradients and straightened channels to prevent erosion of channels and at outlets. Water within channels should be allowed to flow and should not be stagnant, and tracks should be free from standing water through inclusion of camber or cross-fall. Track surface cross-drains can be installed on tracks with long gradients and limited camber, and should be kept free of sediment.

Sustainable drainage systems such as swales with vegetated channels are preferential and will be designed to intercept, filtrate and convey run-off. Permanent swales and drainage ditches adjacent to access tracks will have outlets at specified intervals to reduce the volume of water collected in a single channel and, therefore, reduce the potential for erosion.

Settlement lagoons should be installed at drainage ditch outlets, prior to discharge to watercourse. They should be constructed to allow for adequate attenuation of water and settlement of sediments. Silt mats may be used at the outfalls of settlement lagoons and retention ponds to further aid the settlement of sediment from earthworks drainage. Further details on sediment management are provided in Section 3.2.

The use of retention ponds should be used to allow for additional storage capacity during heavier rainfall and storm events.

3.1.4 Management of Drainage from Surplus and Loose Materials

Careful consideration will be given to the location of topsoil and subsoil storage areas for all areas of the Revised Development during construction. Storage areas will be either in a flat dry area away from watercourses, or be protected by the addition of cut off drains above the storage areas to minimise the ingress of water.

The use of peat and soil stockpiles will be minimised by earthworks planning. However, where stockpiles are used, silt fences and silt mats will be employed to minimise sediment levels in run-off.

All stockpiled material will be stored at least 50 m from watercourses in order to reduce the potential from sediment to be transferred into the wider surface water system and will be regularly inspected to ensure that erosion of the material is not taking place.

An example of a stockpile/ overburden and the installation of drainage ditch to divert run-off from the stockpile material is shown in Plate 3.2.

Plate 3.2: Stockpile and drainage ditch (under construction)

In accordance with BS 3882 'Specification for Topsoil and Requirements for Use', any long-term stockpiling of topsoil should not exceed 2.0 m in height with a maximum side slope of 1 in 2. In its dry non plastic state, topsoil can be stockpiled in a 'loose tipped' manner and tracked in a compactive method reducing water ingress. Wetter soils can be stored in windrows for drying and later stockpiled for re-use. The re-wetting of peat will be carried out, if there is a potential risk of the peat drying out. Mineral and peat soil stockpiles will not be allowed to dry out.

Loose materials such as crushed rock and stone will be prevented from entering watercourses through the employment of sediment pollution prevention measures in areas of loose material storage or generation, as outlined in Section 3.2.

3.1.5 Discharge of Water

Discharge of water from the site will depend on the water environment on site and the quality of the final discharge. This section considers the discharge of surface water drainage to the water environment and does not consider foul drainage from substation and temporary construction compound welfare facilities.

3.1.5.1 Discharge to Sewer

Discharge to foul sewer require permission from Scottish Water. Scottish Waters starting position is that no new surface water connections to combined/ foul sewer will be accepted.

Scottish Water prefer that surface water is re-used on site where practicable, drained into a SuDS system, drained to ground through soakaway or to an existing watercourse and notes that pumping of water to one of these outlets may be required.

Where it is not practicable to discharge to SuDS, ground or watercourse, surface water may be drained to a combined/ surface water sewer and requires enquiry and an application to Scottish Water.

Further details are provided in Scottish Water Surface Water Policy advice note and guidance[23] and GPP4.

3.1.5.2 Soakaway

Water contaminated with fine silt only can be discharged to vegetated surfaces and required permission from SEPA and landowner.

Irrigation techniques, which may include the use of perforated discharge hoses or similar, will be employed to rapidly distribute discharge across a vegetated slope. This will be carried out in consultation with the ECoW.

Details on typical infiltration rates of soil types are provided in GPP5.

3.1.5.3 Drain to watercourse or SuDS system

Treated water can be discharged to watercourse, loch or SuDS systems. The discharge water must be in line with the baseline water quality and flood risk capacity of the receiving water.

Methods of on-site sediment and chemical pollution prevention and water treatment are outlined in Section 3.2.

Authorisation from SEPA is required for discharge of water from the Revised Development to the water environment.

3.1.5.4 Tanker off site

Water which cannot be treated on site and is not of a quality which can be released to water environment, will need to be tankered off site for appropriate treatment and disposal.

3.1.6 Provision for Storm Events

The site itself is not at risk from flooding. In extreme storm events, there would be elevated levels of run-off from the hardstanding elements of the Revised Development relative to greenfield flow rates, which has the potential to contribute to down-stream, off-site, flood risk. The areas of new hardstanding, in terms of the percentage of the relevant catchments that may be affected, are a maximum of approximately 0.51 % of catchment (River E – upper catchment).

In the baseline scenario, the water table is not at the ground surface, and hence some infiltration would be expected. Measures are proposed in this document that would limit run-off rates in Section 3.2.

Temporary storage volume for storm run-off from the turbine foundations and crane hardstanding areas would be provided via settlement lagoons, further details of which are provided in Section 3.2.5.

Along the access tracks, drainage channels on the down-slope would shed track run-off to adjacent rough ground approximately every 30 m, to attenuate flow and allow natural

[23] Scottish Water (2018) Surface Water Policy: Standard advice note and process guidance [Online] Available at: https://www.scottishwater.co.uk/help-and-resources/document-hub/business-and-developers/connecting-to-our-network (Accessed: 10/03/2022)

filtration to remove sediments. In areas within 50 m of a watercourse marked on an Ordnance Survey 1:50,000 scale map or where cross-slopes exceed 1 in 20, drainage channels will be bunded and outflow will be monitored daily in areas with on-going construction activity.

3.2 Sediment Pollution Prevention

Sediment pollution and release of excess sediments can result in detrimental effects to fish spawning habitats by covering the stream bed. Mitigation measures should minimise mobilisation and release of sediments to the water environment. Water polluted by sediments are not allowed to leave the site untreated and the final discharge from the site must have acceptable levels of sediment (in line with baseline levels).

Major construction works will be minimised during heavy precipitation events.

Sediment pollution prevention is to be employed in line with the following best practice guidance:

- SEPA WAT-SG-26: Good Practice Guide – Sediment Management[24];
- SEPA WAT-SG-78: Sediment Management Authorisation[25];
- CIRIA C648 – Control of water pollution from linear construction projects[26];
- CIRIA C352 – Control of water pollution from construction sites[27]; and
- GPP5: Works and maintenance in or near water[28];

Best practice methods of sediment management and pollution prevention, and required authorisation are outlined in the following sections.

3.2.1 Authorisation

Under CAR Regulations authorisation is required for all sediment management works within inland surface water and surface water dependent wetlands.

The levels of authorisation are GBR, Registration or Licence and the required level is based on the environmental risk at the Site. More details are provided in SEPA guidance documents WAT-SG-78 Sediment Management Authorisation and WAT-RM-02 Regulation of Licence level Engineering Activities[29].

3.2.2 Silt Traps and Silt Matting

Purpose

Silt traps may be utilised to trap, temporarily store and filter sediment-laden run-off from excavation works at the Revised Development, including turbine bases and access roads. This is to prevent discharge of silt-laden waters to watercourses or ground.

[24] SEPA (2010) *WAT-SG-26: Engineering in the water environment: good practice guide – Sediment management* [Online] Available at: https://www.sepa.org.uk/media/151049/wat-sg-26.pdf (Accessed: 09/06/2020)
[25] SEPA (2012) *Supporting Guidance (WAT-SG-78) Sediment Management Authorisation v1* [Online] Available at: https://www.sepa.org.uk/media/151062/wat-sg-78.pdf (Accessed: 09/06/2020)
[26] CIRIA (2006) *C648: Control of water pollution from linear construction projects: Technical Guidance* [Online] Available at: https://www.ciria.org/Search?SearchTerms=c648 (Accessed: 09/06/2020)
[27] CIRIA (2001) *C532: Control of water pollution from construction sites: Guidance for consultants and contractors* [Online] Available at: https://www.ciria.org/ProductExcerpts/C532.aspx (Accessed: 09/06/2020)
[28] NetRegs (2017) *GPP5: Works and maintenance in or near water* [Online] Available at: https://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgs-and-replacement-series/guidance-for-pollution-prevention-gpps-full-list/ (Accessed: 10/06/2020)
[29] SEPA (2019) *WAT-RM-02 Regulation of Licence Level Engineering Activities* [Online] Available at: https://www.sepa.org.uk/media/150958/wat_rm_02.pdf (Accessed: 10/06/2020)

Installation

Silt traps and matting have a limited effective flow capacity and must be installed with the built to peak river flow plus a climate change allowance of 37% increase capacity in consideration.

Silt traps and matting are to be installed at the following locations:

- Within drainage ditches but will be sited to avoid slopes with a gradient greater than 1 in 20;
- At the inlet (sump) or outlet side of culverts; and
- At the outfall of settlement lagoons to filter sediment during times of heavy rainfall as shown in Plate 3.3.

Plate 3.3: Silt matting (combined with silt fencing)

Maintenance

The silt traps and silt matting will be monitored by the Ecological Clerk of Works (ECoW) and should be cleared regularly and replaced when necessary.

3.2.3 Silt Fencing

Purpose

Silt fencing is a widely used form of silt trapping and provides a linear barrier for installation upstream of watercourses and lochs. Silt fences are cost-effective and practical methods of attenuating storm water run-off and intercepting sediment and silt.

Installation

Silt fences are a semi-permeable geotextile fabric arranged in the form of a fence (attached to timber posts) as shown in Plate 3.4.

Silt fences are to be used as perimeter controls on the site at the downslope end of earthworks or disturbed soils, and at watercourse crossings as shown in Plate 3.5. They should be used in conjunction with other sediment and water treatment solutions where required.

To comply with best practice, they should be installed as follows:

- Installed perpendicular to the gradient of the slope;
- Construct a trench on the up-gradient side;
- Install stakes on the down-gradient side; and
- Position with a curve to the end of the fence in the up-gradient direction to help capture surface run-off, as shown in Plate 3.3.

Silt fences should not be installed:

- Within drainage ditches or channels; and / or
- Running parallel to the direction of slope.

Plate 3.4: Typical silt fencing

Plate 3.5: Silt fencing at watercourse crossing

Maintenance

Silt fencing will be monitored by the ECoW and should be cleared regularly of sediment and silt build-up, and after heavy rainfall and storm events. Silt fencing will should be replaced when necessary.

3.2.4 Check Dams

Purpose

Check dams will facilitate the settlement of suspended solids by slowing the flow of water within the drainage ditches. An example of a typical check dam is shown in Plate 3.6.

Installation

Check dams will be installed within drainage ditches at regular intervals, where appropriate. Appropriately sized stone pitching will be used within the dam in order to provide a rough surface for water within the drainage ditch to pass over.

Plate 3.6: Check dam example

3.2.5 Settlement Lagoons

Purpose

Retention of contaminated water to allow for the settlement of silt and sediments to an acceptable level (in line with the baseline level) prior to discharge to the water environment.

Installation

Settlement lagoons will be implemented where appropriate across the Site and at all turbine excavations (where appropriate).

Settlement lagoons should be installed so as to retain water long enough for silt to settle out. The length of time required will depend on the type of silt with finer silts and clays taking longer to settle.

Further measures may include the use of flocculent to further facilitate the settlement of suspended solids. The appropriateness of flocculent use must be discussed with SEPA prior to its introduction into settlement lagoons. Flocculants can be pollutants if the incorrect dosage is used. Further guidance on the required dimension of settlement lagoon are provided in GPP5.

To comply with best practice, they should be installed as follows:

- Install energy dissipation methods (e.g. rip-rap) at the inlet to minimise flow;
- Install inlet pipe work vertically to dissipate energy of flow in;
- Install a lined inlet chamber and outlet weir with materials such as geotextiles;
- Install a long outlet weir;
- Install two or three lagoons in a series to increase silt retention and storage as shown in Plate 3.7.

Plate 3.7: Settlement lagoon series

Maintenance and Operation

Settlement lagoons should be inspected regularly by the ECoW to ascertain the functionality of the system. To comply with best practice, the following maintenance measures are to be conducted:

- All settlement lagoons will be actively managed to control water levels and ensure that any run-off is contained, especially during times of rainfall;
- A constant pumped inlet rate should be maintained;
- Inlet chamber should be emptied of silt regularly; and
- Discharge quality to be monitored frequently.

Settlement lagoon outflow discharge may be pumped, when required, for maintenance purposes. A 'siltbuster' is a method of pumping excess silt-laden water and treated prior to discharge, as shown in Plate 3.8.

Plate 3.8: Settlement lagoon and Siltbuster pumping out water for treatment

Any pumping activities will be supervised and authorised by the Infrastructure Contractor's Project Manager.

Methods for discharge of outflow water from a settlement lagoon are detailed in the following section.

3.3 Chemical Pollution Prevention

Pollution from fuels and other chemicals can cause a variety of detrimental effects to freshwater ecology and can lead to loss of aquatic flora and fauna. Cement pollution and concrete wash-out can lead to increases in alkalinity and rase the pH of watercourses, which can be toxic to aquatic flora and fauna.

Chemical pollution prevention is to be employed on site in line with best practice guidance, including the following:

- SEPA Groundwater protection policy for Scotland (Section F);
- SEPA WAT-SG-31: Special Requirements for Civil Engineering Contracts for the Prevention of Pollution[30];
- SEPA WAT-SG-32: SEPA Guidance on the Special Requirements for Civil Engineering Contracts[31];
- CIRIA Control of Water Pollution form Construction Sites (C532)[32];
- GPP5: Works and maintenance in or near water[33];

[30] SEPA (2006) *WAT-SG-31: Prevention of pollution from Civil Engineering Contracts: Special Requirements Version 2* [Online] Available at: https://www.sepa.org.uk/media/152220/wat_sg_31.pdf (Accessed: 10/03/2022).

[31] SEPA (2006) *WAT-SG-32: Prevention of pollution from Civil Engineering Contracts: Guidelines for the Special Requirements Version 2* [Online] Available at: https://www.sepa.org.uk/media/152233/wat_sg_32.pdf (Accessed: 10/03/2022)

[32] CIRIA (2001) *C532: Control of water pollution from construction sites – Guidance for consultants and contractors*

[33] NetRegs (2017) *GPP5: Works and maintenance in or near water* [Online] Available at: https://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgs-and-replacement-series/guidance-for-pollution-prevention-gpps-full-list/ (Accessed: 10/03/2022)

- GPP8: Safe storage and disposal of used oils[34];
- GPP13: Vehicle washing and cleaning[35];
- PPG18: Managing fire water and major spillages[36];
- GPP21: Pollution incident response planning[37];
- GPP22: Dealing with spills[38]; and
- GPP26: Safe storage – drums and intermediate bulk containers[39].

To reduce the potential for a chemical pollution incident, areas of high-risk activities are to be located away from watercourses and drainage paths. Areas of high risk include:

- Fuel and chemical storage;
- Refuelling areas;
- Material stockpiles;
- Vehicle and equipment washing areas; and
- Site compounds/parking areas.

3.3.1 Storage of Chemicals and Oil

Potentially contaminating chemicals stored on site will be kept within a secure bunded area to prevent any accidental spills from affecting hydrological resources. The bunded area will be within the construction compound and will be underlain by an impermeable ground membrane layer to reduce the potential pathways for contaminants to enter watercourses and groundwater.

Oil storage areas will be covered in order to prevent rainwater collecting within the bunded area.

The chemicals storage area would be kept secure to prevent theft of vandalism. A safe system for accessing the storage area would be implemented by the Construction Contractor.

The following measures should be employed under best practice guidance for storage of chemicals and oils:

- Storage tanks (above or below ground) should eb sufficient strength and structural integrity to hold without leak or burst and bunded in accordance with SEPA guidance, and double-skinned tanks should be used for list I substances[40];
- Storage containers should have a minimum design life of 20 years;
- All storage containers are closed and locked when not in use.

[34] NetRegs (2017) *GPP8: Safe storage and disposal of used oils* [Online] Available at: https://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgs-and-replacement-series/guidance-for-pollution-prevention-gpps-full-list/ (Accessed: 10/03/2022)

[35] NetRegs (2017) *GPP13: Vehicle washing and cleaning* [Online] Available at: https://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgs-and-replacement-series/guidance-for-pollution-prevention-gpps-full-list/ (Accessed: 10/03/2022)

[36] NetRegs (2000) *PPG18: Managing water and major spillages* [Online] Available at: https://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgs-and-replacement-series/guidance-for-pollution-prevention-gpps-full-list/ (Accessed: 10/03/2022)

[37] NetRegs (2021) *GPP21: Pollution Incident Response Planning* [Online] Available at: https://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgs-and-replacement-series/guidance-for-pollution-prevention-gpps-full-list/ (Accessed: 10/03/2022)

[38] NetRegs (2018) *GPP22: Dealing with spills* [Online] Available at: https://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgs-and-replacement-series/guidance-for-pollution-prevention-gpps-full-list/ (Accessed: 10/03/2022)

[39] NetRegs (2019) *GPP26: Safe Storage – drums and immediate bulk containers* [Online] Available at: https://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgs-and-replacement-series/guidance-for-pollution-prevention-gpps-full-list/ (Accessed: 10/03/2022)

[40] SEPA (n.d.) Control of priority and dangerous substances and specific pollutants in the water environment [Online] Available at: https://www.sepa.org.uk/media/59968/policy_61-control-of-priority-and-dangerous-substances-and-specific-pollutants-in-the-water-environment.pdf (Accessed 10/03/2022)

Chemical storage areas are to be removed from Site as part of decommissioning, any remnant in-situ storage facilities must be appropriately maintained and monitored for degradation and release of oils or chemicals.

3.3.2 Spillage of Chemicals and Oil

The construction compound will have a bunded area and this area will be underlain by an impermeable ground membrane layer. The bund will have a capacity of 110 % of the stored liquid containers (including fresh concrete). This will reduce the potential for accidental spillages to contaminate surface water or groundwater.

Best practice guidance on the prevention of spillages of chemical outlines the following measures:

- Areas where transfer and handling of chemicals is to occur should have impermeable surface;
- Drainage systems onsite should be designed to enable the containment of spillages and appropriate disposal and treatment; and
- Emergency procedures are implemented for a spillage incident and leak detection measures (if appropriate);
- Regular maintenance and inspection of chemical storage facilities to be conducted (may be carried out by onsite ECoW); and
- Provision and training in the use of spill kits, as outlined below.

An appropriately sized spill kit(s) will be provided, maintained and located at strategic points across the site, as shown in Plate 3.9. This will contain materials, such as absorbent granules and pads, absorbent booms and collection bags. These are designed to halt the spread of spillages and will deployed, as necessary, should a spillage occur elsewhere within the construction compound.

Plate 3.9: Spill kit provision on site

Speed limits for vehicles transporting concrete will be set at a maximum of 15 miles per hour (mph) and will be monitored. Maximum vehicle load capacities will not be exceeded.

Although tracks will be maintained in good condition, vehicle loads will be reduced when a rougher surface is identified prior to track maintenance.

All maintenance and operation of machinery, and use of chemicals and oils on site, will be conducted on suitable absorbent spill pads to minimise the potential for groundwater and surface water pollution. All machinery will be equipped with drip pans to contain minor fuel spillage or equipment leakages.

Appointed refuelling personnel will be trained in the correct methods of refuelling on site to ensure that pollution incidents are prevented and a quick response plan is implemented, should a spill occur, to minimise the impact of spills.

Regular vehicle and machinery maintenance will be conducted to ensure that there is minimal potential for fuel or oil leaks / spillages to occur.

Plate 3.10 and Plate 3.11: Drip trays and bunds show examples of drip trays and bunds.

Plate 3.10 and Plate 3.11: Drip trays and bunds to prevent chemical spillages

3.3.3 Concrete, Cement and Grout

Concrete, cement and grouts which are batched and transported on site will be subject to the same requirements as outlined in Section 3.3.1.

To comply with best practice, concrete, cement and grout mixing and washing areas should:

- Be sited in an impermeable hardstanding or geotextile within a designated area;
- Be sited at least 10 m from any watercourse or surface water drain, rock outcrop or sinkhole;
- Install settlement and re-circulation systems for water re-use in the batching process to minimise water use, treatment requirements and risk of pollution;
- Designated and contained washing areas for batching plant and vehicles (further details of vehicle washing provided in Section 3.3.4);
- Collect contaminated wash waters which cannot be reused and discharge to foul sewer or tanker off-site (further details of discharge of water is provided in Section 3.1.5). Contaminated water should never be released to the water environment.

To prevent pollution, it is important that all concrete pours are planned and that specific procedures are adopted where there may be a risk of surface water or groundwater contamination, in accordance with CIRIA C532. These procedures will include:

- Ensuring that all excavations are sufficiently dewatered before concrete pours begin and that dewatering continues while the concrete cures. However, construction good practice will be followed to ensure that fresh concrete is isolated from the dewatering system; and
- Ensuring that covers are available for freshly placed concrete to avoid the surface of the concrete washing away during heavy precipitation.

Typical foundation shuttering is shown in Plate 3.12.

Plate 3.12: Shuttering for concrete foundation (wind turbine base)

3.3.4 Vehicle Washing

There will be a wash-out facility within the construction area consisting of a sump overlain with an impermeable geosynthetic membrane. The geosynthetic membrane will filter out the concrete fines leaving clean water to pass through to the sump. The sump water will be pumped to a licenced carrier and taken off-site for approved disposal.

No washing of concrete-associated vehicles will be undertaken outside the wash out facilities, and the area will be signposted, with all site contractors informed of the locations.

The frequency of concrete plant washout may also be reduced through the use of retarders.

Plate 3.13 displays a typical concrete wash-out facility.

Plate 3.13: Concrete wash-out facility

In the event that plant and wheel washing is required, dry wheel wash facilities and road sweepers will be provided to prevent (as far as is practicable) mud and debris being carried from within the site onto the public road.

Signage will be put in place to direct all plant vehicles to use wheel wash facilities. The track section between the wash facility and the public road will be surfaced with tarmac or clean hardcore and the area surrounding the facilities will be kept clean and in good condition.

The wheel wash facility, which will work on a closed cycle, shall be operated throughout the construction period. Wheel wash facilities will be located within a designated area of hardstanding at least 50 m from the nearest watercourse or 20 m from the nearest surface drain. It is expected that these facilities shall be sited adjacent to the site entrance. An example of a dry-ramp wheel wash facility is shown in Plate 3.14.

Should debris be spread onto the site access or public road adjacent to the wind farm, then road sweepers will be quickly utilised to clean affected areas. Loose debris will also be periodically removed from on-site tracks. All HGVs taking construction materials to and from the site will be sheeted to prevent the spillage or deposit of material on the highway.

Plate 3.14: Vehicle wheel wash facility

3.4 Activities in the Water Environment

Temporary activities related to construction phase works within the water environment include construction of temporary and permanent watercourse crossings,

3.4.1 Authorisation

Engineering activities within the water environment, including construction of watercourse crossings, culverting, diversions and dewatering requires authorisation under the Controlled Activities Regulations (CAR).

The level of authorisation required will be confirmed by the Contractor prior to the construction phase.

3.4.2 Watercourse Crossings

The crossing of watercourses is to be avoided in the design where possible. Existing culverts and watercourse crossings, if any, may be upgraded and anticipated to be replaced with suitable pre-cast culvert designs.

Where required to be installed, watercourse crossings should be designed in order to minimise effects of developments on the natural integrity and continuity of watercourses. The following best practice guidance should be used:

- Forest and Water Guidelines[41];
- SEPA WAT-SG-25 River Crossing – Good Practice Guide[42];
- SEPA WAT-PS-06-02: Culverting watercourses[43]; and

[41] Forestry Commission (2011) *Forest and Water Guidelines, 5th Edition,* Forestry Commission [Online] Available at: https://www.confor.org.uk/media/246145/forest-and-water-guidelines.pdf (Accessed: 10/03/2022).
[42] SEPA (2010) *WAT-SG-25 Engineering in the water environment: good practice guide. River Crossings.* [Online] Available at: https://www.sepa.org.uk/media/151036/wat-sg-25.pdf (Accessed: 10/03/2022).
[43] SEPA (2015) *WAT-PS-06-02: Culverting of Water courses - Position Statement and Supporting Guidance* [online] Available at: https://www.sepa.org.uk/media/150919/wat_ps_06_02.pdf (Accessed: 10/03/2022).

- CIRIA C689: Culvert design and operation guide[44].

Pre-installation

Identification of ecological requirements and limiting factors (e.g., breeding birds and fish spawning) should be conducted prior to installation of a watercourse crossing. The ECoW should be consulted before watercourse crossing construction can commence.

The hydraulic capacity of the crossing is to be assessed and constructed for flows up to the 1:200-year event. Further information on the hydraulic capacity of a watercourse crossing or culvert is outlined in SEPA River Crossing – Good Practice Guide.

Watercourse crossings should not be installed in 'active' areas of a watercourse e.g., meandering bends and depositional areas.

Consideration should be given to the type of watercourse crossing acknowledging that hard engineering structures, such as concrete culverts, can make it more difficult to restore a site or decommission temporary structures e.g., access tracks. Single span bridges or bridges with an in-stream support should be used for large watercourse crossings and culverts for smaller scale crossings. Further details on the type of culvert to use is provided in Section 3.4.3.

Installation

The use of in-situ fresh concrete in the construction of watercourse crossings will be avoided where possible by the use of pre-cast elements. Watercourse crossings will be installed perpendicular to the direction of flow.

In total four new watercourse crossings are required for the Revised Development, this is reduced from eight new watercourse crossings required for the previous Development. It is anticipated the following type of watercourse crossings are to be installed on site:

- Ready-made concrete 'box style' or bottomless arched concrete or plastic culverts.

However, in accordance with best practice guidance, each watercourse crossing shall be designed on a case-by-case basis to be appropriate for the width of watercourse being crossed, and the prevailing ecological and hydrological situation (i.e., the sensitivity of the watercourse). A number of factors, both environmental and engineering will influence the selection of structure type and the design of the crossing.

All watercourse crossings should be installed in line with SEPA WAT-SG-25 River Crossing good practice guide. General good practice in watercourse crossing design and construction will ensure that site conditions are taken into account and the objectives of the CAR are achieved. These include:

- The use of appropriate structures to carry access tracks across watercourses taking into account the scale of the watercourse, ecological value, sensitivity to construction activities, topography and construction methodology;
- There is a preference to avoid construction in watercourses altogether through the use of arch culverts appropriately designed not to impede the flow of water and allow safe passage for wildlife, such as fish, water voles, otters etc. However, short- and long-term impact of designs should be considered, and there can be a case for using pipe or box culverts;
- When installing culverts, care will be taken to ensure that the construction does not pose a permanent obstruction to migrating species of fish, or riparian mammals (i.e., the crossings will make provision for fish and wildlife migration);

[44] CIRIA (2010) *C689: Culvert design and operation guide* [Online] Available at: https://www.ciria.org/Resources/Free_publications/C689.aspx?WebsiteKey=3f18c87a-d62b-4eca-8ef4-9b09309c1c91 (Accessed: 10/03/2022)

- Culverts should be sized so that they do not interfere with the bed of the stream post construction, (i.e., the crossings will leave the watercourse in as natural condition as possible or permit re-establishment of substrate post construction);
- Single culverts will be used in preference to a series of smaller culverts that may be more likely to become blocked with flotsam and create erosion (i.e., the crossings will not constrict the channel);
- Although no fish have been recorded within the tributaries running through the Site, if any fish are found during the construction of any culverts, they will be removed from the immediate construction site to a place of safety if deemed necessary after consultation with the relevant fisheries interest;
- To minimise impacts on the breeding of any fish found, any in-stream works in these areas will be conducted during months which have less impact on their breeding and development, where possible;
- Ease and speed of construction are important to minimise disruption to the watercourse and surrounding habitat;
- Culverts and headwalls should be designed to last the operational life of the Revised Development; and
- Designs should be low maintenance and where possible self-cleansing; and
- Structures should be visually in keeping with the surroundings.

Maintenance

Erosion to the bed and banks at a watercourse crossing as a result of scouring during high rainfall and storm events. Erosion can expose span structure foundations and/ or cause a drop forming at the outlet of the watercourse crossing.

If this occurs, the inclusion of erosion protection measures may be required, such as baffles. The crossing should be reinstated and reinforced to allow for scour during higher flows. The crossing should be reinstated to allow for fish passage and continuity of the watercourse bed. If this is not possible, inclusion of a fish pass may be required.

If maintenance works are required within the watercourse bed then isolation of the watercourse is required and authorisation from SEPA may be required.

Culverts are prone to blockage by debris and may require routine clearing.

3.4.3 Culverts

Culverts are used to create artificial channels and allow for the continuity of water drainage and balance upstream and downstream of infrastructure associated with the Revised Development e.g. access tracks.

Closed culverts for river crossings would only be justified for single track roads over small watercourses (<2 m wide). Closed culverts are sufficient for cross-drainage under an onsite access track, as outlined in Section 3.1.3.

Bottomless arch culverts and box culverts should be used for all culverts over watercourses of 2 m or greater in width.

Culverts will be installed and designed in line with best practice guidance, including *CIRIA C689,* and incorporate the following criteria:

- Culverts will be well bedded to avoid settlement and protected by an adequate cover of road material;
- The substrate and side/ head walls will be reinforced in order to prevent erosion;
- The culverts will be designed such that it does not cause a barrier to movement of fish or other aquatic fauna;
- Culvert floors will have the same gradient (not exceeding a slope of 3 %) and level, and carry similar bed material and flow, as the original stream;
- There shall be no hydraulic drop at the culvert inlet or outlet;

- The width of the culvert will be greater than the active channel width of the watercourse;
- The culvert must not exacerbate or create flooding;
- Culverts will be used to conduct water under the wind farm tracks; and
- Any fences or screens fitted on the inlet or outlet of the culvert will be designed to allow at least 230 mm of space between the bars of the screen of fence, up to the high-water level.
- A natural stone headwall will be provided upstream and downstream of culverts to protect the road embankment. Further protection will be provided to the banks using soft engineering techniques as much as possible.
- Where there is risk of bed erosion upstream or downstream of culverts, natural stone rip-rap will be provided.

3.4.4 Dewatering

Dewatering may be required for excavations, construction of foundations or borrow pits. Dewatering is regulated under CAR GBR15 if less than $10m^3$ per day.

Dewatering should be employed in line with the following best practice guidance:

- SEPA WAT-SG-29: Temporary Construction Methods;
- SEPA Good Practice Guide WAT-SG-28: Intakes and Outfalls[45]; and
- SEPA Regulatory Method WAT-RM-11: Licensing Groundwater Abstractions including Dewatering[46].

If the dewatering volume is greater than $10m^3$/ day, a CAR licence is required and SEPA WAT-RM-11 is to be referred to. Discharge of water as a result of dewatering must not cause further erosion and energy dissipation measures should be put in place as outlined in SEPA WAT-SG-28 guidance.

Dewatering must consider the impact on other groundwater abstractions and GWDTEs. Further information on the protection of GWDTE and groundwater abstractions are provided in Section 3.5 and 3.6.

3.5 Measures to Protect Groundwater Dependent Terrestrial Ecosystems (GWDTE)

Foundations, borrow pits and linear infrastructure such as roads, tracks and trenches can disrupt groundwater flow. If carried out in close proximity to GWDTE, construction activities can have adverse effects on these receptors.

Measures to protect GWDTE are based on mitigation and good practice, similar to those outlined already in this document, as well as avoidance of GWDTE habitats during design. The following guidance document(s) are used to inform protection of GWDTE habitats:

- SEPA LUPS-GU-31: Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems[47].

The following measures will ensure that water quality and the flow supply of groundwater and near-surface water are maintained during the construction and operational phase of the Revised Development.

Key measures include:

[45] SEPA (2019) *WAT-SG-28: Engineering in the Water Environment Good Practice Guide: Intakes and outfalls Second Edition* [Online] Available at: https://www.sepa.org.uk/media/150984/wat_sg_28.pdf (Accessed: 10/03/2022)

[46] SEPA (2017) *WAT-RM-11: Regulatory Method: Licensing Groundwater Abstractions including Dewatering* [Online] Available at: https://www.sepa.org.uk/media/151997/wat-rm-11.pdf (Accessed: 10/03/2022)

[47] SEPA (2017) Land Use Planning System SEPA Guidance Note 31: Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems (LUPS-GU-31) [Online] Available at: https://www.sepa.org.uk/media/144266/lups-gu31-guidance-on-assessing-the-impacts-of-development-proposals-on-groundwater-abstractions-and-groundwater-dependent-terrestrial-ecosystems.pdf (Accessed: 10/03/2022)

- Silt traps may be deployed to trap and filter sediment-laden run-off throughout the construction phase of the Revised Development;
- Settlement lagoons may be constructed and actively managed to control water levels and ensure that any runoff is contained, especially during times of rainfall. The location and management of the settlement lagoons is essential and will not be sited within vulnerable wetland areas where they may cause drying out and direct loss of habitat;
- Flush areas, depressions or zones which may concentrate water flow, will be identified in advance of construction and a suitable drainage design shall be developed to address each location, to ensure hydraulic connectivity;
- Site drainage design will avoid any severance of saturated areas to ensure hydrological connectivity is maintained. Site drainage design will be produced in advance of construction;
- The length of time excavations are kept open and the duration of any dewatering will be minimised;
- All excavations will be sufficiently dewatered before concrete pours begin and that dewatering continues while the concrete cures. However, construction good practice will be followed to ensure that fresh concrete is isolated from the dewatering system; and
- Water from dewatering activities are generally treated by settlement lagoons and will be discharged onto vegetated surfaces, ensuring no net loss of water from the hydrological system. If ponding of water is observed during the discharge onto vegetated surfaces, additional measures may be employed.

3.6 Measures to Protect Groundwater Abstractions and Private Water Supplies

A watching brief will be undertaken during the access track upgrade to ensure any pipework is identified and protected.

3.7 Water Quality Monitoring Programme

A surface water and groundwater monitoring programme will be established prior to the construction phase of the Revised Development. An indicative monitoring programme is set out below.

Surface water monitoring would be undertaken at locations on the principal watercourses downstream of the Revised Development infrastructure and upstream of other non-natural influences, where possible.

Regular visual inspections of surface watercourses are proposed, especially during major excavation works, as these allow rapid identification of changes in levels of suspended solids that could indicate construction related effects are occurring upstream. Potential effects can then be investigated and remedial action taken to prevent further effects, if necessary.

To supplement the visual inspections, it is anticipated that there would be a number of surface water monitoring points for extractive sampling and analysis. Details will be agreed with SEPA in advance of construction.

The following sampling frequency is proposed in order to establish baseline hydro-chemical conditions of surface water constituents:

- Once every month for six to twelve months prior to the construction phase.

The following sampling frequencies are proposed in order to monitor surface water conditions against baseline conditions:

- Once a month during construction works; and

- Twice a month for three months then once a month for a further 3 months during the post construction phase.

Establishing baseline conditions for surface waters will enable any trends in levels of critical parameters to be assessed and deviations from the norm identified and rectified through water management measures.

CORRIEGARTH 2 WIND FARM

SEI Report – Volume 3 – Technical Appendices

TA A13.2 Outline Peat Management Plan

CORRIEGARTH 2 WIND FARM
SEI REPORT

SEI TECHNICAL APPENDIX 13.2

OUTLINE PEAT MANAGEMENT PLAN

APRIL 2022

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Table of Contents

1 INTRODUCTION

Arcus Consultancy Services Ltd (Arcus) were commissioned by Corriegarth 2 Wind Farm Limited to carry out an Outline Peat Management Plan (oPMP) for the amendments to the proposed Corriegarth 2 Wind Farm (the Revised Development) located in The Scottish Highlands centred at National Grid Reference (NGR) 257500, 813100. Following submission of an application for consent (ECU00002175) in January 2021 for an onshore wind development consisting of 16 turbines and associated infrastructure, consultation has taken place with relevant stakeholders.

This Supplementary Environmental Information (SEI) Report provides further, and updated, environmental information in light of revisions to the Development. The Applicant has revised the Development by:

- Removal of T10 & T12, therefore reducing the number of turbines from 16 to 14;
- Relocation of eight turbines (T1, T2, T8, T9, T11, T13, T14, T15), adjustments to turbine crane hardstandings and access tracks; and
- Relocation ancillary infrastructure, including borrow pit & substation compound.

This outline Peat Management Plan (oPMP) for the Revised Development has been prepared as a technical appendix to support the SEI submission. Given the revision to the Development, additional peat probing has been undertaken to gather data on areas of the Site which had not been previously covered, which has been used to support this oPMP. The oPMP will detail the proposed peat and soils management methodologies to be employed during construction.

The purpose of the oPMP is to:

- Define the materials that will be excavated as a result of the Revised Development, focusing specifically on the excavation of peat;
- Report on detailed investigations into peat depths within the Revised Development;
- Detail proposals for the management of excavated peat and other soils;
- Consider the potential effect of the Revised Development on Ground Water Dependent Ecosystems (GWDTEs);
- Determine volumes of excavated arisings, the cut/fill balance of the Revised Development and proposals for re-use or reinstatement using excavated materials; and
- Detail management techniques for handling, storing and depositing peat for reinstatement including any habitat management plan/peatland restoration.

The oPMP has been produced in accordance with SR and the SEPA Guidance on Peat Excavations and Management[1]. This oPMP is intended to be a document that will evolve during the different phases of the project and, as such, will be subject to continued review to address:

- Requirements to discharge future planning conditions;
- Detailed ground investigations and design development;
- Unforeseen conditions encountered during construction;
- Changes in best practice during the life of the wind farm; and
- Changes resulting from the construction methods used by the construction contractor(s).

Whilst this OPMP provides a base standard for good practice, where avoidance or further minimisation of risks to the environment can be demonstrated through use of alternative methods or improvements to current practices, the Construction Contractor will

[1] SR and SEPA (2012) Guidance on the Assessment of Peat volumes, Re-use of Excavated Peat and the Minimisation of Waste [Online] Available at: http://www.scottishrenewables.com/media/uploads/publications/a4_developments_on_peatland.pdf (Accessed 11/04/2022)

implement these wherever possible and will consult with SEPA and The Highland Council (the Council).

1.1 The Site

The Site is located south-east of Loch Ness and approximately 15 kilometres (km) north-east of Fort Augustus and the site boundary is approximately 1,694 hectares (ha), as shown on Figure 13.2.1. The Site incorporates the boundaries of the Operational Corriegarth Wind Farm in its entirety and will utilise approximately 13 km of the existing access tracks, particularly from the site entrance to the main body of the Site. The Site is centred on NGR 257500, 813100.

The topography of the Site and immediate vicinity is complex and largely consist of rural upland farmland used for grazing and grouse shooting. The Site itself varies significantly in elevation ranging from approximately 550 - 720 m Above Ordnance Datum (AOD) in the central part of the Site, which is within the Operational Corriegarth Wind Farm, before sloping west along the access track towards the B862, with elevations reducing to approximately 200 m AOD. A number of hills are present in the immediate vicinity of the Site boundary while the summit of Carn na Saobhaidhe is within the western site area, at 603 m AOD.

Published British Geological Survey (BGS)[2] mapping indicates the superficial soils at the Site to be dominated by peat. There are small pockets of Till, Glacial Sand and Gravel in the east of the Site, although large areas of the site in the south are recorded as being unmapped. Desk based information in soils and geology and due to the rural upland nature and peatland habitats that peat deposits were considered to be present across most of the site area and in particular topographically low areas.

Figure 13. 1 of the EIA illustrates the Superficial Soils across the site area.

The BGS mapping indicates the central, southern and western areas of the study area are underlain by Loch Laggan Psammite Formation and the Monadhliath Semipelite Formation rocks with intrusions of North Britain Siluro aged Devonian Calc-alkaline Dyke Suite comprising Felsite rock across the central and southern areas. The northern area was noted to be rocks belonging to the Gairbeinn Pebbly Psammite Member. Online geographical data will be used to produce desk study plans and for use during an initial site walkover and subsequent probing investigations.

Figure 13. 2 of the EIA illustrates the bedrock geology across the site area.

[2] British Geological Survey (2019): http://mapapps.bgs.ac.uk/geologyofbritain/home.html (Accessed 11/04/2022)

2 AIM AND OBJECTIVES

2.1 Background

Desk based assessments, detailed peat survey work and completion of technical assessments such as Peat Slide Risk Assessment (PSRA) for the EIA Report and SEI Report allows a consistent approach for managing peat.

The preparation of an oPMP responds to the consultation responses received on the EIA Report (see Section 1.3) and the intent to deliver a construction project that complies with good practice in accordance with Scottish Renewables (SR) and SEPA guidance.

In addition to the assessments, an outline civil design of the Site has been undertaken. The overall objective of the design of the Revised Development has been to minimise the excavation of peat where possible. Due to the nature of the underlying ground conditions on the Site, tracks were designed to be as close as possible to existing levels. This is considered to provide the best opportunity for a design which includes floating tracks and achieve reinstatement or restoration in accordance with good practice and the methods set out in the outline Habitat Management Plan (oHMP), while removing the need for off-site waste management controls.

This objective of the oPMP is achieved through:

- Ensuring the characteristics of the Site are understood through extensive peat probing and assessing the Site topography;
- Understand the extent of the Site layout and how excavations will take place;
- Modelling the peat depth profile based on probing and a digital terrain modelling in 3D;
- Consider the best practice advice for peat reinstatement; and
- Develop practical peat restoration opportunities for improvement of habitats and peatlands.

This oPMP has been compiled in accordance with the following best practice guidance:

- Guidance on Developments on Peatland: Peatland Survey[3];
- Guidance on Developments on Peatland: Guidance on the Assessment of Peat Volumes, Re-use of Excavated Peat and Minimisation of Waste[4];
- Developments on Peatland: Site Surveys & Best Practice[5];
- Floating Roads on Peat Guidance[6];
- Good Practice During Wind Farm Construction[7]; and
- SEPA Regulatory Position Statement – Developments on Peat[8].

[3]SNH (2017) Guidance on Developments on Peatland: Peatland Survey (2017) [Online] Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2018/12/peatland-survey-guidance/documents/peatland-survey-guidance-2017/peatland-survey-guidance-2017/govscot%3Adocument/Guidance%2Bon%2Bdevelopments%2Bon%2Bpeatland%2B-%2Bpeatland%2Bsurvey%2B-%2B2017.pdf (Accessed 11/04/2022)

[4] Scottish Government (2014) Assessment of Peat Volumes, Reuse of Excavated Peat and Minimisation of Waste [Online] Available at: https://www.gov.scot/publications/assessment-of-peat-volumes-reuse-of-excavated-peat-and-minimisation-of-waste-guidance/ (Accessed 11/04/2022)

[5] Scottish Government (2007) Guidance: Developments on Peatland [Online] Available at: https://www2.gov.scot/Resource/Doc/917/0120462.pdf (Accessed 11/04/2022)

[6] SNH (2010) Floating Roads on Peat [Online] Available at: http://www.roadex.org/wp-content/uploads/2014/01/FCE-SNH-Floating-Roads-on-Peat-report.pdf (Accessed 11/04/2022)

[7] Scottish Renewables et al. (2019) Good Practice during Wind Farm Construction [Online] Available at: https://www.nature.scot/sites/default/files/2019-05/Guidance%20-%20Good%20Practice%20during%20wind%20farm%20construction.pdf (Accessed 11/04/2022)

[8] SEPA (2010) SEPA Regulatory Position Statement – Developments on Peat [Online] Available at: https://www.sepa.org.uk/media/143822/peat_position_statement.pdf (Accessed 11/04/2022)

2.2 Approach to Minimising Peat Excavation

The following steps have been taken during the outline design stage of the Revised Development to minimise the effect on peat:

- The development of an access track design which avoids deeper peat where practicable;
- The design and orientation of turbines and crane hardstandings considers local topographical and peat constraints; and
- Consideration of borrow pit locations in areas of shallow peat cover.

At detailed design and construction stage, these steps will be further supplemented by taking the following measures to minimise disturbance:

- Maximisation of batter angles in cuttings;
- Consideration of floating tracks; and
- The use of appropriate construction plant to avoid unnecessary disturbance of the ground surface.

The fundamental principle upon which this oPMP is based is to achieve a successful materials strategy contingent on gaining a thorough understanding of the Site through investigation and developing a design that achieves the materials management objectives. For the Revised Development, this is achieved by undertaking significant peat investigation works prior to preparing this oPMP.

2.3 Aim and Objectives

2.3.1 Need for Peat Management Plan

The significance of peatlands is most evident in their protection by various legislation, policy and local, national or international initiatives including but not limited to;

- United Kingdom Biodiversity Action Plan (UKBAP);
- Scotland's National Peatland Plan (SNH, 2015);
- European Council Habitats Directive 92/43/EEC (Council of the European Communities, 1992),
- Scottish Biodiversity List (SBL) (Scottish Government, 2013),
- Scottish Government discussion paper on the Management of Carbon-Rich Soils (Scottish Government, 2010),
- Scottish Soil Framework (Scottish Government, 2009); and
- Climate Change Plan (2017-2032) (Scottish Government et al., 2017).

SEPA has a statutory and legislative duty to ensure that where peat spoil is generated during construction, it is stored, re-used, treated or disposed of correctly, which may require authorisation or permits.

SEPA's policy on the management of peat is set out within SEPA Regulatory Position Statement – Developments on Peat. This highlights that the best management option for peat spoil is the prevention of its production, by seeking to minimise peat excavation and disturbance. Where this is unavoidable, developers should attempt to re-use as much of the peat produced on-site as is possible, in justifiable and environmentally beneficial ways.

This oPMP is prepared to demonstrate to the Council, SEPA and other consultees that the construction of the Revised Development will progress in a manner that is planned, in accordance with good practice and achieves the aim of being environmentally sustainable.

This oPMP is therefore prepared in accordance with the SR and SEPA guidance. It details how:

- The Revised Development has been structured and designed so far as practicably possible to reduce the volumes of excavated peat;
- Volumes of excavated peat during the course of the works have been considered in the design; and
- Excavated peat will be managed.

2.3.2 Objectives of the oPMP

The main objectives of the oPMP are to outline how peat and peaty soils proposed to be excavated will be managed and re-used during the construction of the Revised Development and proposed restoration plans.

This is achieved through responding of the following objectives:

- Providing details of the extent and depth of the peat on Site and how this was determined;
- Estimation of peat volumes to be excavated and re-used;
- Classification of excavated materials;
- Consideration of the use of appropriate construction methods;
- Describing how excavated peat will be handled to ensure suitability for re-use;
- Determining if temporary storage of peat will be required during construction and how this will be done to ensure suitability for re-use; and
- Considering the potential volume of peat which may not be suitable for re-use and any requirement for a Site Waste Management Plan (SWMP) for the Revised Development.

The response to these objectives is provided in the following sections.

3 PEAT INVESTIGATIONS, EXCAVATION, RE-USE AND MANAGEMENT

3.1.1 General Peat Classification

Acrotelmic peat is the upper layer of peat consisting of living and partially decayed material with a higher hydraulic conductivity and a variable water table. These deposits are generally found to exist in the upper 0.5 m of peat deposits and are typically suitable for re-instatement because they contain viable plant life to assist in the regeneration of peatland vegetation and carbon sequestration.

Catotelmic peat is variable in characteristics, with decomposition of fibres generally increasing with depth. Water content can be highly variable and affects the structural strength of the material. Suitability for re-use generally depends on fibre and water content. The upper catotelm is commonly deemed as being appropriate for re-use in restoration due to its relatively high fibre content.

Generally, excavated semi fibrous catotelmic peat from the Site will have sufficient structural strength to be able to be used in the lower layers of verge restoration as it will not be 'fluid'.

The catotelmic peat would be capped with a surface layer of actrotelm to re-establish the peat vegetation. If any fluid like wet catotelmic peat is encountered, then it would be placed in more appropriate locations such as low-lying section of the borrow pits or concave deposition areas.

The following assumptions have been made in classifying peat excavated during the construction work:

- Where the total peat depth was found to be less than 0.5 m, this peat material is assumed to be 100 % acrotelmic;
- Where the total peat depth is between 0.5 m and 1.0 m, the upper acrotelmic peat is at least 0.5 m deep; and
- Where the total peat depth as found to be greater than 1.0 m, acrotelmic peat is assumed to account for at least 30 % of total depth but generally applying minimum of 0.5 m thick.

Existing topography and permitted track gradients drive the design of the infrastructure with due consideration given to potential construction risk and effects on environmentally sensitive receptors including deep peat, watercourse buffers and any GWDTEs. Further micro-siting post-consent would take place in such a way as to avoid where possible the excavation of deep peat.

3.2 Investigations

The existing peat depths across the Site have been determined through a phased survey approach. The survey was initiated to inform the EIA and Site design work while supporting the PSRA. The survey comprised a total of 5,390 probes.

Peat depths ranged from 0.0 m to 5.3 m thickness across the Site and were shown as localised or isolated zones within the central area of the Site.

Initial peat depth surveys were undertaken in August, September and December 2019 comprising 100 m grid coverage across the Site, where accessible. This rationale of probing is in accordance with the phase one approach as detailed in the Scottish Government guidance for investigating peat.

Further peat depth surveys (phase two) were undertaken in June and July of 2020. The probe positions for this visit were focussed on the proposed turbines, access tracks and other key infrastructure. Peat depths were measured along the proposed access tracks at 50 m centres with offsets between 10 m and 25 m either side of the centre line, and

10 m cross-hair at turbines across the Site. As this is a Site with extensive Peat presence, a 10 m grid of a 50m radius was captured at each turbine position to better understand potential micro siting benefits.

Following the completion of the peat depth surveys, a series of peat coring was undertaken in September 2020 to further characterise the nature of the peatland. All proposed turbine locations where peat had been identified at depths greater than 1.0m were subjected to coring, T1 was included within the assessment as a precaution despite peat only being recorded at 0.95m.

In total, peat cores were obtained from 11 of the 16 proposed turbine locations, Peat Coring Results are available in Appendix D of the PSRA while analysis of the results is discussed within section 4.4 of the PSRA.

Further probing was then undertaken in November/December 2021 and in January/March 2022, which focused on the Revised Development (the relocated turbines, new track sections), new borrow pit area and proposed habitat management areas.

The peat depths and probe locations are illustrated in Figure 13.2.2 'Recorded Peat Depths' within Appendix 1 of this document.

3.3 Summary of Peat Depths

Throughout the peat surveys to date, a total of 4,791 probes were progressed. 15.5% of these recorded no peat or peat less than 0.5 m, while 30.7% recorded peat between 0.5 m and 1.0 m. Thick peat (where the depth was greater than >1.0 m) was recorded at 53.8% of locations.

The maximum peat depth recorded was 5.3 m in the south-western area of the Site. Generally, peat depths exceeded 1.0 m, which is anticipated with flat topography surrounded be slopes and an average peat depth of just less than 1.2m across all phases of survey work.

The distribution of peat deposits along the proposed tracks and infrastructure are shown in Figure 13.2.3 'Interpolated Peat Depths' included in Appendix A.

Where peat is consistently over 1.0 m thick and existing ground levels permit, the use of floating roads should be adopted. The 'Potential Areas for Floating Tracks' are shown on Figure 13.2.4 included in Appendix 1. Prior to commencing works on Site, the Construction Contractor, as part of any floating road design, will undertake further ground investigation to establish peat characteristics and surcharging strategies.

3.3.1 Excavation Calculation

To derive an accurate estimate of excavated volumes, the access tracks and turbine hardstandings have been developed to outline design stage in 3D based Ordinance Survey Digital Terrain 5 data. This design is overlaid on the 3D peat surface model which has been derived from extensive peat probe surveying undertaken.

In addition, a further 10 % of the total volume excavated material has been applied as contingency bulking factor.

By analysing these models, it is possible to derive volumes of excavation and estimate what the excavated material comprises – be this non peat superficial soils, peat or other materials. Table 3.1 conveys the construction activities that will generate excavated peat, and the expected volumes produced from each activity based on 3D modelling exercise, and without the proposed mitigation of micro-siting.

Table 3.1: Peat Excavation Volumes Based on Construction Activity

Development Component	Estimated Volume of Excavated Peat (m^3)	Estimated Volume of Acrotelmic Peat (m^3)	Estimated Volume of Catotelmic Peat (m^3)
Turbine Foundations, Crane Hardstanding and associated earthworks	123,123	62,449	60,674
Tracks and associated earthworks and verges	17,834	11,119	6,715
Borrow Pit	17,670	17,670	0
Construction Compound	1,500	1,500	0
Substation	6,056	6,056	0
SUB-TOTAL	**166,183**	**98,794**	**67,389**
+10% Contingency Bulking Factor	16,618	9,879	6,739
TOTAL	**182,801**	**108,673**	**74,128**

A detailed assessment of excavated volumes by location within the Site is provided in Appendix 2 of this oPMP.

The peat excavation volumes have been significantly reduced as part of the redesign of the site with the overall excavation amount reduced from 187,087 m^3 to 74,128 m^3.

3.3.2 Peat Re-Use Requirements

The principles of re-instating peat and peaty soils should be adhered to for all elements of the infrastructure, comprising the below:

- Peat and peaty soils will be reinstated on track and infrastructure verges with turves placed on the upper horizons encouraging re-vegetation;
- All peat, soil and turves excavated from beneath infrastructure (excluding any floating track section) will be re-instated in the vicinity of its original location;
- Any wet catotelmic peat will be placed at the bottom of any restoration profile, followed by semi fibrous catotelmic peat and then acrotelmic should be placed on top;
- Reinstatement of haggs and ditches will comprise the same principles with wet catotelmic peat placed at the bottom of any restoration profile, followed by semi fibrous catotelmic peat and then acrotelmic placed on top
- and
- Restoration activities will be overseen by the Ecological Clerk of Works (ECoW) to ensure methods are properly adhered to.

Table 3.2 illustrates the opportunities for re-use of peat within the Site including the demand for acrotelm and catotelm peat. Table 3.3 summarises the total peat balance estimated during construction of the Revised Development. It should be noted that 51,626 m^3 of peat is estimated to be achievable from a reduction in peat excavations

associated with floating tracks. Detailed excavation calculations are included in Appendix 2.

Table 3.2: Peat Re-use Volumes Based on Construction Activity

Revised Development Area	Total Demand Estimate (m^3)	Acrotelm Demand (m^3)	Catotelm Demand (m^3)	Estimated Reinstatement Thickness (max) where gradient permits (m)	Assumptions
Turbine Foundations, Crane Hardstanding and associated earthworks	38,789	19,394	19,394	0.8m	Turbines and associated earthworks will be dressed off with up to 0.80m of peat and peaty soils, with any catotelm placed in the lower regions and acrotelm and turves placed nearer the surface.
Tracks and associated earthworks and verges	33,598	16,799	16,799	0.8m	Where new wind farm tracks are proposed, peat will be reinstated along verges and associated earthwork banking and verges with peat up to 0.8m. It is assumed that where peat depths are 1.0m or greater, floating track construction techniques will be adopted where gradients permit. This is anticipated to be in the region of 40% of tracks.
Borrow Pits	35,339	17,669.5	17,669.5	1.0m	It is assumed that peat reinstatement thicknesses will reflect the peat excavated prior to borrow pit and in this case up to 1.0m at borrow pit 1.
Construction Compound	1,500	1,500	0	0.3	The construction compound will be placed on an existing hardstand and no excavation of peat or re-use is likely.
Substation	605	605	0	0.5	The substation will be dressed off where no infrastructure is proposed and on graded side slopes with up to 0.5m of peat and/or peaty soils.
SUB-TOTAL	**109,831**	**55,968**	**53,863**		
Peat Reuse for Habitat Management	72,970	52,705	20,265		Peatland restoration including ditch blocking, hag reparation and use as part of the wider

					Habitat Management Plan for the Site. The restoration techniques will be discussed in more detail in the HMP.
TOTAL	**182,801**	**108,673**	**74,128**		

Table 3.3 is presented as a summary of the assessment of peat reinstatement volumes. A detailed assessment is provided in Appendix 2 of this oPMP.

The following assumptions have been made in assessing peat re-use:

- New access track sections assume verges on both sides at widths of approximately 0.5m excluding earthworks. As the access track edges will have graded slopes, peat depths will vary across the profile to tie into existing ground levels.
- Upgraded track sections assume a verge on the upgraded side 0.5m wide. As the access track edges will have graded slopes, peat depths will vary across the profile to tie into existing ground levels.
- Earthwork areas along the access tracks could consist of up to 0.8m thick peat thinning towards the verges. Where possible catotelmic peat will be reinstated along verges in flatter areas.
- No peat will be placed on access track verges where the local topography is steep and/or a watercourse is in close proximity. This has been reflected in the volumes generated for access track sections.
- Peat will be laid only to a thickness that maintains hydrological conditions and to avoid drying out. Peat will not be used as a thin layer or on steeper non-peat slopes. Low verges and landscaping will be formed to permit surface water to drain off the access tracks.
- Catotelmic soils will only be used if it is suitable for purpose.
- Borrow pit reinstatement assumes a maximum peat depth thickness of that which existed prior to borrow pits works, but anticipated not to exceed 1.0m. This will include the re-use of catotelmic peat in the lower regions, and acrotelmic peat soils and turves in the upper layers.

Indicative areas of peat reinstatement at key infrastructure are shown in Figure 13.2.5 included in Appendix 1 of this oPMP. Excavated peat will be temporarily placed adjacent to where it is excavated. However, where this is not possible, temporary peat storage areas are detailed on Figure 13.2.6, included in Appendix 1. These are areas of previous disturbance, out with 50 m buffer of watercourses and where topography permits.

In addition, peat will be re-used in peatland restoration activities, the locations of which are shown on Figure 13.2.7. Details of the peat re-use in Habitat Management Plan is included in Section 3.3.3.

3.3.3 Peat Reuse Techniques - Habitat Management Plan

A Habitat Management Plan would be agreed post-consent incorporating the re-use of peat within the estate.

Preliminary areas have been identified as suitable peatland for restoration/reparation where there is existing man-made drainage and/or natural hagging and bare/exposed areas of peat. While further consultation is expected to take place post-consent with SEPA and NatureScot, for the purposes of this SEI application, it is expected that the main types of restoration will include the repair of peat hags including bare and exposed peat as well as opportunities for ditch blocking and damming.

These works will include, but not be limited to the following techniques summarised below:

- Drains will be in-filled using peat excavated during wind farm construction which will be placed in drains as soon as possible after excavation. Where immediate re-use of peat is not practical, peat will be stored in designated storage areas before being carefully transported to the drains.
- Deeper drains will be dammed at intervals using artificial materials such as metal/wood structures or plastic sheeting, if required, taking into account best practice methods (e.g. Armstrong et al. 2009). Such dams will be used on all larger drains to retain water levels in the in-filled ditches and prevent peat being washed out of the drains and into watercourses.
- On smaller drains and plough furrows simple peat dams are likely to be sufficient to fulfil this purpose. However, the need for peat dams will be negated in many drains due to the placement of excavated peat. In the case of highly permeable peat, or vertically cracked peat, dams will be designed to reach into the low permeability subsoil or less permeable peat layers in order to avoid collapse and to prevent preferential underground water flow through the installed material.
- Final details regarding the type, number, location and spacing of artificial dams and details of the drains will be determined following completion of detailed topographical and drainage surveys. Information from these surveys will be used to calculate the maximum potential loads of accumulating water, such as after heavy rain events, to ensure that structures are strong enough to withstand this pressure. Specialist input from a civil engineer and/or hydrologist will be required to design dams adequately to ensure no risk of failure
- Peat hags can be re-profiled to a flatter topography through the use of excavators. Excavators will firstly remove vegetated turves, before flattening out the hag to form a shallower profile. After this, turves are placed on top of profiled bare peat, to stabilise the surface and prevent further erosion. Over time, the turves will grow and interlock preventing erosion in the future, and in some case contributing to active peat formation.

All peatland restoration work will be supervised by an experienced ECoW.

3.3.4 Peat Balance

Table 3.3: Peat Balance Calculations

Peat Description	Total Peat Demand Estimate for Reinstatement (m^3)	Total Peat Supply from Excavation (m^3)	Surplus (+) or Deficit (-) (m^3)
Acrotelm	108,673	108,673	0
Catotelm	74,128	74,128	0
Total	**182,801**	**182,801**	**0**

Table 3.3 demonstrates that there will be a balance in excavation and re-use of peat and peaty soils. These volumes should be considered in the context of the total excavated peat during construction. It is likely that balance would be achieved once total excavated peat is established by the appointed Construction Contractor and reinstatement depths are adjusted accordingly.

3.3.5 Handling and Storage of Peat

It will be necessary for the Construction Contractor to prescribe methods and timing involved in excavating, handling and storing peat for use in reinstatement. The Construction Contractor will be responsible for appointing a chartered geotechnical engineer who will monitor any potential stability risks. Construction methods will be based on the following principles:

- The surface layer of peat (acrotelm) and vegetation will be stripped separately from the catotelmic peat. This will typically be an excavation depth of up to 0.5 m;
- Acrotelmic material will be stored separately from catotelmic material;
- Careful handling is essential to retain any existing structure and integrity of the excavated materials and thereby maximise the potential for excavated material to be re-used;
- Less humified catotelmic peat which maintains its structure upon excavation should be kept separate from any highly humified amorphous or wet catotelmic peat;
- Acrotelmic material will be replaced as intact as possible once construction progresses/as it is complete;
- To minimise handling and transportation of peat, acrotelmic and catotelmic will be replaced, as far as is reasonably practicable, in the locality from which it was removed. Acrotelmic material is to be placed on the surface of reinstatement areas;
- Temporary storage of peat will be minimised, with restoration occurring in parallel with other works;
- Suitable areas should be sited in locations with lower ecological value, low stability risk and at a suitable distance from water courses;
- Reinstatement will, in all instances, be undertaken at the earliest opportunity to minimise storage of turves and other materials;
- Managing the construction work as much as possible to avoid periods when peat materials are likely to be wetter i.e. high rainfall events;
- Temporary storage and replacement of any peat excavated from the borrow pit should occur adjacent to and within the source pit; and
- Transport of peat on Site from excavation to temporary storage and restoration Site should be minimised.

Indicative temporary peat storage areas are illustrated on Figure 13.2.6.

3.3.6 Waste Management Plan Requirements

Based on the calculations carried out, the total peat volumes excavated will be fully incorporated into the re-instatement works or peatland restoration through habitat management; therefore, it is unlikely to require a waste management licence.

4 CONCLUSIONS

The following conclusions are drawn regarding the management of peat and excavated materials within the:

- As a result of the peat excavation and re-use estimates, it is demonstrated that all excavated peat can be suitably re-used on Site;
- The site redesign has resulted in a reduction of excavated peat from 355,284 m^3 to 182,800 m^3.
- The re-use calculations include the assumption of using floating track construction methods as identified on Figure 13.2.4 Extent of Floating Tracks;
- Excavated peat will be used for the reinstatement of access track verges, cut and fill embankment slopes, reinstatement of turbine hardstandings, reinstatement of borrow pit and compound areas;
- The estimates of excavated peat provided in this report are likely to be higher than actually occur, as micro-siting during construction will allow for the avoidance of localised pockets of deeper peat;
- Sufficient methods have been defined to ensure that peat can be sensitively handled and stored on Site to allow for effective re-use; and
- No waste licence is required for the construction work.

APPENDIX 1 - DRAWINGS

BayWa r.e.

ARCUS

- Site Boundary
- Proposed Turbine Location
- Operational Corriegarth Wind Turbines
- Crane Hardstanding
- Access Tracks
- Existing Tracks to be Utilised
- Track Widening Area
- Construction Compound
- Existing Wind Farm Tracks
- Earthworks
- Borrow Pit
- Substation Compound

1:20,000 Scale @ A3

0 0.5 1 Km NORTH

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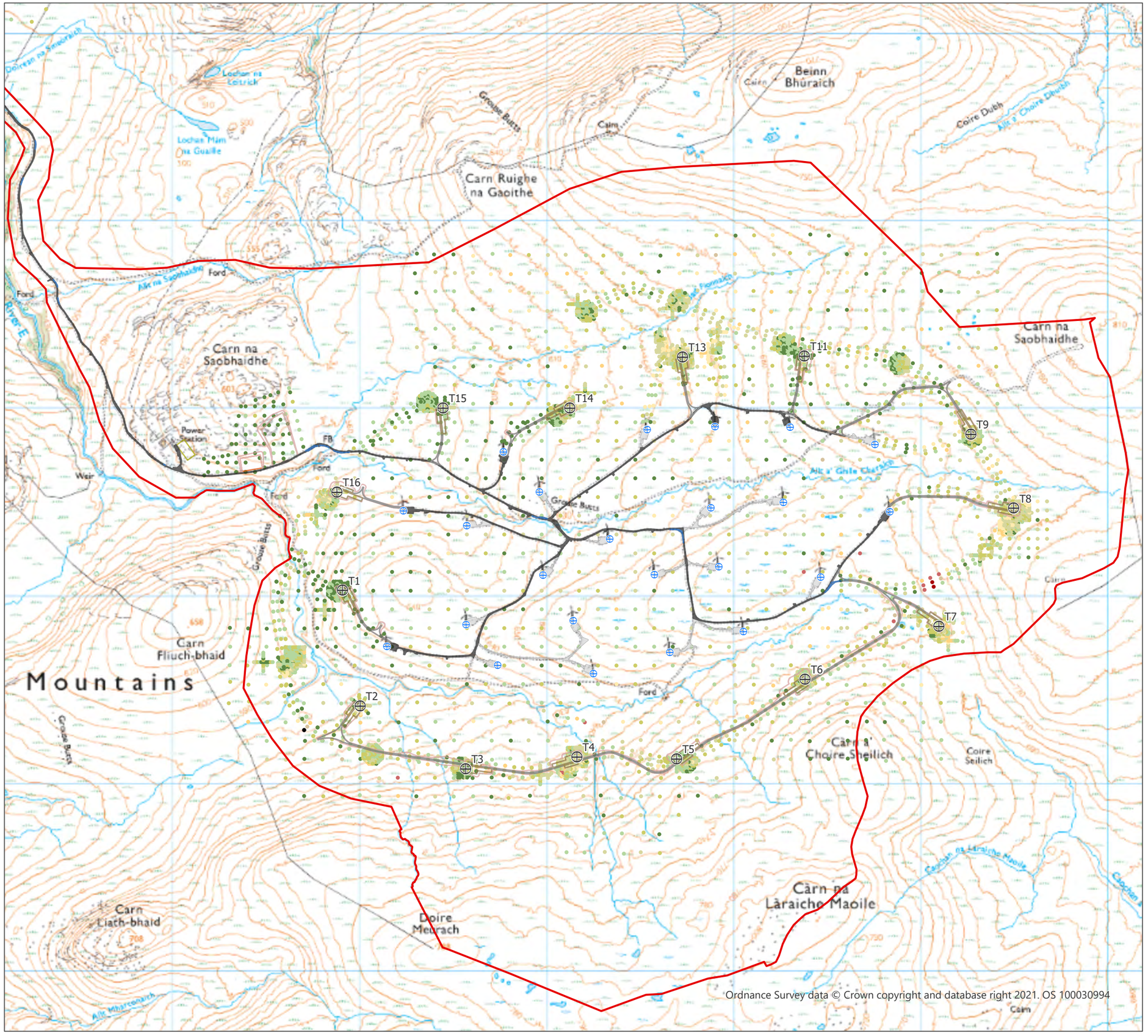
Checked By: DB	Date: 11/04/2022

Site Layout Plan
Figure 13.2.1

Corriegarth 2 Wind Farm
Outline Peat Management Plan

Y:\GIS\Engineering\Projects\4643 Corriegarth 2 SEI\4643 Corriegarth 2 SEI.aprx\4643-REP-038 Fig13.2.1 Site Layout Plan



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ARCUS

- Site Boundary
- Proposed Turbine Location
- Operational Corriegarth Wind Turbines
- Crane Hardstanding
- Access Tracks
- Existing Tracks to be Utilised
- Track Widening Area
- Construction Compound
- Existing Wind Farm Tracks
- Earthworks
- Borrow Pit
- Substation Compound

Peat Depth (m)

- 0- 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

1:20,000 Scale @ A3

0 0.5 1 Km NORTH

Produced By: BM	Ref: 4643-REP-039
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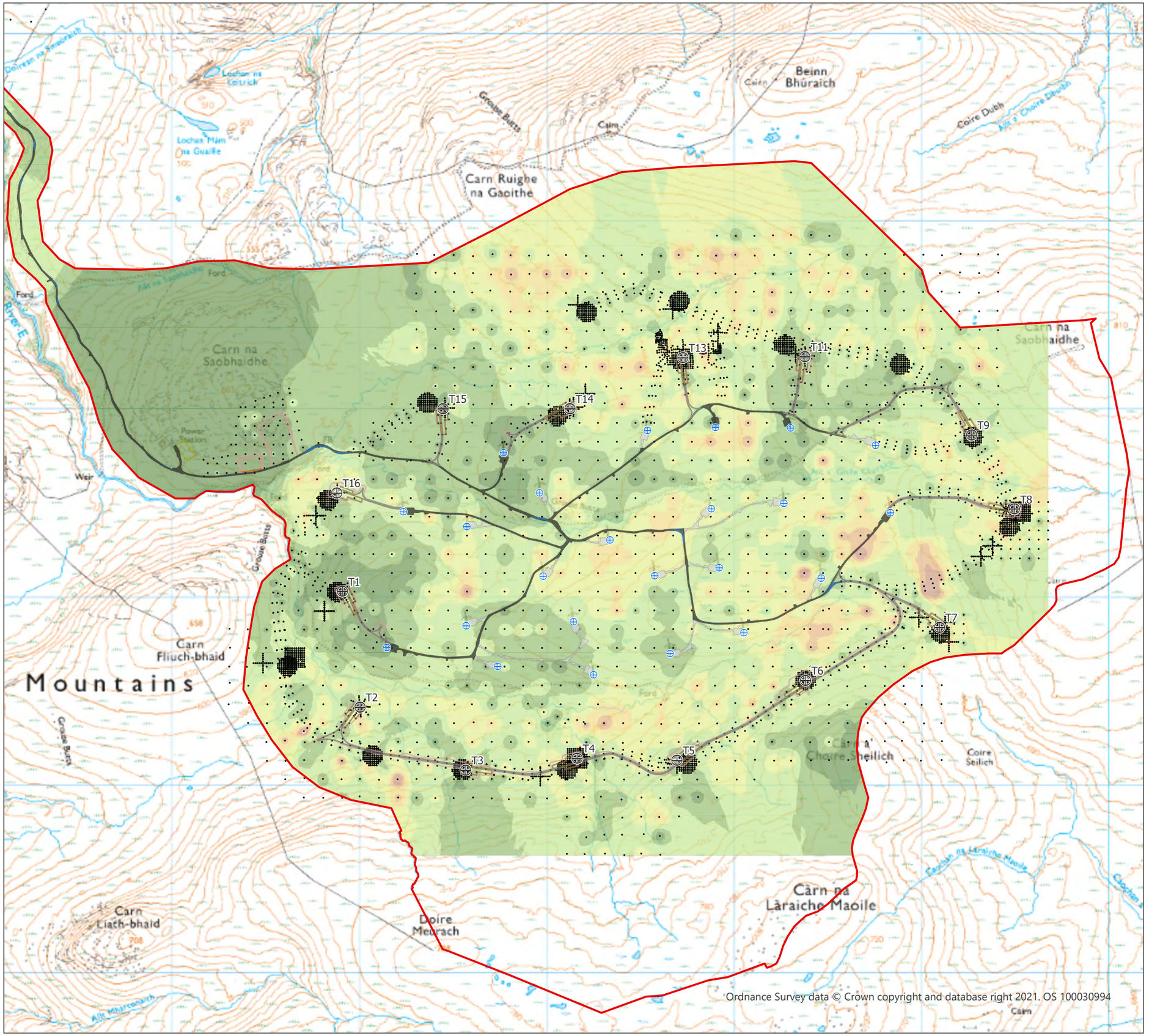
Recorded Peat Depths
Figure 13.2.2

Corriegarth 2 Wind Farm
Outline Peat Management Plan

Y:\GIS\Engineering\Projects\4643 Corriegarth 2 SEI\4643 Corriegarth 2 SEI.aprx\4643-REP-039 Fig13.2.2 Recorded Peat Depths



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ARCUS

- Site Boundary
- Proposed Turbine Location
- Operational Corriegarth Wind Turbines
- Crane Hardstanding
- Access Tracks
- Existing Tracks to be Utilised
- Track Widening Area
- Construction Compound
- Existing Wind Farm Tracks
- Earthworks
- Borrow Pit
- Substation Compound
- Peat Probe Locations

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

1:20,000 Scale @ A3

0 0.5 1 Km

NORTH

Produced By: BM	Ref: 4643-REP-040
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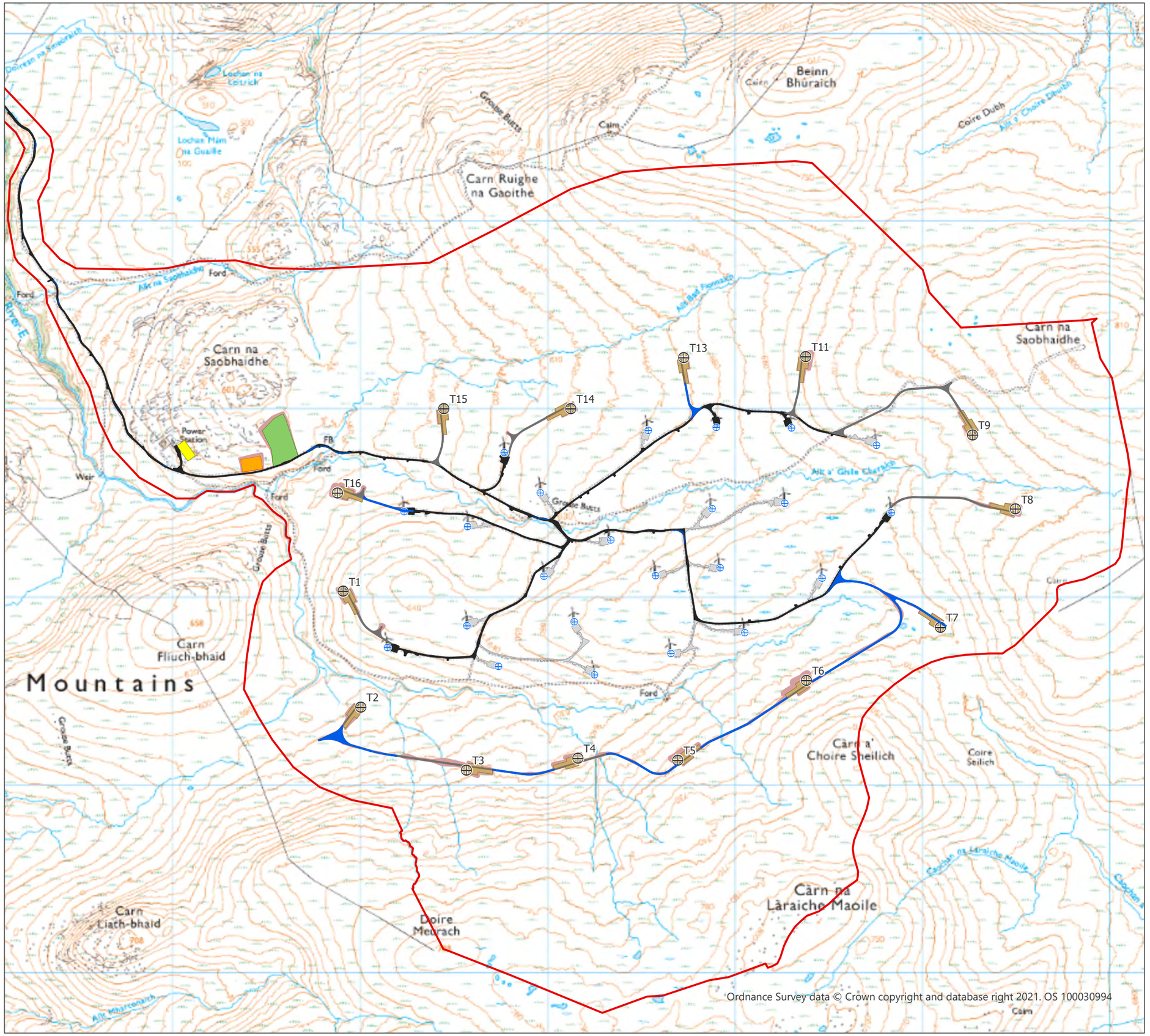
Interpolated Peat Depths
Figure 13.2.3

Corriegarth 2 Wind Farm
Outline Peat Management Plan

Y:\GIS\Engineering\Projects\4643 Corriegarth 2 SEI\4643 Corriegarth 2 SEI.aprx\4643-REP-040 Fig13.2.3 Interpolated Peat Depths



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ARCUS

- Site Boundary
- Proposed Turbine Location
- Operational Corriegarth Wind Turbines
- Floating Track
- Crane Hardstanding
- Access Tracks
- Existing Tracks to be Utilised
- Track Widening Area
- Construction Compound
- Existing Wind Farm Tracks
- Earthworks
- Borrow Pit
- Substation Compound

1:20,000 Scale @ A3

0 0.5 1 Km NORTH

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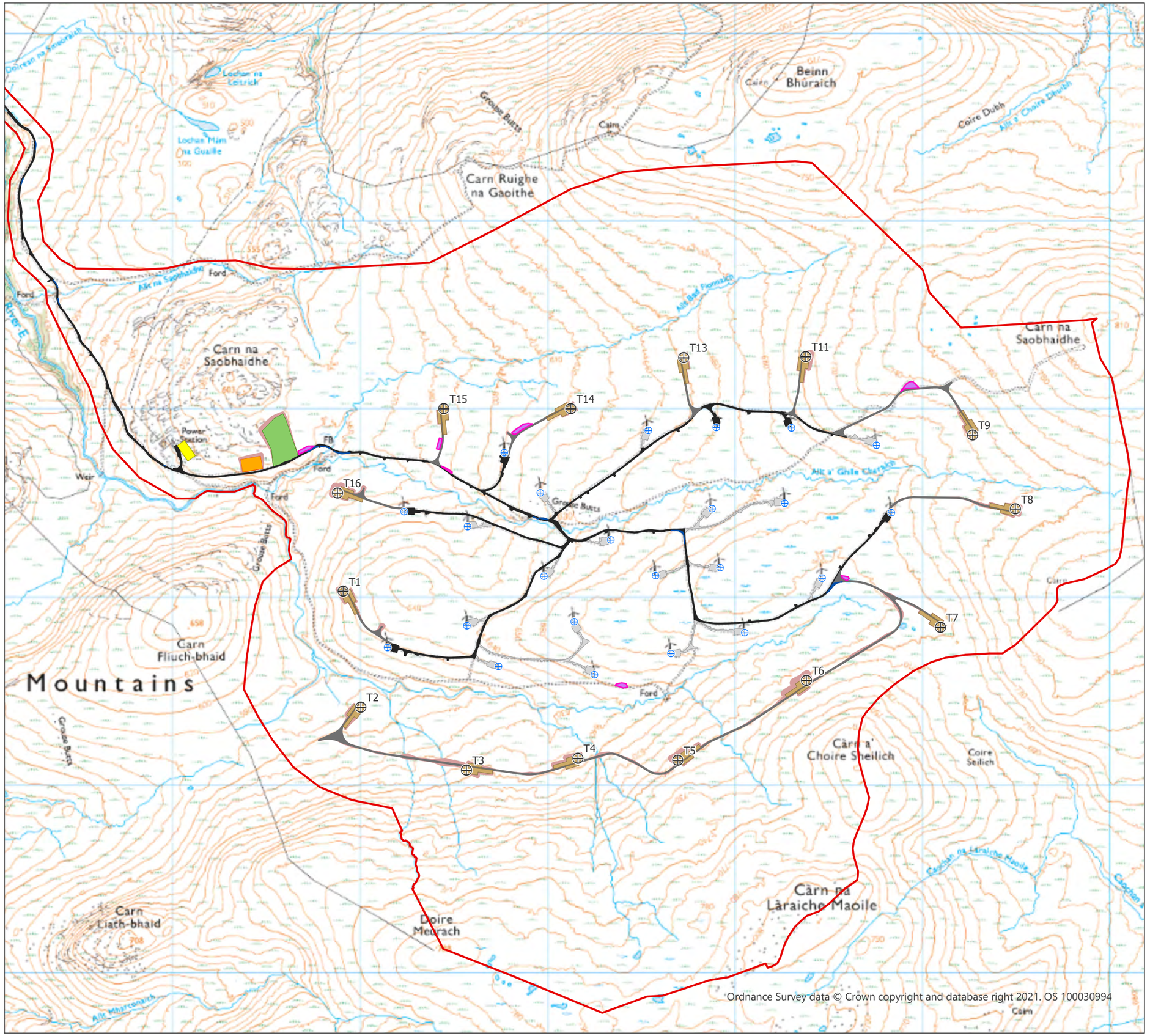
Extent of Floating Tracks
Figure 13.2.4

Corriegarth 2 Wind Farm
Outline Peat Management Plan

Y:\GIS\Engineering\Projects\4643 Corriegarth 2 SEI\4643 Corriegarth 2 SEI.aprx\4643-REP-041 Fig13.2.4 Extent of Floating Tracks



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ARCUS

- Site Boundary
- Proposed Turbine Location
- Operational Corriegarth Wind Turbines
- Temporary Peat Storage Area
- Crane Hardstanding
- Access Tracks
- Existing Tracks to be Utilised
- Track Widening Area
- Construction Compound
- Existing Wind Farm Tracks
- Earthworks
- Borrow Pit
- Substation Compound

1:20,000 Scale @ A3

0 0.5 1 Km NORTH

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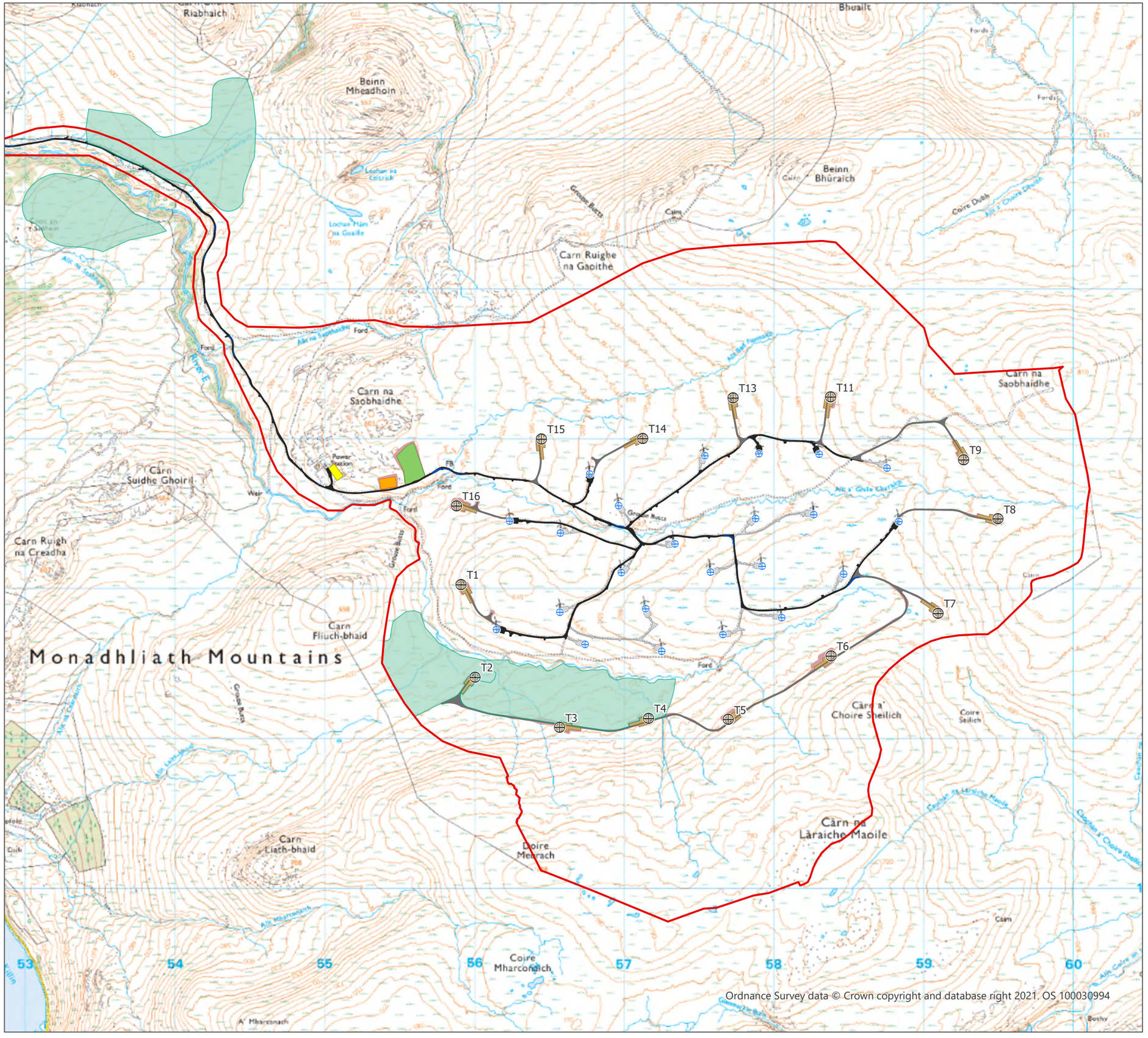
Temporary Peat Storage Areas
Figure 13.2.6

Corriegarth 2 Wind Farm
Outline Peat Management Plan

Y:\GIS\Engineering\Projects\4643 Corriegarth 2 SEI\4643 Corriegarth 2 SEI.aprx\4643-REP-042 Fig13.2.6 Temporary Peat Storage Areas



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ARCUS

- Site Boundary
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- Earthworks
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- Substation Compound

1:25,000 Scale @ A3

0 0.6 1.2 Km

NORTH

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Peat Restoration Areas
Figure 13.2.7

Corriegarth 2 Wind Farm
Outline Peat Management Plan

Y:\GIS\Engineering\Projects\4643 Corriegarth 2 SEI\4643 Corriegarth 2 SEI.aprx\4643-REP-043 Fig13.2.7 Peat Restoration Areas

APPENDIX 2 - EARTHWORKS VOLUMES AND CALCULATIONS

4643 - Corriegarth SEI - Peat and Borrow Pit Excavation and Re-Use Calculations

	Peat Excavation				Peat Reinstatement and Re-use			
Infrastructure	**Total Area of Infrastructure inc EW.**	**Peat Cut Volume**	**Total Acrotelm Excavation Est.**	**Total Catotelm Excavation Est.**	**Areas of Reinstament**	**Total Peat Re-use Est.**	**Total Acrotelm Re-use Est.**	**Total Catotelm Re-use Est.**
Turbines								
T1	9229	6203	4614.5	1588.5	3771	3016.8	1508.4	1508.4
T2	8148	9852	4074	5778	2690	2152	1076	1076
T3	9749	9986	4874.5	5111.5	4291	3432.8	1716.4	1716.4
T4	9749	12146	4874.5	7271.5	4291	3432.8	1716.4	1716.4
T5	11025	8340	5512.5	2827.5	5567	4453.6	2226.8	2226.8
T6	13430	11862	6715	5147	7972	6377.6	3188.8	3188.8
T7	7375	9081	3687.5	5393.5	1917	1533.6	766.8	766.8
T8	9043	13595	4521.5	9073.5	3585	2868	1434	1434
T9	8204	8223	4102	4121	2746	2196.8	1098.4	1098.4
T11	8153	5071	4076.5	994.5	2695	2156	1078	1078
T13	6770	7376	3385	3991	1312	1049.6	524.8	524.8
T14	7724	6510	3862	2648	2266	1812.8	906.4	906.4
T15	7216	4150	3608	542	1758	1406.4	703.2	703.2
T16	9083	10728	4541.5	6186.5	3625	2900	1450	1450
SUB-TOTAL	**124898**	**123123**	**62449**	**60674**	**48486**	**38788.8**	**19394.4**	**19394.4**
Tracks								
Track - T1	3983	2421	1991.5	429.5	2733	2186.4	1093.2	1093.2
Track- T2-T3 and Turning Area CUT	5542	5929	2771	3158	4542	3633.6	1816.8	1816.8
Track - T2-T3	3435	Floating Tracks	0	0	2556	2044.8	1022.4	1022.4
Track - T3-T4	2031.25	Floating Tracks	0	0	1944	1555.2	777.6	777.6
Track - T4-T5	4050	Floating Tracks	0	0	2340	1872	936	936
Track - T5-T6	4687.5	Floating Tracks	0	0	2532	2025.6	1012.8	1012.8
Track - T6	4006.25	Floating Tracks	0	0	6180	4944	2472	2472
Track - T7	4031.25	Floating Tracks	0	0	1170	936	468	468
Track - T8	4425	Floating Tracks	0	0	3540	2832	1416	1416
Track - T9 (Partial Upgrade)	7262	6725	3631	3094	6762	5409.6	2704.8	2704.8
Track - T11	2446	1038	1038.0	0.0	1946	1556.8	778.4	778.4
Track - T13	2150	Floating Tracks	0	0	1740	1392	696	696
Track - T14	2947	1285	1285.0	0.0	2447	1957.6	978.8	978.8
Track - T15	805	436	402.5	33.5	305	244	122	122
Track - T16	1406.25	Floating Tracks	0	0	1260	1008	504	504
SUB-TOTAL	**53208**	**17834**	**11119**	**6715**	**41997**	**33598**	**16799**	**16799**
Construction Compound								
Construction Compound	5000	1500	1500	0	5000	1500	1500	0
SUB-TOTAL	**5000**	**1500**	**1500**	**0**	**5000**	**1500**	**1500**	**0**
Substation								
Substation Compound	12112	6056	6056	0	1211.2	605.6	605.6	0
SUB-TOTAL	**12112**	**6056**	**6056**	**0**	**1211.2**	**605.6**	**605.6**	**0**
Borrow Pits								
BP1	35339	17669.5	17669.5	0	35339	35339	17669.5	17669.5
SUB-TOTAL	**35339**	**17669.5**	**17669.5**	**0**	**35339**	**35339**	**17669.5**	**17669.5**
TOTAL Excavation Volume		**166183**	**98793**	**67389**	**132033**	**109831**	**55968**	**53863**
. +10% contingency for Bullking		**16618**	**9879**	**6739**				
TOTAL		**182801**	**108673**	**74128**				
Peat Re-use in Habitat Management Plan						72970	52705	20265
SUB-TOTAL						72969.8	52704.5	20265.2
TOTAL PEAT EXCAVATION and REUSE	**230557**	**182801**	**108673**	**74128**		**182801**	**108673**	**74128**
						0	**0**	**0**

CORRIEGARTH 2 WIND FARM

SEI Report – Volume 3 – Technical Appendices

TA A13.1 Peat Slide Risk Assessment

CORRIEGARTH 2 WIND FARM
SEI REPORT

SEI TECHNICAL APPENDIX A13.1

PEAT SLIDE RISK ASSESSMENT

APRIL 2022

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TABLE OF CONTENTS

1 INTRODUCTION

1.1 Background

Arcus Consultancy Services were commissioned by Corriegarth 2 Wind Farm Limited to carry out a Peat Slide Risk Assessment (PSRA) for amendments to the proposed Corriegarth 2 Wind Farm (The Revised Development) located in The Scottish Highlands centred at National Grid Reference (NGR) 257500, 813100. Following submission of an application for consent (ECU00002175) in January 2021 for an onshore wind development consisting of 16 turbines and associated infrastructure, consultation has taken place with relevant stakeholders.

This Supplementary Environmental Information (SEI) Report provides further, and updated, environmental information in light of revisions to the Development. The Applicant has revised the Development by:

- Removal of T10 & T12, therefore reducing the number of turbines from 16 to 14;
- Relocation of eight turbines (T1, T2, T8, T9, T11, T13, T14, T15), adjustments to turbine crane hardstandings and access tracks; and
- Relocation of ancillary infrastructure, including borrow pit & substation compound.

The Revised Development Site Layout is shown on Figure 13.1.1 appended with this report in Appendix A.

1.2 Scope and Purpose

This PSRA provides factual information on the peat survey results relating to the proposed turbine locations. Desk-based information and site surveys have been utilised to assess the potential risk of any peat landslide. The methodology adopted and details on the assessment are outlined in Sections 3, 4 and 5. The assessment has been undertaken in accordance with Scottish Government Guidance[1] in assessing the likelihood and consequence of such an event.

The main authors of the PSRA are Gregor Hirst (BSc Hons) a Senior Geo-Environmental Engineer at Arcus with 6 years' experience in ground investigation and assessment and David Ballentyne (BSc Hons), a Principal Engineer at Arcus with over 15 years in ground condition assessment, 9 of which has been in the Renewables sector specialising in peat survey and assessments for onshore wind developments. Gregor and David will be supported by Tomos Ap Tomos (BEng Hons), a Civil Engineer of over 25 years and Technical Director of Engineering at Arcus.

The references to EIAR chapters and associated documents relates to the Environmental Impact Assessment Report prepared by Arcus and submitted to the Scottish Government for Corriegarth 2 Wind Farm Limited in December 2019, associated with the Development 'Corriegarth 2 Wind Farm' and the Revised Development and associated documents as part of the provision of SEI.

[1] https://www.gov.scot/publications/peat-landslide-hazard-risk-assessments-best-practice-guide-proposed-electricity/

2 SITE INFORMATION

2.1 Site Description and Topography

The Site is located south-east of Loch Ness and approximately 15 km north-east of Fort Augustus, and the site boundary is approximately 1,694 hectares (ha), as shown on Figure 13.1.1. The Site incorporates the boundaries of the operational Corriegarth Wind Farm in its entirety. The Site is centred on National Grid Reference (NGR) 257500, 813100.

The topography of the Site and immediate vicinity is complex and largely consist of rural upland farmland used for grazing and grouse shooting. The Site itself varies significantly in elevation ranging from approximately 550 - 720 m Above Ordnance Datum (AOD) in the central part of the Site, which is within the Operational Corriegarth Wind Farm, before sloping west along the access track towards the B862, with elevations reducing to approximately 200 m AOD. A number of hills are present in the immediate vicinity of the Site boundary while the summit of Carn na Saobhaidhe is within the western site area, at 603 m AOD.

2.2 Published Geology

2.2.1 Superficial Soils

Published British Geological Survey (BGS) mapping[2] of superficial soils indicates the majority of the site to be underlain by peat with small pockets of till, glacial sand and gravel in the east of the Site. Figure 13.1.2 illustrates the published Superficial Soils.

2.2.2 Solid Geology

Published bedrock geology mapping indicates the Site to be underlain by a variety of bedrock geology. The Gairbeinn Pebbly Psammite Member in the form of Pebbly Psammite dominates the northern sector of the Site while the Monadhliath Semipelite Formation (Semipelite) underlies the southern sector.

The Loch Laggan Psammite Formation, which is predominantly micaceous and feldspathic psammite with thin semipelite beds, covers the central sector of the Site other than a thin band of the Ruthven Semipelite Formation, in the form of Semipelite and Gneissose, which runs across the central western area.

Small pockets of the North Britain Siluro-Devonian Calc-Alkaline Dyke Suite (Felsite) are scattered sporadically across the Site, and the Foyers Igneous Complex (Quartz-Diorite) is present at the north-western extent, near the site entrance.

Figure 13.1.3 illustrates the published Solid Geology

2.2.3 Geomorphology

Geomorphological mapping can act as a primary instrument in highlighting geological risk factors when considering peat slides. The Scottish Government Guidance provides 5 basic features in which a geomorphological map should convey:

- The position of major slope breaks (e.g. convexities and concavities);
- The position and alignment of major natural drainage features (e.g. peat gullies and streams);
- The location and extent of erosion complexes (e.g. haggs and groughs, large areas of bare peat);
- Outlines of past peat landslides (including source areas and deposits), if visible; and

[2] British Geological Survey (BGS) 2019: http://mapapps2.bgs.ac.uk/geoindex/home.html

- The location, extent and orientation of cracks, fissures, ridges and other prefailure indicators.

Figure 13.1.4 'Geomorphology Map' has been prepared to inform a baseline information of the Site with consideration given to existing site conditions through site visit and aerial photography, slope angles and geomorphological data.

The Sites hydrology is dominated by the River E and its tributaries, the majority of which run from east to west across the site with its remaining tributaries flowing north from the southern sector of the Site. The River Gourag is also present in the western sector of the site flowing in a southerly direction, eventually running into the River Foyers.

Across the Site as a whole, there is little evidence of past peat failure; however, four possible historic peat slide/fissure locations are recorded within the southern sector of the Site, two of which are in an area of intensive peat haggs and two are in an area of sparse peat haggs. Notably all are located on the northern slope of Càrn na Làraiche Maoile in areas recorded as having peat at depths of between 1.0 m and 1.5 m.

The possible historic peat slide/fissure are located approximately 200 m to 300 m south of T3, T4 and T5; however, the turbines are located at a lower altitude where the slope is at a shallower gradient which would reduce the slide risk at these locations. Photographs are provided in Appendix A.

There is evidence of intensive peat hagging within the northern, eastern and south-eastern areas of the site along with sparse areas of peat haggs in southern, central and north-western areas.

The Site has varied and extensive slopes with numerous hills located around the boundary of the Site. The majority of the Site where the turbines are located is dominated by 4^{o} to 12^{o} slopes, while within the wider Site area, crests of up to 27^{o} are present around the area of Carn na Saobhaidhe in the western sector of the Site. Infrastructure on or in proximity to slopes has been carefully designed with respect to peat and topography. The Slope Gradients are included in Figure 13.1.7.

2.2.4 Hydrology and Hydrogeology

The Site lies within the catchments of the River E and River Foyers.

The River E flows east to west across the core study area and rises in the southeast of the Site before discharging into Loch Mhor (also known as Loch Garth). The River E has an overall SEPA status of "Moderate".

The Allt Bad Fionnaich and Allt a' Ghille Charaic tributaries of the River E rise approximately 800 m and 900 m east of the Site boundary respectively and flow west across the Site to join River E at the southwest boundary of the Site. A number of small unnamed tributaries of the River E are present at the south of the Site, flowing south to north.

The River Gourag, a tributary of the River Foyers, exists in the west of the Site. It issues from Loch Mohr and flows south into the River Foyers. The River Gourag has an overall SEPA status of "Good".

BGS 1:50,000 digital mapping and the BGS GeoIndex shows the bedrock aquifer underlying the Study Area to consist of the Grampion Group and Unnamed Igneous Intrusion, late Silurian to early Devonian. These rocks are classified by the BGS as a 'low productivity aquifer' with small amounts of groundwater in the near-surface weathered zone and secondary fractures.

2.2.5 Other Baseline Information

The information sources listed in Section 2.3 of the PSRA indicates that BGS Online GeoIndex was consulted, which has provided some context around historical landslide.

Section 2.2.3 Geomorphology above describes historic failures noted following a review of aerial photography and site visits.

The developer provided local information regarding the operational site (provided by the operators of Corriegarth 1 Windfarm), which informed our assessment. Several site visits were completed within Arcus Technical teams, including a visit between our technical advisers and estate representatives to review site conditions, and 'lessons learned' from the initial development. All of the information informed the assessment and overall design of the Development.

2.3 Sources of Information

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

- British Geological Survey - Online GeoIndex [3];
- Ordnance Survey (OS) topographical information;
- Aerial and Satellite photography via Ordnance Survey and Google Earth.
- Soil Survey of Scotland - 'MacAulay Institute for Soil Research' 1984;
- Soil Survey of Scotland - 'Scottish Peat Surveys' 1964;
- Scottish Government (SG) - 'Peat Landslide Hazard and Risk Assessments' December 2017;
- Scottish Government, Scottish Natural Heritage, SEPA (2017) Peatland Survey[4], Guidance on Developments on Peatland;
- The Scottish Government - Scotland's Third National Planning Framework, 2014[5];
- The Scottish Government - Scottish Planning Policy, 2014[6];
- Assessments by other EIA specialists (specifically hydrology and ecology for data on sensitive receptors); and
- Scotland's Environment Interactive Map[7].
- Anecdotal information and discussion from Estate Managers and Construction Contractor from Corriegarth 1.

[3] https://mapapps2.bgs.ac.uk/geoindex/home.html

[4] https://www.gov.scot/publications/peatland-survey-guidance/

[5] https://www.gov.scot/publications/national-planning-framework-3/

[6] https://www.gov.scot/publications/scottish-planning-policy/

[7] https://soils.environment.gov.scot/maps/soil-maps/national-soil-map-of-scotland/

3 GUIDANCE AND METHODOLOGY

3.1 General Guidance on Peat Failure

The SG guidance divides peat instability into two categories[8]: '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 and reports of bog bursts are generally restricted to the Republic and Northern Ireland.

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 blasting or mechanical movement.

Consideration of peat stability should form an integral part of the design of a Wind Farm development. 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 potential instability and movement. The site layout included embedded design measures to avoid deep peat where possible and took consideration of site topography.

3.2 Assessment Approach

This PSRA has been carried out in accordance with Scottish Government (SG) guidance of 2017, titled 'Peat Landslide Hazard and Risk Assessments - Best Practice Guide for Proposed Electricity Generation Developments', Scottish Government.

[8] Scottish Government (2017) Peat Landslide Hazard and Risk Assessments: Best Practice Guide for Proposed Electricity Generation Developments. Prepared for Energy Consents Units Scottish Government, Second Edition, April 2017.

In June 2014, the new 'Scottish Planning Policy' (SPP)[9] and 'National Planning Framework (NPF3)[10] were published. In relation to peat and the assessment of effects on resource, NPF3 references Scottish Natural Heritage 'Scotland's National Peatland Plan[11]'. These policy, framework and guidance documents are therefore also considered in this PSRA. The PSRA undertaken is based on;

- Desk based assessment;
- Site visits;
- Historic peat probing data;
- Further peat probing including infrastructure specific probing; and
- A hazard and risk ranking assessment.

The area of the Development subject to assessment was determined by the emerging Revised Development layout which considered initial findings from desk studies and anticipated peat deposits as well as other physical and environmental constraints.

3.3 Peat Probing Methodology

Initial peat probing (phase one) was undertaken by Arcus as part of the preliminary EIA works, supplemented by existing peat data from the Operational Corriegarth Wind Farm. This was combined with detailed peat probing within the affixed Site layout and immediate vicinity at more detailed level. Preliminary probing consisted of 100 m centres within the proposed area for the locations of the turbines, in this case in the surrounding areas of the existing Operational Corriegarth Wind Farm. Following on from this, the design freeze layout was probed in a more detailed methodology (phase two) comprising 50 m intervals along track centre lines and up to 25 m either side to create a corridor. Probes were undertaken at 10 m centres at turbines in accordance with SG guidance.

Following design iteration revisions, further peat probing was required in order to cover areas not previously probed following the same methodology as the Phase 2 probing.

Further peat probing took place to inform the design evolution of the Revised Development which included the same methodologies as above with detailed probing taking at prospective turbine locations, new track alignments, and a new borrow pit and substation location. The construction compound is still proposed for an area formerly utilised as a compound/borrow area from the operational windfarm construction.

3.4 Development of Hazard Rank

The early stages of the PSRA includes a desk study of existing data, site visits and preliminary peat probing with consideration given to the assessment of wider constraints and the design of the Development layout. Following collection of peat depth data and site reconnaissance information gathering, an assessment was carried out to determine the potential effects on the peat resource from construction activities which would include:

- Construction of tracks;
- Excavation of turbine bases;
- Foundation construction;
- Construction of hardstanding; and
- Temporary Storage of Peat

[9] Scottish Government Scottish Planning Policy (2014): Scottish Planning Policy (SPP) - Scottish Planning Policy - gov.scot (www.gov.scot). (Accessed 12/04/2022)

[10] Scottish Government National Planning Framework 3: https://www2.gov.scot/About/Performance/scotPerforms (Accessed 12/04/2022)

[11] NatureScot (2015) Scotland's National Peatland Plan: Working for our future: https://www.nature.scot/scotlands-national-peatland-plan-working-our-future (Accessed 12/04/2022).

An assessment of the peat depth, slope gradient and other key factors would be undertaken in order to determine a hazard rank calculated zonally across the Site reflecting risk of peat instability/constraint to construction.

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

4 SITE SURVEYS

4.1 Introduction

The existing peat depths across the Site have been determined through a phased survey approach. The survey was initiated to inform the EIA and Site design work while supporting the PSRA.

Initial peat depth surveys were undertaken in August, September and December 2019 comprising the 100 m grid coverage across the Site, as detailed in section 3 in accordance with the phase one approach as detailed in the Scottish Government guidance for investigating peat.

Further peat depth surveys (phase two) was undertaken across several visits between June, July and August 2020. The probe positions for this visit were focussed on the proposed turbine, access tracks and other key infrastructure. 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, an intense 10 m grid across the proposed turbine locations.

Probing for the Revised Development took place between September 2021 and February 2022.

Peat Cores were also undertaken and the findings are discussed in Section 4.4 and details are included in Appendix D.

4.2 Peat Depth

Throughout the peat surveys to date, a total of 4,791 probes were sunk. Of these, 15.5% recorded no peat or peat less than 0.5 m, while 30.7% recorded peat between 0.5 m and 1.0 m. Deep peat (where the depth was greater than >1.0 m) was recorded at 53.8% of locations.

The maximum peat depth recorded was 5.3 m in the south-eastern area of the Site. Generally, peat depths exceeded 1.0 m, which is anticipated with localised generally flat topography and rural upland setting.

Figure 13.1.6 'Interpolated Peat Depths' included in Appendix A illustrates the peat depths across the Site. The distribution of peat deposits along the proposed tracks and infrastructure are shown on Figure 13.1.5 'Recorded Peat Depths' included in Appendix A.

Peat depths at turbines and the wider Site are included in Table 1 and 2 respectively while the general Site survey conditions are illustrated in photographs 1 to 6. Additional photographs are included in Appendix B.

Photograph 1 – Taken in the southern Site area in close proximity to T5, facing south.

Photograph 2 – Taken in the central Site area on an existing track, facing west.

Photograph 3 – Taken in the northern Site area in close proximity to T13, facing north-west

Photograph 4 – Taken in the eastern Site area in close proximity to T8, facing south-west

Photograph 5 – Taken in the eastern Site area in close proximity to T7, facing west

Photograph 6 – Taken in the north-eastern Site area facing south

The peat slide risk assessment was undertaken on the finalised Site layout provided by the design team. Table 1 indicates the average peat depths encountered at each proposed turbine location while Table 2 summarises the peat depths recorded across the entire project.

Table 1 – Peat Depths at Turbines and Associated Hardstand

Proposed Turbine No.	Average Peat Depths at 50 m Radius (m)
T1	0.49
T2	1.38
T3	0.77
T4	1.50
T5	0.80
T6	1.17
T7	1.43
T8	1.46
T9	1.15
T11	0.50
T13	1.15
T14	1.06
T15	0.75
T16	1.14

Table 2 – Peat Depth Summary

Peat Depth Range (m)	No of peat probes	Percentage of Total (%)
0.00 - 0.50	742	15.5
0.51 - 1.00	1471	30.7
1.01 - 1.50	1108	23.1
1.51 - 2.00	1040	21.7
2.01 - 2.50	299	6.2
2.51 - 3.00	105	2.2
3.01 - 3.50	10	0.2
3.51 - 4.00	13	0.3
4.01 - 4.50	2	<0.1
4.51 - 5.00	0	<0.1
5.01 - 5.50	1	<0.1

4.3 Substrate

To assist with the peat slide risk assessment, an estimation of the underlying substrate was obtained during the preliminary site visits, comprising a resistance-based approach at base of probe.

- Gradual refusal – Clay;
- Crunching/Gritty – Weathered Rock/Sand and Gravel; or

- Abrupt Refusal/Hard – Rock

The substrate parameters are only a guide and much of the probing undertaken as part of the detailed peat probe investigations did not consider substrate values during the works, therefore a conservative 'not proven' value is assumed for these probes as included in the Hazard and Exposure Assessment in Section 5 of this report.

4.4 Peat Cores

A series of peat cores were obtained from seven of the 14 proposed turbine locations and a section of proposed track in order to further characterise the peatland across the Site. The methodology in which the peat coring was undertaken was guided by the Peatland Survey (2017) *Guidance on Developments on Peatland*[12], commissioned by the Scottish Government, Scottish National Heritage 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.

Characteristics of the peat were recorded to be generally consistent across the site with a trend in the changes of the peat properties with depth. Firm ground was recorded at all coring locations, which could be an indicator of low moisture content within the upper horizons of the peat. This assumption is strengthened by the fact that upon squeezing, minimal volumes of liquid were extruded by the soil matrix, especially in the upper soil horizons where less decomposition has occurred and higher volumes of free-flowing liquids could be expected. Details on botanical and vegetation parameters are included in **Chapter 7: Ecology** of the EIA Report and the associated Ecology Technical Appendices.

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. Von Post values ranged from H2 to H8 within the peat cores obtained at the Development with averages across different depth ranges presented in Table 3.

Table 3 –Von Post value by depth

Depth range (m)	No of peat cores	Low H Value	High H Value	Mean H Value
0.0 – 0.5	8	2	7	4.1
0.5 -1.0	8	4	8	6.0
1.0 – 1.5	5	6	8	7.4

The definitions for the mean values identified at each depth range are as follows:

- H4 - Slightly decomposed peat containing some amorphous material. Strongly muddy brown water but no peat passes between the fingers. Residue is somewhat pasty.
- H6 - Moderately decomposed peat with a fair amount of amorphous material and indistinct plant structure. On pressing, about one third of the peat passes between the fingers. Residue is strongly pasty, but shows the plant structure more distinctly than in unsqueezed peat.
- H7 - Strongly decomposed peat with much amorphous material and faintly recognisable plant structure. On squeezing, about one half of the peat is extruded. The water is very dark in colour.

Fine fibres were recorded at a high content within the peat, particularly in the upper horizons with quantities reducing to a moderate content with depth. Similarly, the quantity of coarse fibres generally reduced with depth, typically from moderate to low content.

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

Wood remains were only recorded at a low content within the upper soil horizons at T9; no other evidence of wood remains were encountered during the investigation.

The vast majority of peat at the site was recorded as Dark Brown in colour. Exceptions to this included at T7 where Brown peat was recorded and T9 where Black Brown peat was noted. Black Brown peat was also recorded from 0.0 – 0.5 m at T4 and >0.5 m at T16.

HAZARD AND EXPOSURE ASSESSMENT

4.5 Background

A 'Hazard Ranking' system has been applied across the Site based on the analysis of risk of peat landslide 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 study area.

4.6 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 PSRA assessment is outlined in the following sub sections.

4.7 Hazard Assessment

The potential for a peat slide to occur during the construction of a windfarm depends on several factors, the importance of which can vary from Site to Site. The principal factors considered in determining the hazard rank are:

- Peat depth;
- Slope gradient;
- Substrate material;

Further consideration is given to the conditions which surround each probe locations, therefore the assessment draws on the presence of the following to support the principal factors:

- Evidence of instability or potential instability (is there existing peat hags, cracks or other surface instabilities);
- Vegetation cover (is the vegetation intact or was there areas of bare peat); and
- Hydrology (the presence of surface watercourses/ditches etc).

Without a sufficient peat depth and a prevailing slope, peat slide hazard would be negligible for the Development, however the substrate material is also considered a relevant factor in relation to the mechanics of slide.

All factors that contribute to the Hazard Assessment are considered within this assessment vegetation noted in section 4.4, Appendix D of the PSRA and in full detail in Chapter 7 Ecology of the EIA Report. while habitat and hydrology are included in the Hazard Rank Assessment Records of the PSRA.

4.8 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 (<0.5m)	1
Thin Peat (0.5 – 1.0m)	2
Deep Peat (>1.0m)	3*
Deep Peat (>3.0)	8*

* - Note that deep peat generally occurs in areas of shallow gradient and does not generally occur on the steeper gradients.

Table 6: Coefficients for Substrate

Substrate Material	Substrate Coefficients
Sand/gravel (G)	1
Rock (R)	1.5
Clay (C)	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
>15 to 30	Medium
>30 to 50	High
> 50	Very High

Across the development area, using peat depths recorded in survey work from 2018 to 2021, the average peat depth was calculated to be 1.20m. The deepest peat was found

to be in flat lying bog areas and the Revised Development has been reconfigured so tracks and other infrastructure avoids these areas.

The substrate evaluation gathered during the survey primarily recorded a gravel or rock substrate beneath the peat. Locally, clay was recorded. The findings were consistent with the superficial soils mapping which illustrated that the site was predominantly peat with localised glacial till and also some areas of rock outcrop.

Utilising the OS 5m DTM gradient with the peat thicknesses recorded and the substrate, estimation, the hazard rating calculations were derived and this indicated a range of risk ratings, with 2685 of the 4791 data points presented Low or Negligible stability risks (pre-mitigation), 1728 rated as Medium risk, 366 rated as High risk, and 12 Very High Risk Location.

The 'Very High' ratings were located predominantly across the southern Site area, entirely out with the infrastructure footprint. 'High' ratings were also located predominantly in the Southern Site area, however these were impacting on infrastructure including:

- T1 crane hardstanding;
- track between the existing windfarm and T7;
- tracks and turbine infrastructure between T7 and T3 (including T3, T4, T5 and T6); and the track between T3 and T2.

Only localised 'High' ratings were recorded in the north although these were not impacting on infrastructure footprint directly

While the risk rating coefficient was derived primarily from the peat depths, gradients and conservative estimation of substrate, the stability analysis recorded most of these locations to be stable in terms of peat stability (greater than 1.0 Factor of Safety (FoS)) FoS varied between 0.7 and 6.3 for the 'High' and 'Very High' hazard rating locations and the four points which consisted of both a 'High' or 'Very High' risk rating and an unstable FoS (<1.0) were all noted to be out with the proposed infrastructure for the development. The Peat Stability Assessment is explained in Section 4.9. Risk Rating locations are illustrated on Figure 13.1.8 Risk Rating.

4.9 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 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 (Hobbs, 1986,1987).

Assumed geotechnical parameters have been sought from various literature values and for the purposes of the assessment in this report have the following average values have been utilised in the formula to inform the stability assessment;

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.

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

In accordance with the best practice method, F values of <1.0 indicate slopes that would experience failure under the modelled conditions and as such are considered areas of high risk. However, Boylan et al (2008) indicate that a relatively high value of F=1.4 should be used to identify slopes with the potential for instability. Adopting a similar and more onerous approach, high risk areas are indicated where F is <1.0, medium risk areas are indicated between 1.01 to 1.50, low risk between 1.51 and 2.00 and very low/negligible values > 2.0.

Using digital terrain modelling and GPS co-ordinates of each peat probe, a factor of Safety, F has been calculated for each probe location which has been created through ArcGIS Spatial Analyst tools. The 'Factor of Safety Plan' is shown on Figure 13.1.9.

4.10 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 existing Operational Corriegarth Wind Farm infrastructure, 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.

4.11 Exposure Rating

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

Table 8: Coefficients for Receptor Type

Receptor	Receptor Coefficients
Tracks/footpaths	2
Non-critical infrastructure, minor/private roads	3
Minor watercourses and tributaries, critical infrastructure (pipelines, motorways, dwellings, business properties).	6
Residential Properties/Community, Watercourses/Lochs, important habitat	8

Table 9: 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 10: 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 Hazard Rating Coefficient, the risk to stability can be ranked as set out in Table 11.

Table 11: Exposure Rating

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

4.12 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 12.

Table 12: Rating Normalisation

Hazard Rating		Exposure Rating	
Current Scale	**Normalised Scale**	**Current Scale**	**Normalised Scale**
< 6 Negligible	1	<5 Very Low	1
6 to 12 Low	2	5 to 15 Low	2
13 to 24 Medium	3	16 to 30 High	3
25 to 30 High	4	31 to 50 Very High	4
>30 Very high	5	>50 Extremely High	5

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

5 HAZARD RANKING

Having identified the rating coefficients as defined in Section 5 of this report, 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 13 and 14 below:

Table 13 - 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 14 - 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 13 hazard zones using the approach in Section 5. A summary of the Hazard Ranking result for each identified area is summarised in Table 15 and is presented in Figure 13.1.10 'Hazard Ranking Zonation Plan'.

It should be noted that hazard rankings are calculated independently of FoS ratings presented in Figure 13.1.9 'Factor of Safety Plan' with the zones detailed in Table 15 established following the approach outlined in Section 5.

6 SLIDE RISK AND MITIGATION

6.1 General

This PSRA has shown the Site to be generally of low hazard ranking with areas of moderate risk across the most southern track and at T2, T3, T4, T5 and T6 and locally at T16 and a section of track, see Figure 13.1.10.

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

While the site layout design includes embedded design measures in relation to avoiding deep peat, specific recommended mitigation in low and medium ranked areas are proposed, and it is necessary for detailed design and construction of the Development infrastructure to be undertaken in a competent and controlled manner.

The embedded mitigation and good practice measures are set out in Table 15. It should be noted that the mitigation measures defined are not exclusive and other forms of mitigation may well be required and should be developed by designers and implemented during construction of the scheme.

Table 15 – Hazard Rank

Hazard Area and Infrastructure		**Unmitigated Hazard**		**Mitigated Hazard**	
Hazard Area	**Infrastructure Affected**	**Ranking**	**Key Aspects**	**Specific Actions**	**Ranking**
H1	Existing Track, Existing Substations Proposed Track, Construction Compound, Substation, Borrow Pit 1	Low	Location and topography: Main access track to site from the public road, western face of Carn na Saobhaide. The former borrow pit and operational substation are located in this area. Locally steep slopes but gently sloping north-west towards site entrance. The proposed borrow pit and substation are located in this zone. Geomorphology: River E runs north west to south east. Sparse Peat Hagging to the north of the Zone. Peat Depth: (min) 0.9m - (max) 2.2m. Average 1.55m Slope Gradient: 0° to 30°	Best practice construction methods should be sued during borrow pit extraction and reinstatement and construction of the substation See Section 6.3 for further details of Proposed Mitigation.	Low

			Exposure: Proposed infrastructure, minor watercourses and existing tracks.		
H2	T16, Proposed Access Track	Moderate	Location and topography: West of the Site – Localised steep areas, sloping down to north-west. Geomorphology: Tributary of River E runs west to east along northern Zone area. Localised intensive Peat hagging in northern and western Zone areas. Peat Depth: (min) 0.15m - (max) 2.74m. Average: 1.19m Slope Gradient: 0° to 30° Exposure: Proposed Infrastructure, minor watercourse, peat haggs.	Micro-siting in to areas of thinner peat is recommended, where required. In areas where peat depths exceed 1m, it is recommended that floating track construction methods should be adopted. Provision of a Geotechnical Risk Register to be maintained through pre-construction, construction and operational development stages. Appointment of a specialist geotechnical engineer. Adoption of best practice methods to manage drainage and minimise erosion on steep slopes. Monitoring programme for peat slide throughout the construction period should be considered. See Section 6.3 for further details of Proposed Mitigation.	Low
H3	T15, T14 Proposed Access Track	Low	Location and topography: North West of the Site – Generally flat	Micro-siting in to areas of thinner peat is	Low

			Geomorphology: Tributary watercourse of River E runs south west to north east along the northern Site area. Localised spare peat hagging in northern zone area. Peat Depth: (min) 0.01m - (max) 2.90m. Average: 0.89m Slope Gradient: 0° to 10° Exposure: Proposed Infrastructure, minor watercourse, peat haggs.	recommended, where required. Adoption of best practice methods for excavations and for managing drainage in excavations works. Monitoring programme for peat slide throughout the construction period should be considered. See Section 6.3 for further details of Proposed Mitigation.	
H4	T13, Proposed Access Track	Low	Location and topography: Sloping down to the west gently Geomorphology: small Tributaries to River E running west to east along central Site Area. Multiple artificial drainage sites in southern zone area. Sparse peat hagging in centre and south eastern zone area. Intensive peat hagging in northern zone area. Peat Depth: (min) 0.1m (max) 3.20m. Average: 1.52m Slope Gradient: 0º to 10º Exposure: Proposed Infrastructure, minor watercourse, peat haggs.	Micro-siting in to areas of thinner peat is recommended, where required. In areas where peat depths exceed 1m, it is recommended that floating track construction methods should be adopted. Adoption of best practice methods to manage drainage in excavations works. Monitoring programme for peat slide throughout the construction period should be considered. See Section 6.3 for further details of Proposed Mitigation.	Low

H5	T11 and Proposed Access Track	Low	Location and topography: North section of the Site sloping down westward gently –, Geomorphology:. Intensive peat haggs located adjacent to the east of T11. Sparse peat haggs in the northern zone area and on T11.. Peat Depth: (min) 0.00m - (max) 3.2m. Average: 0.83m Slope Gradient: 0° to 10° Exposure: Proposed Infrastructure, minor watercourse, peat haggs.	Micro-siting in to areas of thinner peat is recommended, if required. Adoption of best practice methods to manage drainage in excavations works. Monitoring programme for peat slide throughout the construction period should be considered. See Section 6.3 for further details of Proposed Mitigation.	Low
H6	T9, Proposed Access Track, existing Wind Turbine and existing Track	Low	Location and topography: North east section of the Site – Generally flat, sloping upwards to the east towards 'Carn na Saobhaidhe' Geomorphology: River E dissipates at Southern zone area. Intensive peat haggs throughout. Peat Depth: (min) 0.05 m - (max) 3.00m. Average: 1.14 m Slope Gradient: 0° to 15° Exposure: Proposed Infrastructure, minor watercourse, peat haggs.	Micro-siting in to areas of thinner peat is recommended, if required. Adoption of best practice methods to manage drainage in excavations works. Provision of a Geotechnical Risk Register to be maintained through pre-construction, construction and operational development stages. Appointment of a specialist geotechnical engineer. Adoption of best practice methods to manage drainage and	Low

				minimise erosion on steep slopes. Monitoring programme for peat slide throughout the construction period should be considered. See Section 6.3 for further details of Proposed Mitigation.	
H7	T8 and Proposed Access Track	Low	Location and topography: East section of the Site – Generally flat, sloping upwards to the east of T8. Geomorphology: Tributary of River E runs west to east north of T8 in northern zone area. Intensive peat haggs throughout. Peat Depth: (min) 0.05 m - (max) 4.15m. Average: 1.57 m Slope Gradient: 0° to 15° Exposure: Proposed Infrastructure, minor watercourse, peat haggs.	Micro-siting in to areas of thinner peat is recommended, if required. In areas where peat depths exceed 1m, it is recommended that floating track construction methods should be adopted. Adoption of best practice methods to manage drainage during excavation works. Monitoring programme for peat slide throughout the construction period should be considered. See Section 6.3 for further details of Proposed Mitigation.	Low

H8	T7 and Proposed Access Track	Low	Location and topography: East section of the Site – Generally flat, sloping upwards to the east of T7. Geomorphology: River E dissipates at Southern zone area. Intensive peat haggs throughout, some area of exposed peat in the southern zone area. Peat Depth: (min) 0.04 m - (max) 3.62m. Average: 1.44 m Slope Gradient: 0° to 15° Exposure: Proposed Infrastructure, minor watercourse, peat haggs, exposed bare peat.	Micro-siting in to areas of thinner peat is recommended, if required. In areas where peat depths exceed 1m, it is recommended that floating track construction methods should be adopted. Adoption of best practice methods to manage drainage in excavations works. Monitoring programme for peat slide throughout the construction period should be considered. See Section 6.3 for further details of Proposed Mitigation.	Low
H9	T4, T5, T6, Proposed Access Track	Moderate	Location and topography: South East Site area extending to southern Site area – steeply sloping to the south towards Carn na Laraiche Maoile. Geomorphology: Tributary watercourses run north west to south east throughout the zone. Sparse peat hagging throughout with the exception of the north and east of T6 in the eastern zone area which exhibits intensive peat hagging. Some localised bare peat to	Micro-siting in to areas of thinner peat is recommended, if required. In areas where peat depths exceed 1m, it is recommended that floating track construction methods should be adopted. Provision of a Geotechnical Risk Register to be maintained through pre-construction, construction and	Low

			the extreme north east of the zone. Peat Depth: (min) 0.05m - (max) 4.15m. Average: 1.57m Slope Gradient: 0° to 30+° Exposure: Proposed Infrastructure, minor watercourse, peat haggs, exposed bare peat.	operational development stages. Appointment of a specialist geotechnical engineer. Adoption of best practice methods to manage drainage and minimise erosion on steep slopes. Monitoring programme for peat slide throughout the construction period should be considered. Best practice construction methods should be sued during borrow pit extraction and reinstatement. See Section 6.3 for further details of Proposed Mitigation.	

H10	T2, T3, Proposed Access Track	Moderate	Location and topography: Southern Site Area – Zone slopes upwards towards 'Doire Meurach'. Geomorphology: Tributaries to River E run north to south across zone, evidence of artificial drainage throughout the zone, sparse peat hagging northern and southern zone areas. Peat Depth: (min) 0.00m - (max) 2.90m. Average: 1.04m Slope Gradient: 0° to 30+° Exposure: Proposed Site Infrastructure, peat haggs, minor watercourse, artificial drainage.	Micro-siting in to areas of thinner peat is recommended, if required. In areas where peat depths exceed 1m, it is recommended that floating track construction methods should be adopted. Adoption of best practice methods to manage drainage in excavations works. Provision of a Geotechnical Risk Register to be maintained through pre-construction, construction and operational development stages. Appointment of a specialist geotechnical engineer. Adoption of best practice methods to manage drainage and minimise erosion on steep slopes. Monitoring programme for peat slide throughout the construction period should be considered. See Section 6.3 for further details of Proposed Mitigation.	Low

H11	Existing Windfarm Track	Negligible	Location and topography: Western Site Area – Zone slopes upwards towards 'Doire Meurach'. Geomorphology: Tributaries to River E run north to south across zone, evidence of artificial drainage throughout the zone, sparse peat hagging northern and southern zone areas. Peat Depth: (min) 0.00m - (max) 2.90m. Average: 1.04m Slope Gradient: 0° to 30+° Exposure: Existing infrastructure, minor watercourse, artificial drainage and peat haggs.	No Proposed Infrastructure	Negligible
H12	T1, Proposed Access Track	Low	Location and topography: Western Site Area – Zone slopes upwards to the west towards Carn Fliuch-bhaid. Geomorphology: river E runs north to south through the zone, evidence of artificial drainage to the east of the zone, sparse peat hagging in the southern zone area. Peat Depth: (min) 0.02m - (max) 3.76m. Average: 1.35m Slope Gradient: 0° to 30+° Exposure: Proposed Site Infrastructure, minor watercourse, artificial drainage and peat haggs.	Micro-siting in to areas of thinner peat is recommended, if required. Adoption of best practice methods to manage drainage in excavations works. Monitoring programme for peat slide throughout the construction period should be considered. See Section 6.3 for further details of Proposed Mitigation.	Low

H13	Operational Wind Farm and tracks	Negligible	Location and topography: Central Site Area – gently undulating topography. Geomorphology: river E runs along southern edge of the zone, evidence of artificial drainage throughout the zone, sparse peat hagging northern and southern zone areas. Peat Depth: (min) 0.04m - (max) 5.30m. Average: 1.15m Slope Gradient: 0° to 30+° Exposure: Existing Infrastructure peat haggs, minor watercourse, artificial drainage.	No Infrastructure Proposed	Negligible

6.2 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.

6.3 Peat Slide Mitigation Recommendations

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

- Ground investigations to be undertaken prior to detailed design;
- Identification of areas sensitive to changes in drainage regime prior to detailed design;
- Update the PSRA as necessary following detailed ground investigations;
- Development of a drainage strategy that will not create areas of concentrated flow and will not affect the current peatland hydrology;
- Design of a Development drainage system for tracks and hardstanding that will require minimal ongoing maintenance during the operation of the Wind Farm;
- Where peat is greater than 1.0 m deep, cut and fill should be reduced or minimised where possible and where not should consider excavations to a suitable formation level;
- Levelled areas should be essentially flat with a 1-2% slope to assist with drainage;
- The majority of construction surface's to be essentially horizontal with a slight fall to aid drainage;
- In areas of deep peat, side slopes will require to be graded or benched, although minimising exposed cut slopes, in order to reduce potential erosion;
- 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.

The following mitigation measures should be adopted during the construction stage as good practice and to minimise any peat slide risk:

- Provision of a Geotechnical Risk Register to be maintained through pre-construction, construction and operational development stages;
- Appointment of a specialist geotechnical engineer;
- Inspection and maintenance of the drainage systems during construction and operation;
- Ensure that artificial drainage does not concentrate flows onto slopes, gully heads or into excavations;
- Ensure that drainage ditches and any other groundwater and surface water controls are in place prior to the commencement of construction activities;
- Ensure that sediment control measures are incorporated into all artificial drainage, including erosion protection mitigation where steep slopes or high activity erosion processes are identified;
- The duration for which excavations are open and bare ground is exposed should be minimised with excavated material placed in flat areas where possible to avoid loading on potentially unstable slopes; and
- Vegetation should be re-established in disturbed areas as soon as possible to regulate moisture content, control the transport of sediment and improve slope stability.

Further details of good practice measures to be adopted during the construction stage are provided in Technical Appendix A12.1: Water Construction Environmental Management Plan.

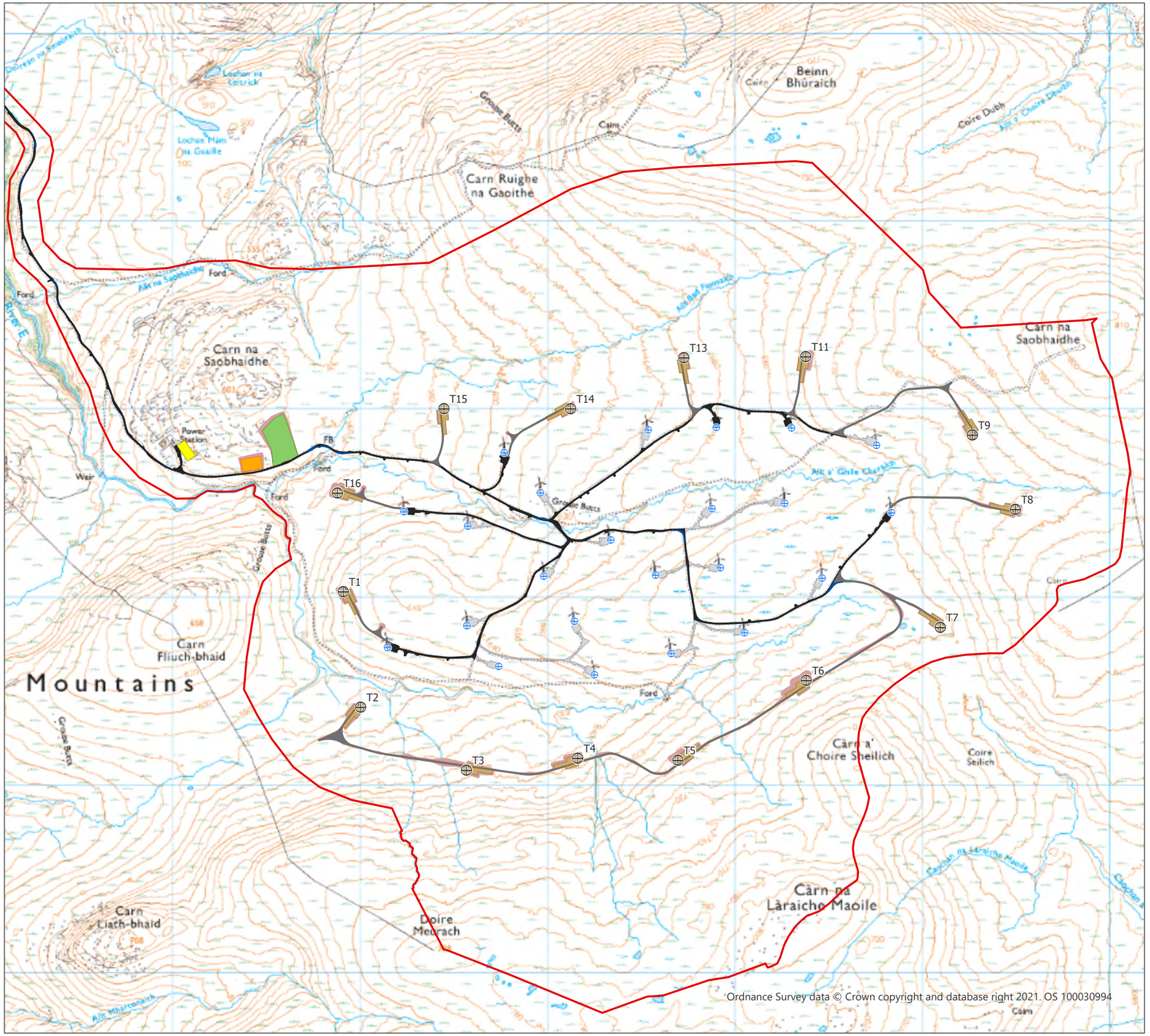
7 PSRA CONCLUSIONS

This PSRA has been undertaken for the proposed Corriegarth 2 Wind Farm in accordance with the Scottish Government Guidance. The early stages of the assessment included a desk study, historic peat probing across the Site, followed by further intensive probing exercise, selective peat coring across the finalised Site layout design. The information gathered during this investigation was used to develop a Hazard Ranking across the Development Site.

The findings of the probing indicate that the majority of the Site is underlain by deep peat and pre-mitigation risk assessment recorded areas of 'moderate' hazard rank in relation to peat slide, notably the southern site area between T2 and T6 However, the remainder of the site was generally within areas of 'low' hazard rank, except from a localised moderate area surrounding T16.

Proposed site infrastructure locations and existing site conditions should be checked on Site at the time of construction and adoption of micro-siting specific mitigation measures outlined in Section 6 should be is required in order to maintain the design objective of avoiding any potential peat slide risk.

APPENDIX A - FIGURES



BayWa r.e.

ARCUS

- Site Boundary
- Proposed Turbine Location
- Operational Corriegarth Wind Turbines
- Crane Hardstanding
- Access Tracks
- Existing Tracks to be Utilised
- Track Widening Area
- Construction Compound
- Existing Wind Farm Tracks
- Earthworks
- Borrow Pit
- Substation Compound

1:20,000 Scale @ A3

0 0.5 1 Km NORTH

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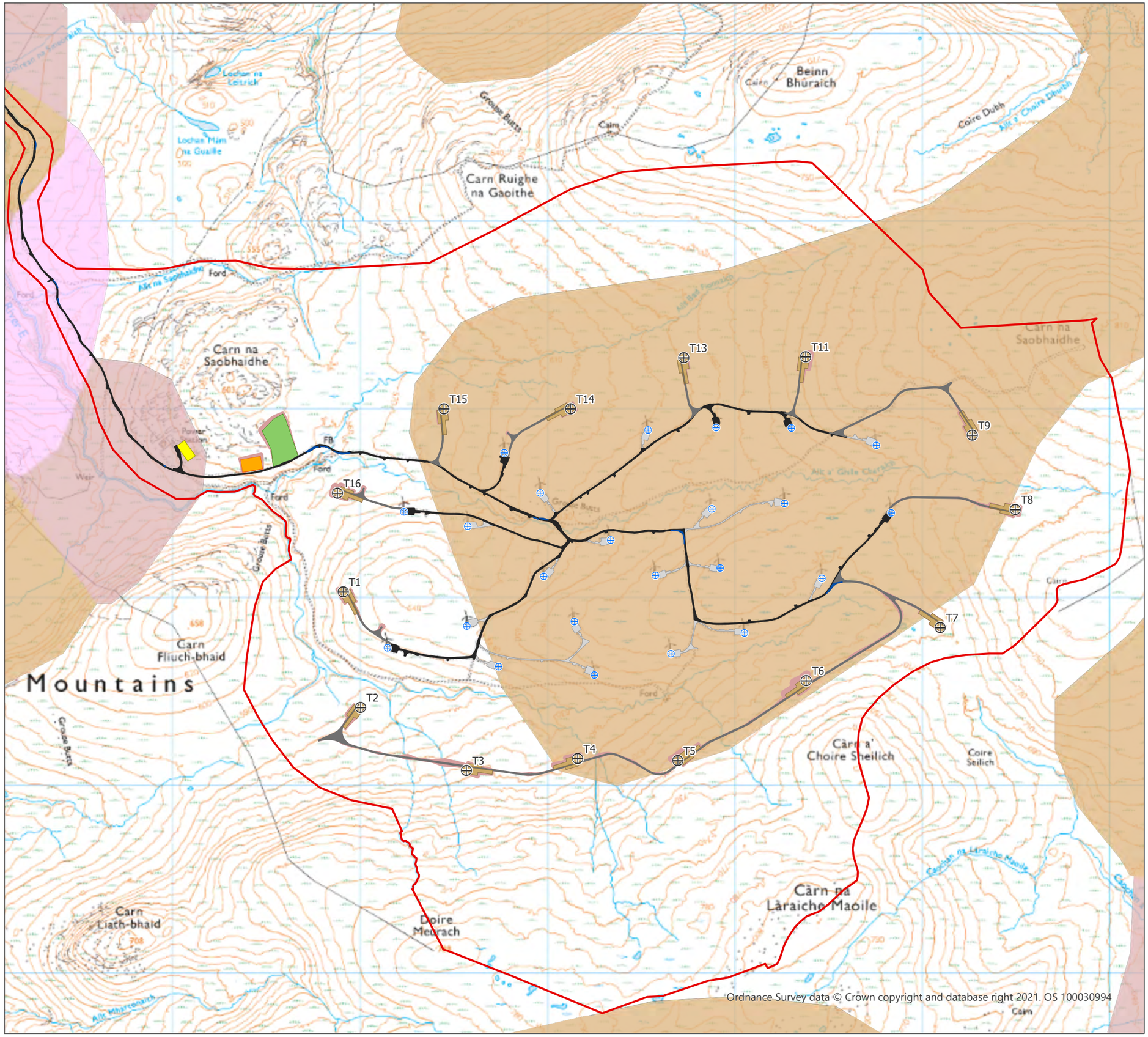
Checked By: DB	Date: 08/04/2022

Site Layout Plan
Figure 13.1.1

Corriegarth 2 Wind Farm
Peat Slide Risk Assessment

Y:\GIS\Engineering\Projects\4643 Corriegarth 2 SEI\4643 Corriegarth 2 SEI.aprx\4643-REP-028 Fig13.1.1 Site Layout Plan



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ARCUS

- Site Boundary
- Proposed Turbine Location
- Operational Corriegarth Wind Turbines
- Crane Hardstanding
- Access Tracks
- Existing Tracks to be Utilised
- Track Widening Area
- Construction Compound
- Existing Wind Farm Tracks
- Earthworks
- Borrow Pit
- Substation Compound

Superficial Geology

- Diamicton
- Peat
- Sand and Gravel

1:20,000 Scale @ A3

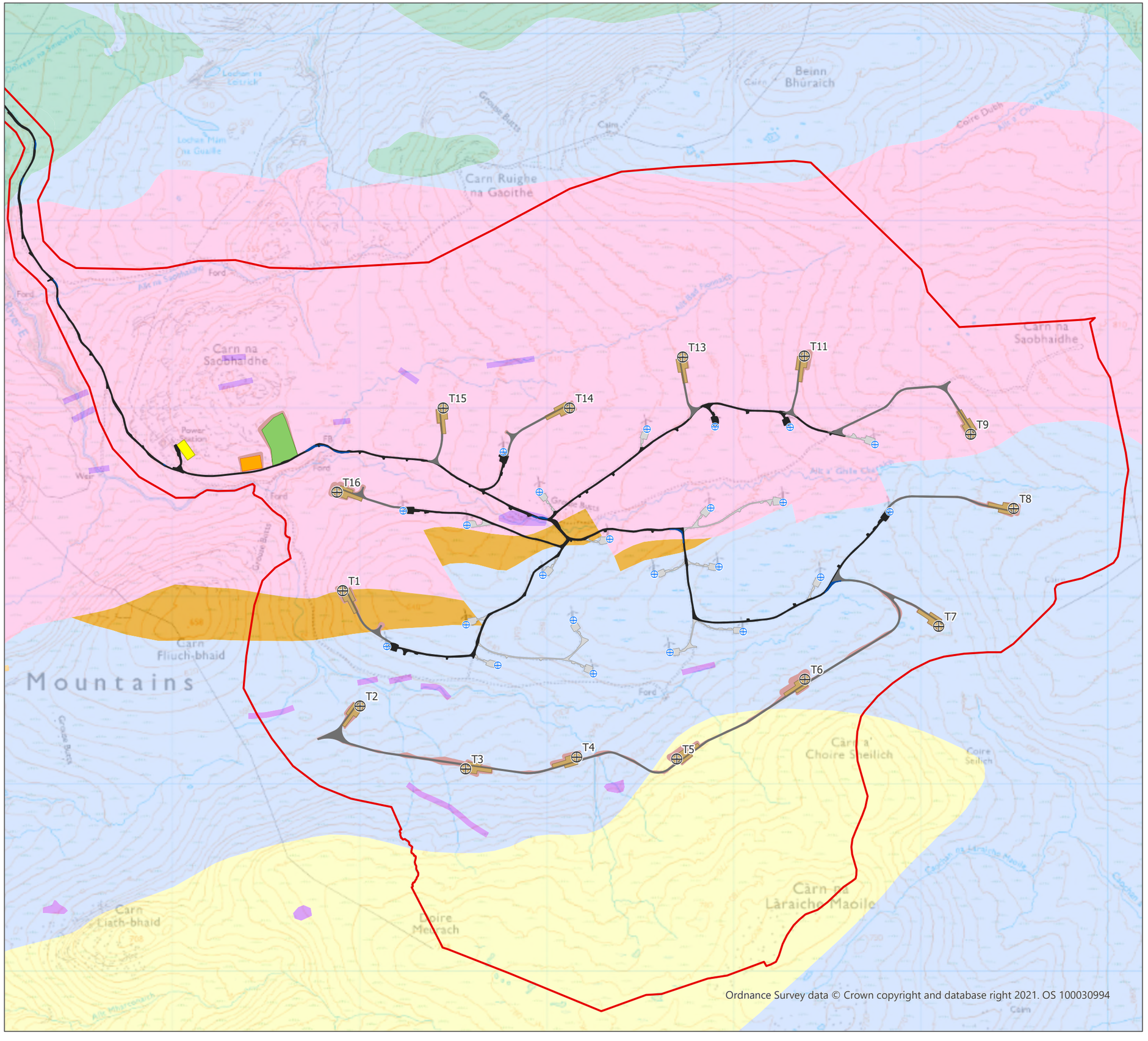
0 0.5 1 Km NORTH

Produced By: BM	Ref: 4643-REP-029
Checked By: DB	Date: 08/04/2022

Superficial Geology
Figure 13.1.2

Corriegarth 2 Wind Farm
Peat Slide Risk Assessment

Y:\GIS\Engineering\Projects\4643 Corriegarth 2 SEI\4643 Corriegarth 2 SEI.aprx\4643-REP-029 Fig13.1.2 Superficial Geology



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ARCUS

- Site Boundary
- Proposed Turbine Location
- Operational Corriegarth Wind Turbines
- Crane Hardstanding
- Access Tracks
- Existing Tracks to be Utilised
- Track Widening Area
- Construction Compound
- Existing Wind Farm Tracks
- Earthworks
- Borrow Pit
- Substation Compound

Solid Geology

- Foyers Igneous Complex
- Gairbeinn Pebbly Psammite Member
- Loch Laggan Psammite Formation
- Monadhliath Semipelite Formation
- North Britain Siluro-Devonian Calc-Alkaline Dyke Suite
- Ruthven Semipelite Formation
- Unnamed Metamorphosed Igneous Rocks, Pre-Caledonian To Caledonian

1:20,000 Scale @ A3

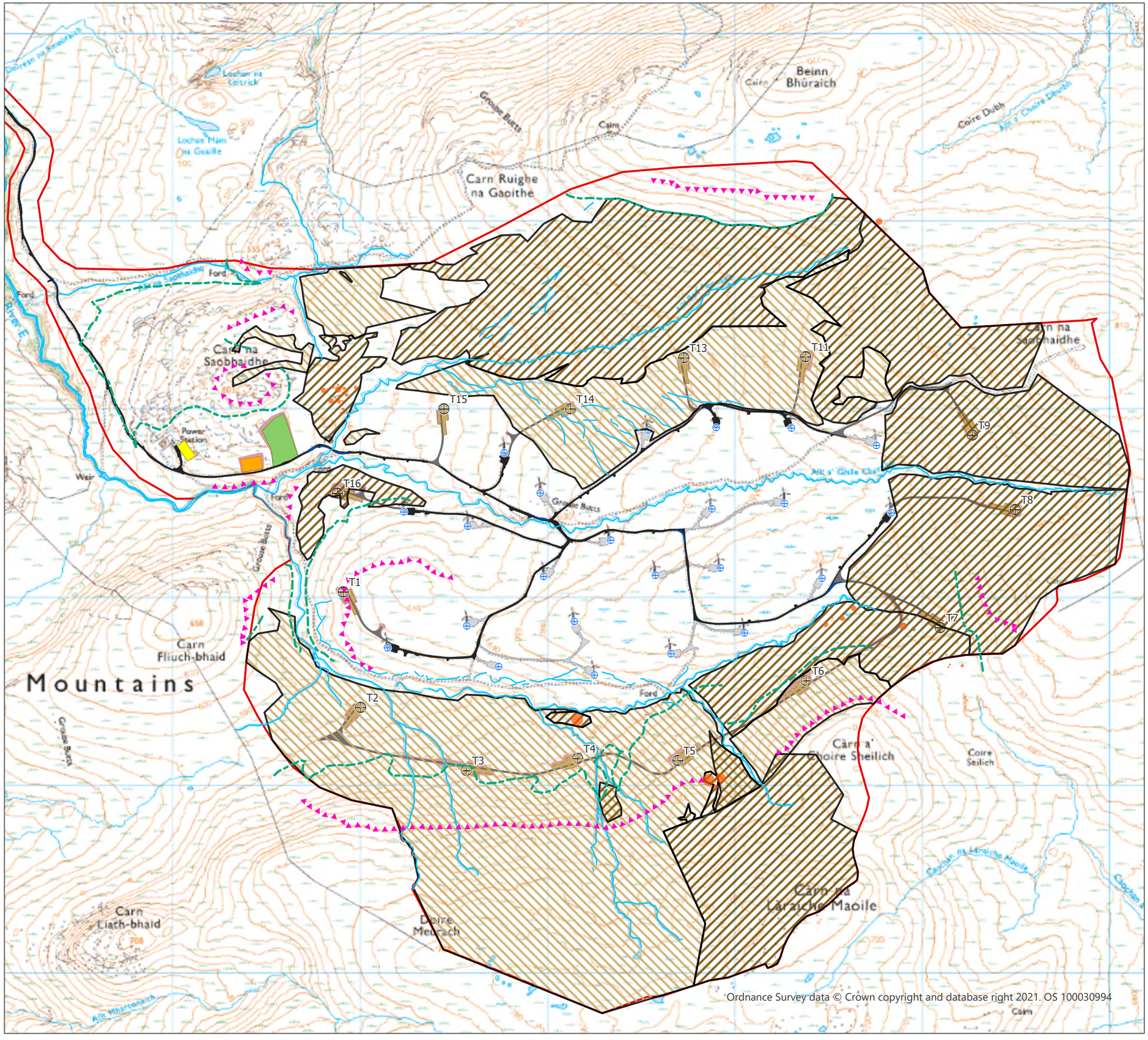
0 0.5 1 Km NORTH

Produced By: BM	Ref: 4643-REP-030
Checked By: DB	Date: 08/04/2022

Bedrock Geology
Figure 13.1.3

Corriegarth 2 Wind Farm
Peat Slide Risk Assessment

Y:\GIS\Engineering\Projects\4643 Corriegarth 2 SEI\4643 Corriegarth 2 SEI.aprx\4643-REP-030 Fig13.1.3 Bedrock Geology



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ARCUS

- Site Boundary
- Proposed Turbine Location
- Operational Corriegarth Wind Turbines
- Crane Hardstanding
- Access Tracks
- Existing Tracks to be Utilised
- Track Widening Area
- Construction Compound
- Existing Wind Farm Tracks
- Earthworks
- Borrow Pit
- Substation Compound
- Top of Slope
- Bottom of Slope
- Natural Watercourses
- Large Areas of Exposed Peat
- Intensive Area of Peat Haggs
- Sparse Area of Peat Haggs

1:20,000 Scale @ A3

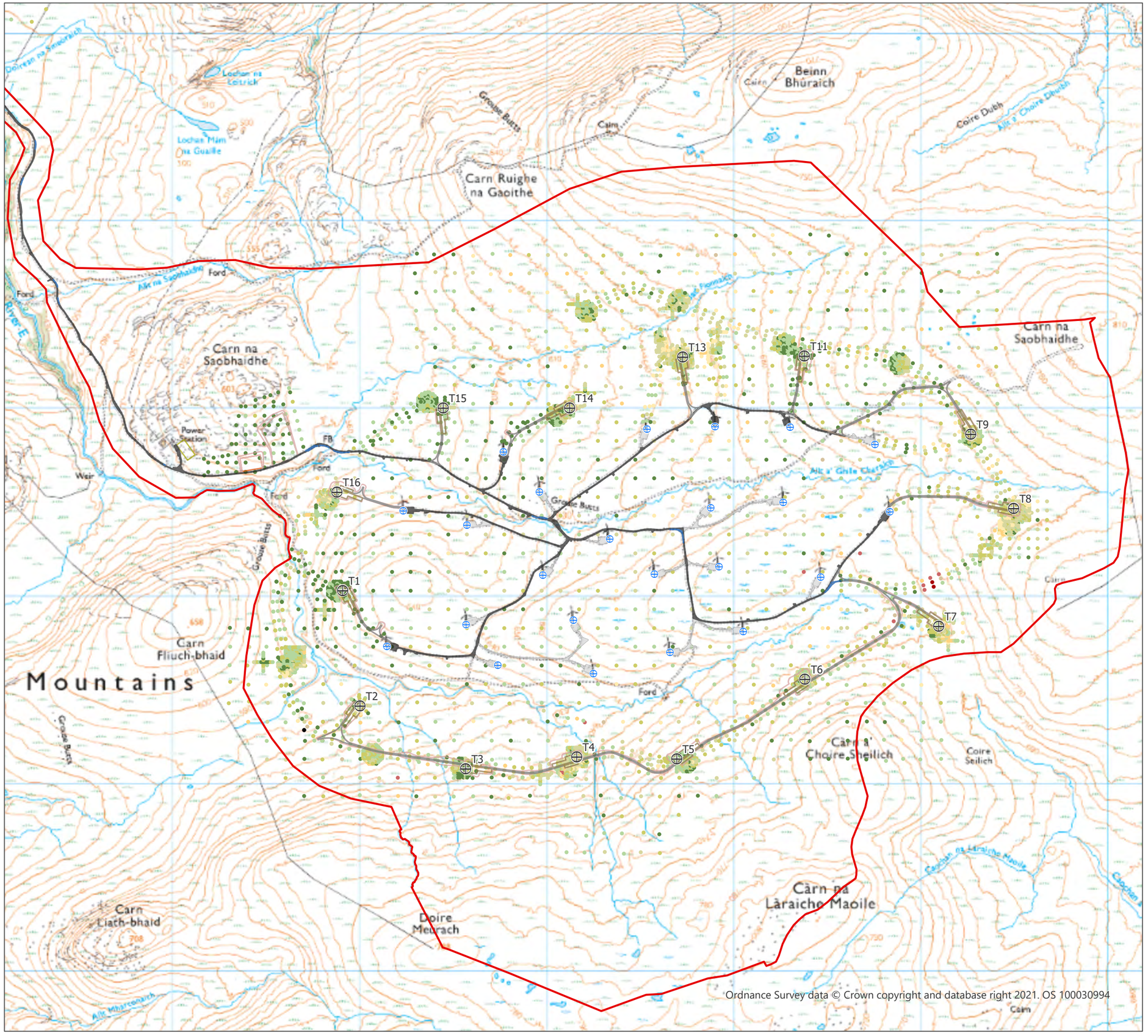
0 0.5 1 Km NORTH

Produced By: BM	Ref: 4643-REP-031
Checked By: DB	Date: 08/04/2022

Geomorphological Map
Figure 13.1.4

Corriegarth 2 Wind Farm
Peat Slide Risk Assessment

Y:\GIS\Engineering\Projects\4643 Corriegarth 2 SEI\4643 Corriegarth 2 SEI.aprx\4643-REP-031 Fig13.1.4 Geomorphological Map



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ARCUS

- Site Boundary
- Proposed Turbine Location
- Operational Corriegarth Wind Turbines
- Crane Hardstanding
- Access Tracks
- Existing Tracks to be Utilised
- Laydown Area
- Track Widening Area
- Construction Compound
- Existing Wind Farm Tracks
- Earthworks
- Borrow Pit
- Substation Compound

Peat Depth (m)

- 0- 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

1:20,000 Scale @ A3

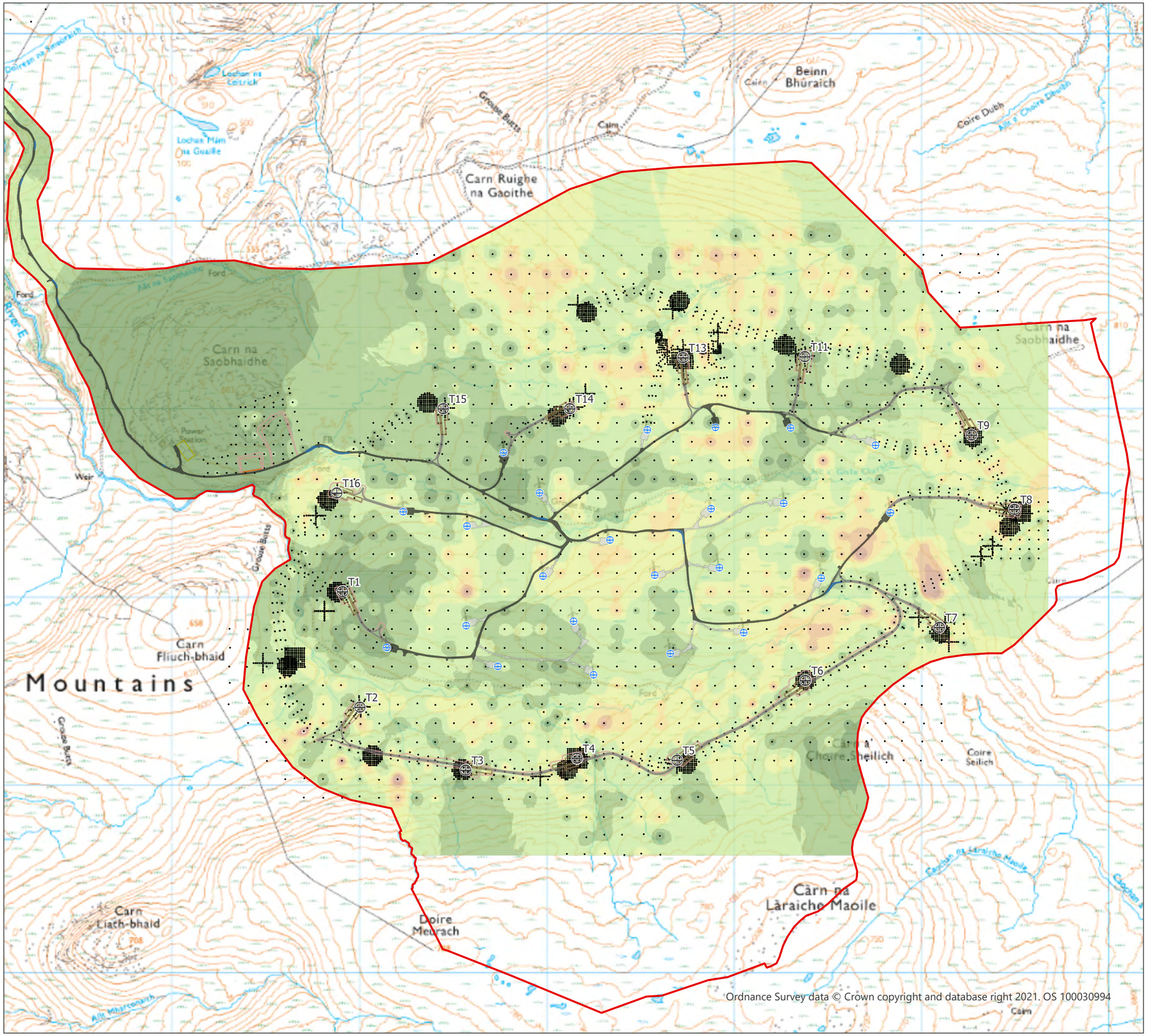
0 0.5 1 Km NORTH

Produced By: BM	Ref: 4643-REP-032
Checked By: DB	Date: 08/04/2022

Recorded Peat Depths
Figure 13.1.5

Corriegarth 2 Wind Farm
Peat Slide Risk Assessment

Y:\GIS\Engineering\Projects\4643 Corriegarth 2 SEI\4643 Corriegarth 2 SEI.aprx\4643-REP-032 Fig13.1.5 Recorded Peat Depths



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ARCUS

- Site Boundary
- Proposed Turbine Location
- Operational Corriegarth Wind Turbines
- Crane Hardstanding
- Access Tracks
- Existing Tracks to be Utilised
- Track Widening Area
- Construction Compound
- Existing Wind Farm Tracks
- Earthworks
- Borrow Pit
- Substation Compound
- Peat Probe Locations

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

1:20,000 Scale @ A3

0 0.5 1 Km

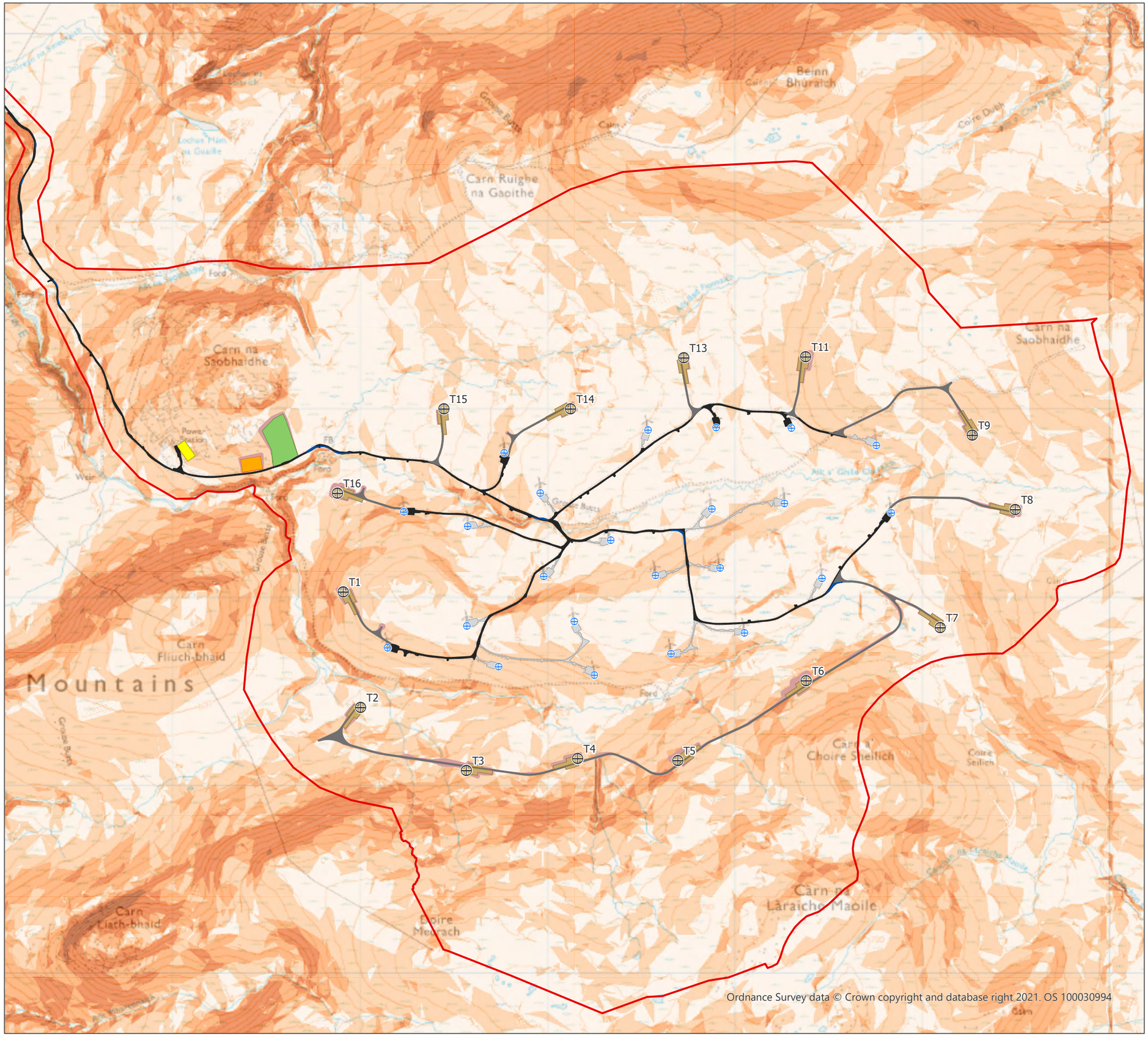
NORTH

Produced By: BM	Ref: 4643-REP-033
Checked By: DB	Date: 08/04/2022

Interpolated Peat Depths
Figure 13.1.6

Corriegarth 2 Wind Farm
Peat Slide Risk Assessment

Y:\GIS\Engineering\Projects\4643 Corriegarth 2 SEI\4643 Corriegarth 2 SEI.aprx\4643-REP-033 Fig13.1.6 Interpolated Peat Depths



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ARCUS

- Site Boundary
- Proposed Turbine Location
- Operational Corriegarth Wind Turbines
- Crane Hardstanding
- Access Tracks
- Existing Tracks to be Utilised
- Track Widening Area
- Construction Compound
- Existing Wind Farm Tracks
- Earthworks
- Borrow Pit
- Substation Compound

Slope Angle (deg)

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

1:20,000 Scale @ A3

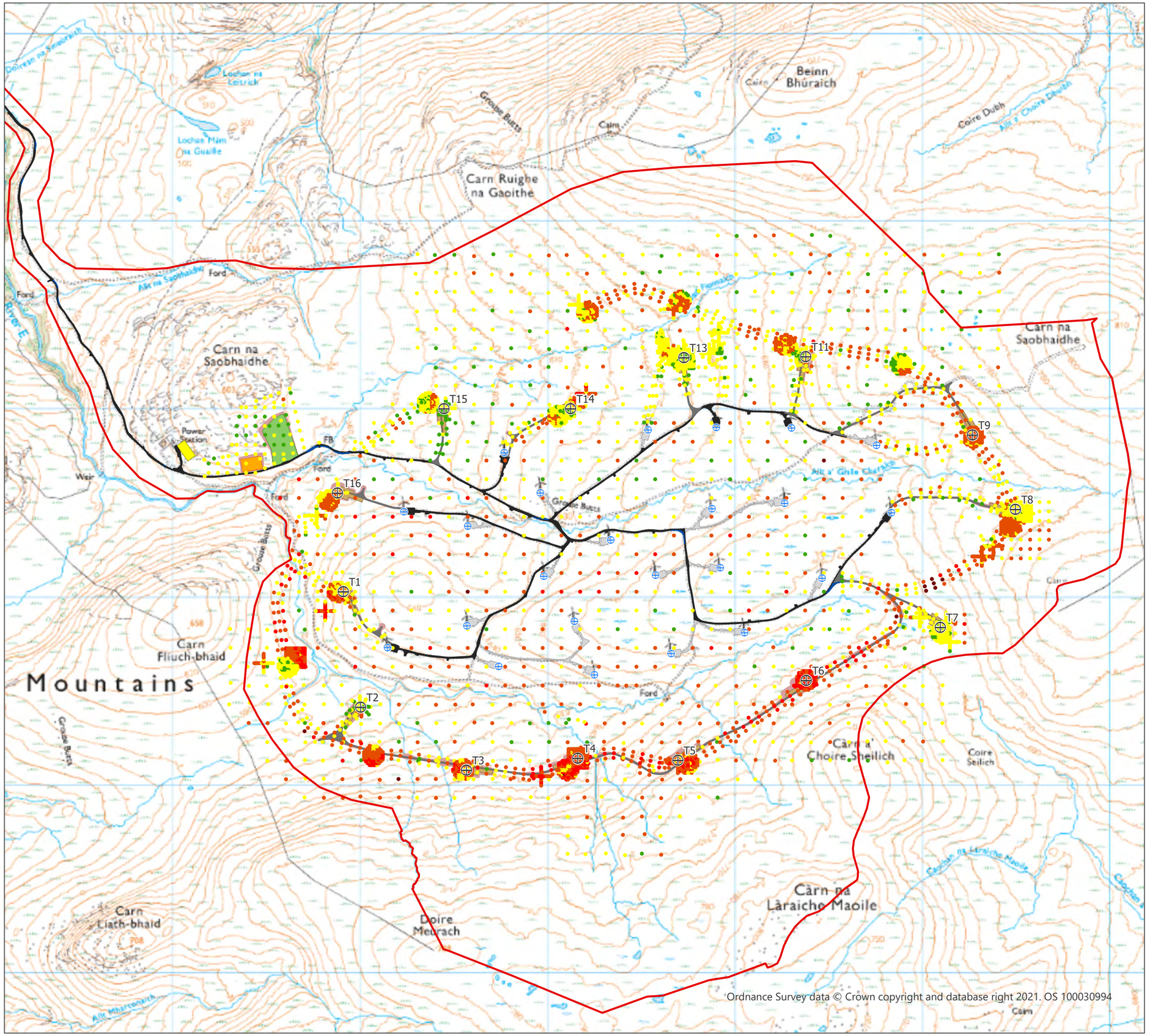
0 0.5 1 Km NORTH

Produced By: BM	Ref: 4643-REP-034
Checked By: DB	Date: 08/04/2022

Slope Gradient
Figure 13.1.7

Corriegarth 2 Wind Farm
Peat Slide Risk Assessment

Y:\GIS\Engineering\Projects\4643 Corriegarth 2 SEI\4643 Corriegarth 2 SEI.aprx\4643-REP-034 Fig13.1.7 Slope Gradient



BayWa r.e.

ARCUS

- Site Boundary
- Proposed Turbine Location
- Operational Corriegarth Wind Turbines
- Crane Hardstanding
- Access Tracks
- Existing Tracks to be Utilised
- Track Widening Area
- Construction Compound
- Existing Wind Farm Tracks
- Earthworks
- Borrow Pit
- Substation Compound

Risk Rating

- 1 - 5
- 6 - 15
- 16 - 30
- 31 - 50
- 51 - 96

1:20,000 Scale @ A3

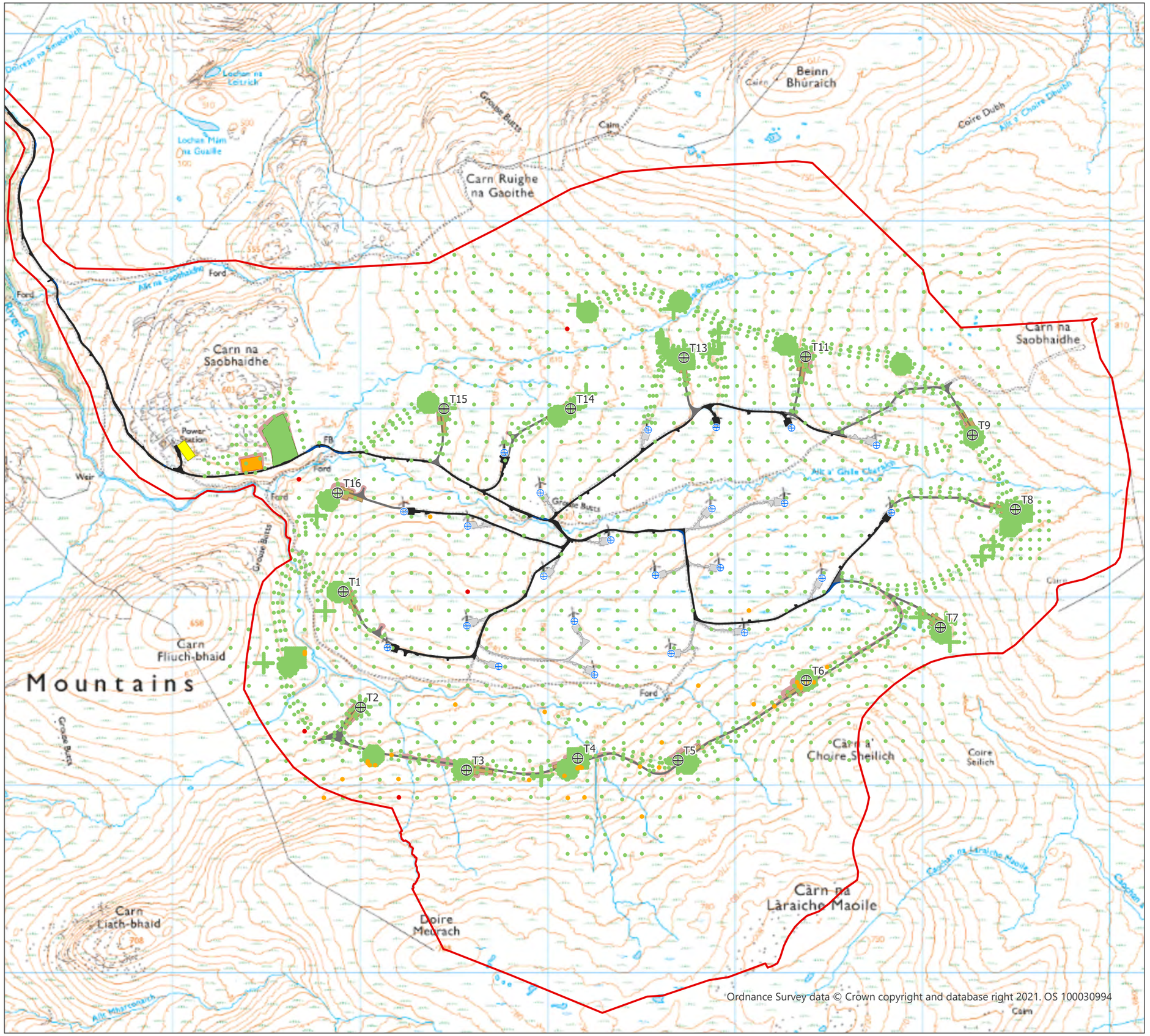
0 0.5 1 km NORTH

Produced By: BM	Ref: 4643-REP-035
Checked By: DB	Date: 08/04/2022

Risk Rating Plan
Figure 13.1.8

Corriegarth 2 Wind Farm
Peat Slide Risk Assessment

Y:\GIS\Engineering\Projects\4643 Corriegarth 2 SEI\4643 Corriegarth 2 SEI.aprx\4643-REP-035 Fig13.1.8 Risk Rating Plan



BayWa r.e.

ARCUS

- Site Boundary
- Proposed Turbine Location
- Operational Corriegarth Wind Turbines
- Crane Hardstanding
- Access Tracks
- Existing Tracks to be Utilised
- Track Widening Area
- Construction Compound
- Existing Wind Farm Tracks
- Earthworks
- Borrow Pit
- Substation Compound

Factor of Safety

- High Risk
- Moderate Risk
- Low Risk

1:20,000 Scale @ A3

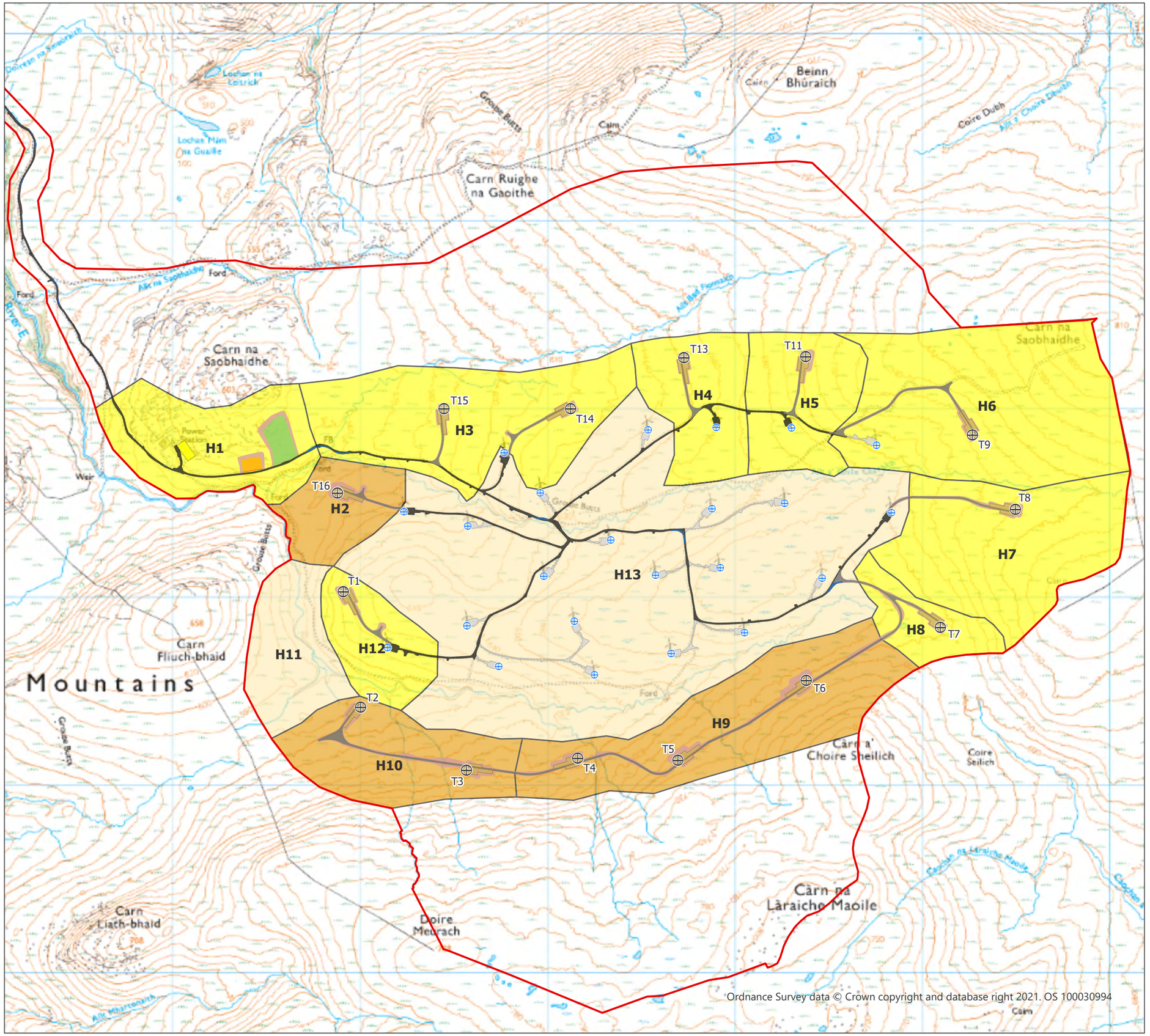
0 0.5 1 km NORTH

Produced By: BM	Ref: 4643-REP-036
Checked By: DB	Date: 08/04/2022

Factor of Safety Plan
Figure 13.1.9

Corriegarth 2 Wind Farm
Peat Slide Risk Assessment

Y:\GIS\Engineering\Projects\4643 Corriegarth 2 SEI\4643 Corriegarth 2 SEI.aprx\4643-REP-036 Fig13.1.9 Factor of Safety Plan



BayWa r.e.

ARCUS

- Site Boundary
- Proposed Turbine Location
- Operational Corriegarth Wind Turbines
- Crane Hardstanding
- Access Tracks
- Existing Tracks to be Utilised
- Track Widening Area
- Construction Compound
- Existing Wind Farm Tracks
- Earthworks
- Borrow Pit
- Substation Compound

Hazard Risk Zones

- Negligible
- Low
- Medium

1:20,000 Scale @ A3

0 0.5 1 km

NORTH

Produced By: BM	Ref: 4643-REP-037
Checked By: DB	Date: 08/04/2022

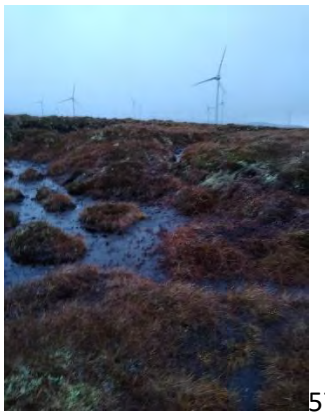
Hazard Rank Zonation Plan
Figure 13.1.10

Corriegarth 2 Wind Farm
Peat Slide Risk Assessment

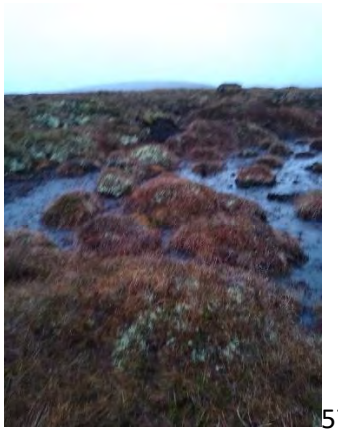
Y:\GIS\Engineering\Projects\4643 Corriegarth 2 SEI\4643 Corriegarth 2 SEI.aprx\4643-REP-037 Fig13.1.10 Hazard Rank Zonation Plan

APPENDIX B - PHOTOGRAPHS

CORRIEGARTH SITE PHOTOS

 57.190,-4.330

259290	813429

 57.190,-4.330

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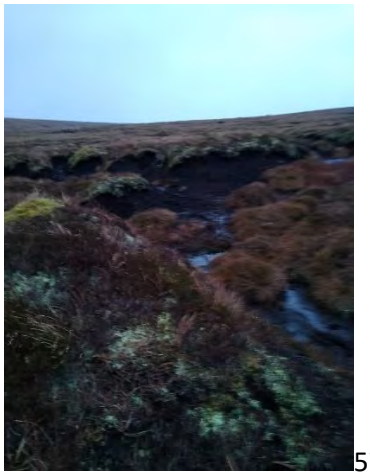
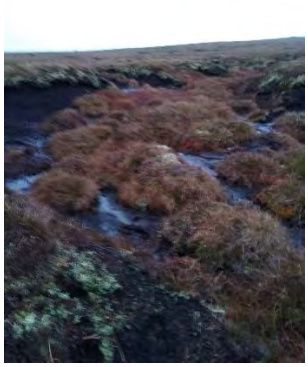
 57.190,-4.330

259290	813429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57.185,-4.336

258909	812885


57.184,-4.338

258784	812778


57.184,-4.338

258784	812778


57.203,-4.347

258313	814911


57.203,-4.347

258313	814911


57.197,-4.358

257626	814266

57.198,-4.357

257690	814375

APPENDIX C - HAZARD RANK ASSESSMENT RECORDS

4643- Corriegarth 2 Wind Farm SEI - PSRA - Tabulated Peat Probe Data

ARCUS

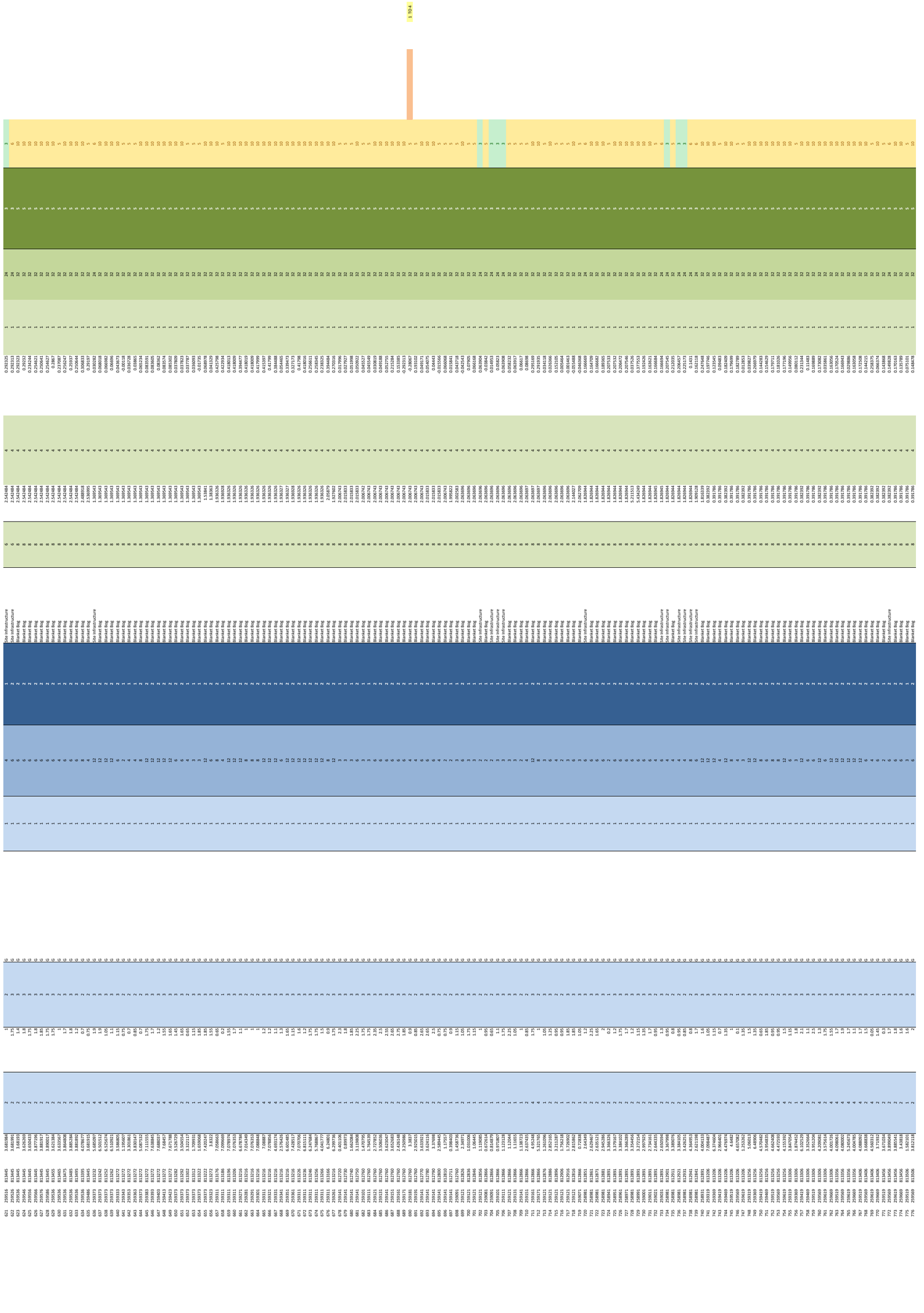
ID	X	Y	SLOPE	Slope Co-efficient	PEAT DEPTH	Peat Co-efficient	Gen Substrate	Substrate Co-eff.	Risk Rating Coefficient	Risk Rating Normalisation	Receptor	Receptor Co-eff.	Distance	Receptor Dist Co-eff.	Z Difference (remove +/-)	Receptor elevation Co-eff	Impact Rating	Impact Rating Normalisation	Hazard Ranking
1	255857	813535	5.295652	4	1.1	3	Not Proven	2	24	3	Site Infrastructure	6	2.203065	4	0.194187	1	24	3	9
2	256504	813928	3.521509	2	0.7	2	G	1	4	1	Blanket Bog	8	1.923323	4	0.074368	1	32	5	5
3	256500	814030	3.525783	2	1	2	R	1.5	6	2	Blanket Bog	8	1.767971	4	0.125785	1	32	5	10
4	256401	814028	4.990174	4	1	2	R	1.5	12	2	Blanket Bog	8	2.533527	4	0.301212	1	32	5	10
5	256401	814126	5.61447	4	1.1	3	G	1	12	2	Blanket Bog	8	1.992045	4	0.337827	1	32	5	10
6	256399	814223	2.392212	2	0.4	1	G	1	2	1	Blanket Bog	8	2.233875	4	0.061887	1	32	5	5
7	256400	814327	0.562531	1	0.5	1	R	1.5	1.5	1	Blanket Bog	8	1.446885	4	-0.010155	1	32	5	5
8	256302	814330	3.041938	2	1.8	3	R	1.5	9	2	Blanket Bog	8	2.161794	4	0.020007	1	32	5	10
9	256301	814427	2.988958	2	1.3	3	G	1	6	2	Blanket Bog	8	2.07871	4	0.156158	1	32	5	10
10	256298	814523	3.45994	2	0.7	2	R	1.5	6	2	Blanket Bog	8	2.644191	4	0.027192	1	32	5	10
11	256298	814620	4.878531	4	0.2	1	R	1.5	6	2	Blanket Bog	8	10.742425	3	-0.899451	1	24	3	6
12	256291	814724	6.528654	4	0.3	1	R	1.5	6	2	Blanket Bog	8	2.445518	4	0.448395	1	32	5	10
13	256302	814829	8.600215	6	0.1	1	R	1.5	9	2	Roads or Tracks	3	12.142433	3	0.069049	1	9	2	4
14	256394	814824	7.123404	4	0.5	1	G	1	4	1	Blanket Bog	8	27.374273	3	0.068827	1	24	3	3
15	256498	814825	7.492537	4	0.4	1	G	1	4	1	Blanket Bog	8	1.728129	4	-0.17964	1	32	5	5
16	256603	814818	4.780365	4	2.1	3	R	1.5	18	3	Blanket Bog	8	2.098685	4	0.01419	1	32	5	15
17	256602	814728	4.953104	4	1.8	3	R	1.5	18	3	Blanket Bog	8	2.847547	4	-0.06055	1	32	5	15
18	256505	814726	7.10728	4	1.9	3	G	1	12	2	Blanket Bog	8	0.797856	4	0.236623	1	32	5	10
19	256401	814730	5.446426	4	2	3	G	1	12	2	Blanket Bog	8	2.855003	4	0.03337	1	32	5	10
20	256401	814627	6.431179	4	0.7	2	R	1.5	12	2	Blanket Bog	8	2.169521	4	0.352403	1	32	5	10
21	256500	814628	5.113703	4	1	2	R	1.5	12	2	Blanket Bog	8	2.111736	4	0.23198	1	32	5	10
22	256597	814624	4.420926	4	1.8	3	G	1	12	2	Blanket Bog	8	2.935743	4	-0.215958	1	32	5	10
23	256601	814532	4.503528	4	0.3	1	R	1.5	6	2	Blanket Bog	8	1.752467	4	0.118115	1	32	5	10
24	256498	814526	5.486786	4	1	2	G	1	8	2	Blanket Bog	8	1.327511	4	-0.046407	1	32	5	10
25	256404	814523	5.538665	4	0.8	2	G	1	8	2	Blanket Bog	8	1.86555	4	0.188922	1	32	5	10
26	256401	814429	6.1936	4	0.8	2	G	1	8	2	Blanket Bog	8	3.125223	4	-0.017589	1	32	5	10
27	256502	814223	6.821809	4	0.7	2	R	1.5	12	2	Blanket Bog	8	2.641679	4	-0.076272	1	32	5	10
28	256504	814128	3.203919	2	1.1	3	R	1.5	9	2	Blanket Bog	8	1.561872	4	0.029333	1	32	5	10
29	256597	813929	3.907109	2	0.6	2	G	1	4	1	Blanket Bog	8	2.56174	4	-0.040214	1	32	5	5
30	256603	814027	2.591925	2	0.8	2	R	1.5	6	2	Blanket Bog	8	1.188371	4	0.011891	1	32	5	10
31	256609	814128	3.405164	2	0.6	2	G	1	4	1	Minor Watercourse	6	3.065044	4	0.17957	1	24	3	3
32	256602	814227	2.815542	2	0.4	1	R	1.5	3	1	Blanket Bog	8	1.611154	4	0.007426	1	32	5	5
33	256607	814327	5.71575	4	0.6	2	G	1	8	2	Blanket Bog	8	6.082516	4	0.295896	1	32	5	10
34	256498	814330	7.292213	4	1.8	3	G	1	12	2	Blanket Bog	8	1.671594	4	-0.206876	1	32	5	10
35	256499	814428	5.526639	4	0.8	2	G	1	8	2	Blanket Bog	8	2.40221	4	0.159918	1	32	5	10
36	256603	814426	4.332815	4	2.1	3	G	1	12	2	Blanket Bog	8	0.861896	4	-0.035005	1	32	5	10
37	256702	814427	4.897309	4	0.7	2	R	1.5	12	2	Blanket Bog	8	2.365393	4	-0.06592	1	32	5	10
38	256701	814528	2.214089	2	1	2	G	1	4	1	Blanket Bog	8	11.763538	3	0.473711	1	24	3	3
39	256693	814634	3.332777	2	2	3	G	1	6	2	Blanket Bog	8	2.031819	4	-0.136069	1	32	5	10
40	256698	814720	3.818214	2	2.1	3	G	1	6	2	Blanket Bog	8	1.577616	4	-0.248013	1	32	5	10
41	256706	814828	3.332233	2	0.7	2	G	1	4	1	Blanket Bog	8	2.603809	4	0.137474	1	32	5	5
42	256801	814822	2.887781	2	2.6	3	G	1	6	2	Blanket Bog	8	2.373585	4	0.072581	1	32	5	10
43	256901	814821	2.724432	2	1.1	3	G	1	6	2	Blanket Bog	8	1.805398	4	-0.017121	1	32	5	10
44	257002	814822	6.809554	4	1.8	3	R	1.5	18	3	Blanket Bog	8	1.762794	4	-0.041397	1	32	5	15
45	257097	814824	4.97109	4	2	3	R	1.5	18	3	Blanket Bog	8	2.95444	4	-0.267874	1	32	5	15
46	257104	814723	5.663159	4	2.9	3	G	1	12	2	Blanket Bog	8	2.116524	4	0.194213	1	32	5	10
47	256995	814722	4.52197	4	2.7	3	G	1	12	2	Blanket Bog	8	0.960219	4	0.065568	1	32	5	10
48	256903	814724	4.9054491	4	2	3	G	1	12	2	Blanket Bog	8	2.556105	4	0.102705	1	32	5	10
49	256804	814720	6.860868	4	3	3	R	1.5	18	3	Blanket Bog	8	1.219238	4	-0.424514	1	32	5	15
50	256800	814629	3.457046	2	2.2	3	G	1	6	2	Blanket Bog	8	2.105293	4	0.016212	1	32	5	10
51	256900	814618	6.582728	4	1.8	3	G	1	12	2	Blanket Bog	8	6.863077	4	-0.086378	1	32	5	10
52	256999	814622	3.130141	2	2.4	3	G	1	6	2	Blanket Bog	8	1.181995	4	0.044261	1	32	5	10
53	257097	814621	3.837582	2	2	3	G	1	6	2	Blanket Bog	8	1.489639	4	-0.059489	1	32	5	10
54	257102	814526	1.205963	1	2	3	R	1.5	4.5	1	Blanket Bog	8	1.769816	4	-0.017628	1	32	5	5
55	256999	814523	3.1348	2	1.7	3	R	1.5	9	2	Blanket Bog	8	2.014531	4	0.059234	1	32	5	10
56	256902	814524	4.48787	4	2.1	3	R	1.5	18	3	Blanket Bog	8	3.093662	4	0.048768	1	32	5	15
57	256802	814522	3.797775	2	2.1	3	R	1.5	9	2	Blanket Bog	8	2.723959	4	-0.035098	1	32	5	10
58	256804	814427	3.563039	2	2	3	G	1	6	2	Blanket Bog	8	0.471555	4	-0.003074	1	32	5	10
59	256900	814418	1.421268	1	2	3	R	1.5	4.5	1	Blanket Bog	8	2.254558	4	-0.060509	1	32	5	5
60	256992	814413	4.571954	4	0.8	2	R	1.5	12	2	Blanket Bog	8	3.049961	4	0.067583	1	32	5	10
61	257100	814430	17.463587	8	2.4	3	R	1.5	36	4	Blanket Bog	8	1.94578	4	-0.189726	1	32	5	20
62	257100	814330	5.565771	4	2.1	3	G	1	12	2	Blanket Bog	8	1.278046	4	0.146443	1	32	5	10
63	257003	814322	1.821689	1	1.5	3	G	1	3	1	Blanket Bog	8	1.336043	4	0.009961	1	32	5	5
64	256899	814329	6.281057	4	2.2	3	G	1	12	2	Blanket Bog	8	2.446271	4	0.178438	1	32	5	10
65	256801	814327	4.455939	4	0.2	1	G	1	4	1	Blanket Bog	8	1.843067	4	0.082711	1	32	5	5
66	256695	814324	6.390881	4	1.5	3	G	1	12	2	Blanket Bog	8	2.772007	4	-0.132481	1	32	5	10
67	256693	814228	5.523982	4	1	2	G	1	8	2	Blanket Bog	8	1.895511	4	0.021847	1	32	5	10
68	256703	814128	3.380233	2	0.7	2	R	1.5	6	2	Blanket Bog	8	5.069763	4	0.412553	1	32	5	10
69	256702	814030	4.962708	4	0.5	1	G	1	4	1	Blanket Bog	8	1.794351	4	0.075127	1	32	5	5
70	256701	813928	4.183443	4	0.5	1	R	1.5	6	2	Blanket Bog	8	53.367974	3	2.558076	1	24	3	6
71	257397	814028	3.285633	2	2.8	3	G	1	6	2	Blanket Bog	8	2.582022	4	-0.038211	1	32	5	10
72	257304	814034	3.156595	2	1.4	3	R	1.5	9	2	Blanket Bog	8	1.928093	4	0.128229	1	32	5	10
73	257197	814018	2.105865	2	1.8	3	G	1	6	2	Blanket Bog	8	2.962653	4	0.010249	1	32	5	10
74	257099	814025	3.61886	2	1.3	3	G	1	6	2	Site Infrastructure	6	1.059029	4	0.161184	1	24	3	6
75	257005	814025	3.503429	2	1.2	3	G	1	6	2	Blanket Bog	8	1.604255	4	0.217254	1	32	5	10
76	256897	814030	2.897718	2	1.2	3	G	1	6	2	Blanket Bog	8	1.741633	4	0.065356	1	32	5	10
77	256895	813930	4.125213	4	0.5	1	G	1	4	1	Blanket Bog	8	1.075963	4	0.219405	1	32	5	5
78	256805	813924	1.205108	1	0.3	1	G	1	1	1	Blanket Bog	8	41.695642	3	0.43078	1	24	3	3
79	256806	814025	5.06528	4	1.5	3	R	1.5	18	3	Blanket Bog	8	2.194631	4	0.358846	1	32	5	15
80	256801	814126	7.633408	4	1.6	3	G	1	12	2	Blanket Bog	8	1.754527	4	0.372945	1	32	5	10
81	256803	814218	5.405189	4	1	3	G	1	12	2	Blanket Bog	8	2.541914	4	0.035841	1	32	5	10
82	256900	814231	8.215473	6	1.1	3	R	1.5	27	3	Blanket Bog	8	1.266241	4	0.195724	1	32	5	15
83	256903	814130	1.274971	1	1.2	3	G	1	3	1	Blanket Bog	8	1.114438	4	0.003029	1	32	5	5
84	257003	814125	4.099401	4	1.3	3	R	1.5	18	3	Blanket Bog	8	1.213722	4	0.098439	1	32	5	15
85	257000	814227	1.370376	1	0.5	1	R	1.5	1.5	1	Blanket Bog	8	1.489902	4	-0.057483	1	32	5	5
86	257095	814225	4.278	4	2.9	3	G	1	12	2	Blanket Bog	8	1.313213	4	0.234924	1	32	5	10
87	257103	814117	4.158571	4	1.5	3	R	1.5	18	3	Blanket Bog	8	1.209613	4	0.074091	1	32	5	15
88	257199	814124	9.173201	6	2	3	G	1	18	3	Blanket Bog	8	2.017208	4	-0.583059	1	32	5	15
89	257205	814227	2.947836	2	2	3	R	1.5	9	2	Blanket Bog	8	1.544829	4	0.130594	1	32	5	10
90	257196	814324	1.616048	1	0.9	2	G	1	2	1	Blanket Bog	8	7.471017	4	-0.735533	1	32	5	5
91	257208	814419	6.103178	4	1.2	3	G	1	12	2	Blanket Bog	8	2.417254	4	-0.246624	1	32	5	10
92	257200	814528	3.525958	2	0.3	1	G	1	2	1	Blanket Bog	8	2.324204	4	0.127895	1	32	5	5
93	257200	814627	5.816128	4	1.6	3	G	1	12	2	Blanket Bog	8	1.9348	4	0.203096	1	32	5	10
94	257205	814725	6.14744	4	2.2	3	R	1.5	18	3	Blanket Bog	8	1.212973	4	0.058928	1	32	5	15
95	257205	814820	4.402227	4	1	2	G	1	8	2	Blanket Bog	8	1.75703	4	0.031113	1	32	5	10
96	257298	814819	5.514691	4	1.1	3	G	1	12	2	Blanket Bog	8	2.275472	4	-0.047328	1	32	5	10
97	257394	814823	3.803698	2	1	2	R	1.5	6	2	Blanket Bog	8	1.517045	4	0.066546	1	32	5	10
98	257503	814826	4.319005	4	1.3	3	G	1	12	2	Blanket Bog	8	1.02356	4	-0.054931	1	32	5	10
99	257501	814728	1.980069	1	1.2	3	G	1	3	1	Blanket Bog	8	2.18423	4	0.084661	1	32	5	5
100	257407	814724	5.144949	4	2	3	G	1	12	2	Blanket Bog	8	2.843764	4	-0.267899	1	32	5	10
101	257291	814728	4.791146	4	1.1	3	G	1	12	2	Blanket Bog	8	2.70955	4	0.25443	1	32	5	10
102	257295	814627	5.671031	4	2.1	3	G	1	12	2	Blanket Bog	8	1.456441	4	0.150985	1	32	5	10
103	257404	814622	4.700139	4	1.4	3	G	1	12	2	Blanket Bog	8	1.216013	4	0.084546	1	32	5	10
104	257495	814620	4.588702	4	0.2	1	R	1.5	6	2	Blanket Bog	8	1.710345	4	-0.17765	1	32	5	10
105	257500	814529	4.958055	4	2	3	R	1.5	18	3	Blanket Bog	8	2.660774	4	0.15932	1	32	5	15
106	257398	814523	6.062077	4	1.1	3	G	1	12	2	Blanket Bog	8	1.820277	4	0.031366	1	32	5	10
107	257311	814524	4.794628	4	1	2	R	1.5	12	2	Blanket Bog	8	2.532086	4	0.04173	1	32	5	10
108	257301	814422	4.121329	4	1.2	3	G	1	12	2	Blanket Bog	8	2.00066	4	0.131404	1	32	5	10
109	257402	814427	5.529049	4	2.1	3	G	1	12	2	Blanket Bog	8	2.106514	4	-0.100477	1	32	5	10
110	257499	814424	3.183552	2	1.4	3	R	1.5	9	2	Blanket Bog	8	1.870979	4	-0.189605	1	32	5	10
111	257501	814331	7.180264	4	2	3	G	1	12	2	Blanket Bog	8	2.379356	4	0.337679	1	32	5	10
112	257410	814327	3.601052	2	0.3	1	R	1.5	3	1	Blanket Bog	8	1.847878	4	0.138704	1	32	5	5
113	257302	814326	5.308983	4	1	2	G	1	8	2	Blanket Bog	8	2.445397	4	-0.10705	1	32	5	10
114	257291	814229	4.933558	4	2.9	3	R	1.5	18	3	Blanket Bog	8	2.762736	4	0.101702	1	32	5	15
115	257394	814224	2.766866	2	2.4	3	G	1	6	2	Blanket Bog	8	2.431429	4	0.111533	1	32	5	10
116	257496	814226	3.602943	2	3.2	8	G	1	16	3	Blanket Bog	8	2.168624	4	0.18272	1	32	5	15
117	257392	814113	2.761488	2	1.8	3	G	1	6	2	Blanket Bog	8	2.914378	4	0.017352	1	32	5	10
118	257312	814122	2.670992	2	2	3	G	1	6	2	Blanket Bog	8	1.820868	4	-0.02674	1	32	5	10
119	257802	814325	4.099519	4	2.1	3	G	1	12	2	Blanket Bog	8	1.685083	4	-0.074744	1	32	5	10
120	257796	814427	3.801501	2	1.1	3	G	1	6	2	Blanket Bog	8	1.735627	4	0.200805	1	32	5	10
121	257701	814421	4.55825	4	2.5	3	R	1.5	18	3	Blanket Bog	8	2.379654	4	0.372177	1	32	5	15
122	257600	814426	6.076784	4	1	2	G	1	8	2	Blanket Bog	8	0.774734	4	0.061464	1	32	5	10
123	257598	814532	2.998777	2	1.7	3	G	1	6	2	Blanket Bog	8	1.167856	4	0.006558	1	32	5	10
124	257602	814628	4.961938	4	1	2	R	1.5	12	2	Blanket Bog	8	2.447886	4	0.039967	1	32	5	10
125	257594	814734	2.831005	2	0.5	1	R	1.5	3	1	Blanket Bog	8	2.205103	4	-0.143246	1	32	5	5
126	257603	814819	3.003527	2	0.4	1	G	1	2	1	Blanket Bog	8	1.987508	4	-0.162452	1	32	5	5
127	257699	814825	2.653002	2	3	3	R	1.5	9	2	Blanket Bog	8	1.338786	4	-0.126503	1	32	5	10
128	257801	814820	2.913721	2	1.7	3	G	1	6	2	Blanket Bog	8	2.593079	4	-0.091324	1	32	5	10
129	257899	814822	5.111271	4	3.1	8	R	1.5	48	4	Blanket Bog	8	0.664981	4	-0.120712	1	32	5	20
130	258001	814826	3.097401	2	2.7	3	R	1.5	9	2	Blanket Bog	8	2.220338	4	0.072571	1	32	5	10
131	258104	814820	4.116266	4	2.5	3	G	1	12	2	Blanket Bog	8	0.916688	4	-0.003545	1	32	5	10
132	258107	814726	3.811185	2	2	3	G	1	6	2	Blanket Bog	8	1.524672	4	-0.05267	1	32	5	10
133	258001	814722	2.680647	2	2	3	G	1	6	2	Blanket Bog	8	2.669006	4	0.163944	1	32	5	10
134	257895	814726	3.781786	2	2.1	3	G	1	6	2	Blanket Bog	8	1.421184	4	0.0763	1	32	5	10
135	257799	814725	2.571494	2	2.2	3	G	1	6	2	Blanket Bog	8	1.570238	4	-0.147105	1	32	5	10
136	257705	814724	2.48114	2	2.2	3	R	1.5	9	2	Blanket Bog	8	2.656442	4	0.091859	1	32	5	10
137	257704	814621	0.978376	1	1	2	G	1	2	1	Blanket Bog	8	4.619334	4	0.059218	1	32	5	5
138	257801	814632	2.236065	2	2	3	G	1	6	2	Blanket Bog	8	2.343291	4	-0.037435	1	32	5	10
139	257898	814622	4.675229	4	1.3	3	G	1	12	2	Blanket Bog	8	1.59847	4	0.02656	1	32	5	10
140	258004	814626	0.935355	1	2.5	3	G	1	3	1	Blanket Bog	8	0.287036	4	-0.032475	1	32	5	5
141	258101	814630	3.99548	2	1.5	3	G	1	6	2	Blanket Bog	8	2.38247	4	0.26337	1	32	5	10
142	258100	814527	4.062246	4	1.1	3	G	1	12	2	Blanket Bog	8	1.847062	4	0.216919	1	32	5	10
143	257996	814529	2.392314	2	2.1	3	R	1.5	9	2	Blanket Bog	8	2.920995	4	0.121843	1	32	5	10
144	257901	814525	3.005608	2	2.1	3	G	1	6	2	Blanket Bog	8	2.418422	4	0.225172	1	32	5	10
145	257798	814524	1.488063	1	1.8	3	R	1.5	4.5	1	Blanket Bog	8	2.388377	4	-0.002414	1	32	5	5
146	257701	814525	7.825179	4	0.2	1	G	1	4	1	Blanket Bog	8	2.445112	4	-0.033952	1	32	5	5
147	258300	814126	6.559302	4	0.5	1	G	1	4	1	Blanket Bog	8	1.028169	4	0.258057	1	32	5	5
148	258303	814226	6.603192	4	1	2	G	1	8	2	Blanket Bog	8	1.348515	4	-0.050045	1	32	5	10
149	258298	814333	6.880998	4	0.2	1	G	1	4	1	Blanket Bog	8	2.245619	4	0.058446	1	32	5	5
150	258302	814432	5.915521	4	1	2	G	1	8	2	Blanket Bog	8	2.333226	4	-0.068942	1	32	5	10
151	258299	814528	5.658479	4	0.8	2	G	1	8	2	Blanket Bog	8	2.086028	4	0.119495	1	32	5	10
152	258299	814624	3.78139	2	1.1	3	G	1	6	2	Blanket Bog	8	1.812314	4	0.122595	1	32	5	10

1 TO 4	Negligible
5 TO 10	Low
11 TO 16	Medium
17 TO 25	High

153	258298	814722	3.005962	2	1	2	G	1	4	1	Blanket Bog	8	1.3521	4	0.026969	1	32	5	5
154	258296	814833	4.962941	4	1.2	3	G	1	12	2	Blanket Bog	8	2.783614	4	0.274836	1	32	5	10
155	258208	814824	5.533275	4	2	3	G	1	12	2	Blanket Bog	8	1.739937	4	-0.203454	1	32	5	10
156	258202	814723	4.014485	4	0.9	2	G	1	8	2	Minor Watercourse	6	2.632219	4	-0.028368	1	24	3	6
157	258197	814626	3.221089	2	2.9	3	G	1	6	2	Blanket Bog	8	1.652062	4	0.004609	1	32	5	10
158	258196	814518	2.783353	2	3	3	R	1.5	9	2	Blanket Bog	8	2.858331	4	0.148683	1	32	5	10
159	258199	814422	4.383382	4	1.6	3	G	1	12	2	Blanket Bog	8	0.957067	4	0.15576	1	32	5	10
160	258099	814426	5.475796	4	1.7	3	R	1.5	18	3	Blanket Bog	8	0.241548	4	0.151002	1	32	5	15
161	257997	814435	2.273352	2	2.4	3	G	1	6	2	Blanket Bog	8	2.277009	4	0.022199	1	32	5	10
162	257904	814418	3.232499	2	0.9	2	R	1.5	6	2	Blanket Bog	8	1.583942	4	0.112995	1	32	5	10
163	257898	814318	4.003874	4	1	2	G	1	8	2	Blanket Bog	8	2.386754	4	0.035686	1	32	5	10
164	258005	814329	3.42855	2	1.4	3	G	1	6	2	Blanket Bog	8	2.509926	4	-0.039263	1	32	5	10
165	258101	814326	4.958194	4	0.8	2	G	1	8	2	Blanket Bog	8	1.898825	4	0.23534	1	32	5	10
166	258199	814323	5.089776	4	1.1	3	G	1	12	2	Blanket Bog	8	1.99205	4	0.129899	1	32	5	10
167	258201	814230	6.902217	4	1.1	3	G	1	12	2	Blanket Bog	8	1.851383	4	0.249774	1	32	5	10
168	258095	814229	4.47594	4	1.3	3	G	1	12	2	Blanket Bog	8	2.821156	4	0.205389	1	32	5	10
169	257997	814230	3.325583	2	1.4	3	G	1	6	2	Blanket Bog	8	4.897795	4	-0.001523	1	32	5	10
170	258006	814126	4.400369	4	1.1	3	G	1	12	2	Blanket Bog	8	2.064499	4	0.237584	1	32	5	10
171	258099	814126	4.256952	4	1.9	3	G	1	12	2	Blanket Bog	8	0.289845	4	0.119853	1	32	5	10
172	258198	814125	5.333389	4	0.9	2	R	1.5	12	2	Blanket Bog	8	1.679458	4	0.024622	1	32	5	10
173	258098	814035	4.13858	4	1.5	3	R	1.5	18	3	Blanket Bog	8	1.149742	4	0.069839	1	32	5	15
174	258202	814031	4.501296	4	1	2	R	1.5	12	2	Blanket Bog	8	1.622955	4	0.003055	1	32	5	10
175	258295	814027	7.36242	4	0.5	1	R	1.5	6	2	Blanket Bog	8	1.355265	4	0.209128	1	32	5	10
176	258407	814023	6.557981	4	0.5	1	R	1.5	6	2	Blanket Bog	8	3.082848	4	-0.045102	1	32	5	10
177	258406	814134	8.61458	6	0.4	1	R	1.5	9	2	Blanket Bog	8	2.877239	4	0.397002	1	32	5	10
178	258403	814231	8.182182	6	1	2	R	1.5	18	3	Site Infrastructure	6	0.660509	4	0.092576	1	24	3	9
179	258399	814331	7.509053	4	1.2	3	G	1	12	2	Blanket Bog	8	0.575258	4	0.199301	1	32	5	10
180	258394	814431	6.870169	4	2.3	3	G	1	12	2	Blanket Bog	8	0.134279	4	0.206601	1	32	5	10
181	258406	814532	7.253602	4	1.5	3	G	1	12	2	Blanket Bog	8	2.569507	4	0.506971	1	32	5	10
182	258401	814625	6.746701	4	1.5	3	G	1	12	2	Blanket Bog	8	1.837614	4	0.428277	1	32	5	10
183	258394	814731	6.094767	4	2.5	3	R	1.5	18	3	Blanket Bog	8	0.09019	4	0.161808	1	32	5	15
184	258399	814828	5.030999	4	2	3	R	1.5	18	3	Blanket Bog	8	1.702276	4	0.089018	1	32	5	15
185	258500	814823	4.247217	4	2	3	R	1.5	18	3	Blanket Bog	8	2.723739	4	0.222656	1	32	5	15
186	258498	814727	8.43322	6	2	3	R	1.5	27	3	Blanket Bog	8	1.540211	4	0.092572	1	32	5	15
187	258500	814629	8.180138	6	2.5	3	G	1	18	3	Blanket Bog	8	2.282706	4	0.34126	1	32	5	15
188	258499	814527	4.637739	4	0.5	1	R	1.5	6	2	Blanket Bog	8	1.178062	4	0.150849	1	32	5	10
189	258508	814430	5.084255	4	1	2	R	1.5	12	2	Blanket Bog	8	1.123813	4	0.11681	1	32	5	10
190	258497	814329	5.630423	4	1.5	3	R	1.5	18	3	Blanket Bog	8	3.036963	4	0.1969	1	32	5	15
191	258497	814231	6.086719	4	1.2	3	G	1	12	2	Blanket Bog	8	2.471512	4	-0.087492	1	32	5	10
192	258496	814126	4.586015	4	1.5	3	G	1	12	2	Blanket Bog	8	2.497571	4	-0.161163	1	32	5	10
193	258497	814030	5.729189	4	1	2	R	1.5	12	2	Blanket Bog	8	1.744597	4	-0.078696	1	32	5	10
194	258604	814027	5.32364	4	0.3	1	G	1	4	1	Blanket Bog	8	0.932604	4	0.023184	1	32	5	5
195	258599	814124	5.651361	4	0.8	2	R	1.5	12	2	Blanket Bog	8	1.717753	4	0.023034	1	32	5	10
196	258599	814223	5.214228	4	1.3	3	R	1.5	18	3	Blanket Bog	8	2.405813	4	0.137821	1	32	5	15
197	258599	814319	4.904948	4	0.7	2	G	1	8	2	Blanket Bog	8	1.695957	4	0.178731	1	32	5	10
198	258598	814425	2.974011	2	2	3	G	1	6	2	Blanket Bog	8	1.768568	4	0.145435	1	32	5	10
199	258600	814529	4.456891	4	0.5	1	G	1	4	1	Blanket Bog	8	2.389796	4	0.221025	1	32	5	5
200	258600	814629	5.953752	4	1.2	3	R	1.5	18	3	Blanket Bog	8	2.060301	4	0.32299	1	32	5	15
201	258601	814727	6.921965	4	2.5	3	G	1	12	2	Blanket Bog	8	2.017168	4	0.396923	1	32	5	10
202	258599	814826	5.105552	4	0.5	1	R	1.5	6	2	Blanket Bog	8	0.485079	4	-0.005369	1	32	5	10
203	258701	814826	6.410919	4	1.5	3	G	1	12	2	Blanket Bog	8	2.466049	4	0.447303	1	32	5	10
204	258704	814722	7.129611	4	0.5	1	G	1	4	1	Blanket Bog	8	0.510886	4	0.211339	1	32	5	5
205	258702	814630	6.733994	4	2.2	3	R	1.5	18	3	Blanket Bog	8	1.977606	4	0.071112	1	32	5	15
206	258703	814527	5.618315	4	1.5	3	R	1.5	18	3	Blanket Bog	8	1.125104	4	0.077133	1	32	5	15
207	258701	814431	4.230946	4	1.3	3	R	1.5	18	3	Blanket Bog	8	2.490058	4	-0.052428	1	32	5	15
208	258704	814332	4.991688	4	1.5	3	G	1	12	2	Blanket Bog	8	0.74956	4	0.160629	1	32	5	10
209	258699	814230	4.378	4	0.8	2	G	1	8	2	Blanket Bog	8	1.06457	4	0.128667	1	32	5	10
210	258703	814027	6.631399	4	0.5	1	G	1	4	1	Blanket Bog	8	1.546421	4	-0.063233	1	32	5	5
211	258699	814131	2.929542	2	0.5	1	G	1	2	1	Blanket Bog	8	0.330055	4	0.020307	1	32	5	5
212	258804	814025	3.764259	2	1.5	3	R	1.5	9	2	Blanket Bog	8	0.967065	4	-0.149979	1	32	5	10
213	258803	814228	2.868061	2	0.8	2	Not Proven	2	8	2	Blanket Bog	8	2.312281	4	0.031521	1	32	5	10
214	258801	814129	4.470885	4	0.6	2	G	1	8	2	Blanket Bog	8	2.704094	4	-0.257992	1	32	5	10
215	258801	814329	6.69549	4	1.8	3	G	1	12	2	Blanket Bog	8	3.360766	4	0.596672	1	32	5	10
216	258801	814429	6.206301	4	1	2	R	1.5	12	2	Blanket Bog	8	3.250322	4	0.328916	1	32	5	10
217	258802	814526	4.656069	4	0.8	2	R	1.5	12	2	Blanket Bog	8	1.623995	4	0.015782	1	32	5	10
218	258800	814631	5.501989	4	0.5	1	G	1	4	1	Blanket Bog	8	0.923491	4	0.253069	1	32	5	5
219	258801	814726	5.10876	4	0.8	2	R	1.5	12	2	Blanket Bog	8	1.683209	4	0.284569	1	32	5	10
220	258800	814831	5.77395	4	1	2	G	1	8	2	Blanket Bog	8	1.373056	4	0.329457	1	32	5	10
221	258901	814824	4.208355	4	2	3	G	1	12	2	Blanket Bog	8	2.805131	4	0.325755	1	32	5	10
222	258903	814723	6.562904	4	2	3	G	1	12	2	Blanket Bog	8	2.484859	4	-0.034025	1	32	5	10
223	258899	814629	6.163828	4	1	2	G	1	8	2	Blanket Bog	8	1.699759	4	0.221729	1	32	5	10
224	258900	814527	3.637896	2	1	2	G	1	4	1	Blanket Bog	8	1.780472	4	0.145433	1	32	5	5
225	258901	814424	5.449537	4	2	3	R	1.5	18	3	Blanket Bog	8	2.455424	4	0.185277	1	32	5	15
226	258904	814327	3.248283	2	1.2	3	R	1.5	9	2	Blanket Bog	8	1.001779	4	0.072651	1	32	5	10
227	258898	814233	3.626562	2	1.5	3	R	1.5	9	2	Blanket Bog	8	1.869718	4	0.056383	1	32	5	10
228	258901	814124	5.508685	4	0.1	1	R	1.5	6	2	Blanket Bog	8	2.961887	4	-0.240928	1	32	5	10
229	258902	814026	4.454231	4	1.6	3	R	1.5	18	3	Blanket Bog	8	2.427518	4	-0.14958	1	32	5	15
230	258994	814020	6.248934	4	1.5	3	R	1.5	18	3	Blanket Bog	8	0.969908	4	-0.233112	1	32	5	15
231	259007	814130	5.245803	4	2	3	R	1.5	18	3	Blanket Bog	8	2.870679	4	-0.287789	1	32	5	15
232	258999	814229	3.968941	2	1.8	3	G	1	6	2	Blanket Bog	8	2.100425	4	-0.230462	1	32	5	10
233	259007	814327	2.495183	2	2	3	R	1.5	9	2	Blanket Bog	8	2.737724	4	-0.032411	1	32	5	10
234	258999	814425	3.580151	2	2.8	3	R	1.5	9	2	Blanket Bog	8	1.041425	4	-0.076929	1	32	5	10
235	258998	814531	2.47457	2	2	3	G	1	6	2	Blanket Bog	8	0.636691	4	0.067194	1	32	5	10
236	259002	814627	5.257395	4	1	2	G	1	8	2	Blanket Bog	8	2.069912	4	-0.008401	1	32	5	10
237	258999	814726	6.46997	4	0.2	1	G	1	4	1	Blanket Bog	8	0.095447	4	0.215077	1	32	5	5
238	259005	814826	7.222938	4	1.8	3	R	1.5	18	3	Blanket Bog	8	0.669165	4	0.291625	1	32	5	15
239	259104	814822	6.273021	4	2	3	G	1	12	2	Blanket Bog	8	0.951244	4	0.057262	1	32	5	10
240	259093	814728	10.371931	6	1	2	G	1	12	2	Blanket Bog	8	2.167493	4	-0.052313	1	32	5	10
241	259103	814629	1.990514	1	0.1	1	R	1.5	1.5	1	Blanket Bog	8	2.097089	4	0.104046	1	32	5	5
242	259098	814523	3.148315	2	1	2	G	1	4	1	Blanket Bog	8	2.475109	4	-0.000679	1	32	5	5
243	259103	814429	2.713427	2	1.2	3	G	1	6	2	Blanket Bog	8	2.728065	4	-0.102541	1	32	5	10
244	259101	814325	3.516795	2	1	2	G	1	4	1	Blanket Bog	8	2.314986	4	0.109057	1	32	5	5
245	259100	814226	3.420008	2	0.5	1	G	1	2	1	Blanket Bog	8	1.211557	4	0.020672	1	32	5	5
246	259101	814128	5.868883	4	0.4	1	G	1	4	1	Blanket Bog	8	2.577243	4	0.251839	1	32	5	5
247	259101	814031	6.901996	4	1.5	3	R	1.5	18	3	Blanket Bog	8	1.910357	4	0.036317	1	32	5	15
248	259195	814027	6.933268	4	1	2	G	1	8	2	Blanket Bog	8	1.711587	4	0.171139	1	32	5	10
249	259200	814126	5.283784	4	1.5	3	R	1.5	18	3	Blanket Bog	8	0.951516	4	-0.121923	1	32	5	15
250	259199	814225	4.698002	4	0.8	2	R	1.5	12	2	Blanket Bog	8	0.91064	4	-0.087784	1	32	5	10
251	259199	814326	3.177896	2	2	3	R	1.5	9	2	Blanket Bog	8	0.293102	4	0.029787	1	32	5	10
252	259203	814427	2.247228	2	0.6	2	G	1	4	1	Blanket Bog	8	1.513592	4	-0.00734	1	32	5	5
253	259196	814523	3.099967	2	1.5	3	G	1	6	2	Blanket Bog	8	2.771711	4	0.104292	1	32	5	10
254	259196	814624	3.786371	2	0.6	2	G	1	4	1	Blanket Bog	8	3.499928	4	-0.100921	1	32	5	5
255	259199	814731	5.907029	4	1	2	G	1	8	2	Blanket Bog	8	0.219527	4	0.102764	1	32	5	10
256	259202	814829	11.194948	6	0.8	2	G	1	12	2	Blanket Bog	8	2.387396	4	0.648977	1	32	5	10
257	259297	814828	5.118126	4	1.1	3	G	1	12	2	Blanket Bog	8	2.74358	4	-0.06292	1	32	5	10
258	259301	814728	5.408115	4	2	3	G	1	12	2	Blanket Bog	8	3.454996	4	-0.02913	1	32	5	10
259	259300	814623	4.953451	4	1.8	3	G	1	12	2	Blanket Bog	8	1.875948	4	0.088305	1	32	5	10
260	259303	814523	3.856839	2	0.8	2	G	1	4	1	Blanket Bog	8	2.476845	4	-0.021369	1	32	5	5
261	259305	814426	3.106106	2	1.5	3	G	1	6	2	Blanket Bog	8	0.90442	4	0.088814	1	32	5	10
262	259299	814326	3.812081	2	2	3	G	1	6	2	Blanket Bog	8	0.032903	4	0.007355	1	32	5	10
263	259302	814230	4.17587	4	3	3	G	1	12	2	Blanket Bog	8	2.184331	4	-0.152859	1	32	5	10
264	259299	814132	4.636936	4	0.9	2	G	1	8	2	Blanket Bog	8	1.352534	4	0.072879	1	32	5	10
265	259300	814031	7.029866	4	1	2	G	1	8	2	Blanket Bog	8	1.283591	4	0.162707	1	32	5	10
266	259403	814026	7.120065	4	1	2	R	1.5	12	2	Blanket Bog	8	1.075141	4	-0.049206	1	32	5	10
267	259404	814126	7.306173	4	1.5	3	G	1	12	2	Blanket Bog	8	0.39941	4	0.017091	1	32	5	10
268	259398	814225	5.230751	4	1.5	3	R	1.5	18	3	Blanket Bog	8	1.842109	4	-0.14228	1	32	5	15
269	259396	814325	4.252376	4	1.1	3	G	1	12	2	Blanket Bog	8	2.202342	4	0.086045	1	32	5	10
270	259403	814424	5.243495	4	1	2	G	1	8	2	Blanket Bog	8	2.53028	4	0.107059	1	32	5	10
271	259400	814527	4.697303	4	1.5	3	G	1	12	2	Blanket Bog	8	1.339976	4	0.178728	1	32	5	10
272	259403	814629	6.435921	4	1	2	R	1.5	12	2	Blanket Bog	8	2.116739	4	0.293777	1	32	5	10
273	259404	814730	6.093086	4	1.6	3	R	1.5	18	3	Blanket Bog	8	19.964018	3	1.386581	1	24	3	9
274	259402	814828	7.515763	4	0.5	1	G	1	4	1	Blanket Bog	8	38.216742	3	2.120576	1	24	3	3
275	257604	812426	3.309056	2	2.1	3	R	1.5	9	2	Blanket Bog	8	0.558982	4	0.132105	1	32	5	10
276	257606	812322	10.228951	6	2.2	3	G	1	18	3	Blanket Bog	8	2.102219	4	0.360692	1	32	5	15
277	257604	812224	13.63738	6	2	3	R	1.5	27	3	Blanket Bog	8	2.259355	4	0.815391	1	32	5	15
278	257606	812116	11.12931	6	1.5	3	G	1	18	3	Blanket Bog	8	2.12889	4	0.750049	1	32	5	15
279	257606	812026	18.727868	8	1.1	3	G	1	24	3	Blanket Bog	8	2.278211	4	0.965999	1	32	5	15
280	257601	811927	8.895346	6	1.5	3	G	1	18	3	Blanket Bog	8	2.303482	4	0.464876	1	32	5	15
281	257595	811826	6.731004	4	2.5	3	G	1	12	2	Blanket Bog	8	1.084555	4	0.307018	1	32	5	10
282	257598	811726	9.577036	6	0.1	1	R	1.5	9	2	Minor Watercourse	6	24.650239	3	3.512152	1	18	3	6
283	257601	811625	8.052805	6	1.5	3	R	1.5	27	3	Minor Watercourse	6	70.94058	3	9.307075	1	18	3	9
284	257498	811631	1.820484	1	1.8	3	G	1	3	1	Minor Watercourse	6	107.647975	3	8.317751	1	18	3	3
285	257513	811735	5.06357	4	1.2	3	R	1.5	18	3	Blanket Bog	8	10.676304	3	1.219239	1	24	3	9
286	257498	811829	11.535295	6	2	3	G	1	18	3	Blanket Bog	8	2.557744	4	-0.242665	1	32	5	15
287	257500	811930	8.877584	6	1.6	3	R	1.5	27	3	Blanket Bog	8	1.351726	4	0.521406	1	32	5	15
288	257488	812061	11.366044	6	1.3	3	G	1	18	3	Blanket Bog	8	0.819224	4	0.370008	1	32	5	15
289	257503	812127	9.713297	6	1.5	3	G	1	18	3	Blanket Bog	8	1.260524	4	0.131759	1	32	5	15
290	257497	812230	8.002602	6	1.6	3	G	1	18	3	Blanket Bog	8	1.998447	4	0.293142	1	32	5	15
291	257499	812325	7.561168	4	1.5	3	G	1	12	2	Blanket Bog	8	0.859457	4	0.350844	1	32	5	10
292	257403	812327	8.431142	6	2.5	3	G	1	18	3	Blanket Bog	8	1.242805	4	0.101934	1	32	5	15
293	257401	812221	7.406429	4	2	3	G	1	12	2	Blanket Bog	8	2.226281	4	0.363357	1	32	5	10
294	257397	812134	7.798425	4	1.2	3	R	1.5	18	3	Blanket Bog	8	2.972055	4	0.423808	1	32	5	15
295	257408	812026	9.316858	6	1	2	G	1	12	2	Blanket Bog	8	0.846953	4	0.279887	1	32	5	10
296	257393	811920	12.407348	6	0.7	2	G	1	12	2	Blanket Bog	8	1.447348	4	0.524921	1	32	5	10
297	257398	811823	14.611577	6	1.5	3	G	1	18	3	Blanket Bog	8	2.062034	4	-0.067367	1	32	5	15
298	257397	811731	8.594776	6	1	2	R	1.5	18	3	Blanket Bog	8	9.977252	4	0.962001	1	32	5	15
299	257408	811623	8.107041	6	1	2	G	1	12	2	Minor Watercourse	6	46.250842	3	4.405037	1	18	3	6
300	257306	811632	6.471682	4	2	3	G	1	12	2	Minor Watercourse	6	41.048391	3	-1.619249	1	18	3	6
301	257302	811733	6.750443	4	0.7	2	R	1.5	12	2	Blanket Bog	8	2.120843	4	-0.013277	1	32	5	10
302	257299	811827	16.210676	8	0.5	1	G	1	8	2	Blanket Bog	8	1.239571	4	0.356432	1	32	5	10
303	257284	811935	19.583647	8	0.5	1	R	1.5	12	2	Blanket Bog	8	1.420833	4	0.743365	1	32	5	10
304	257302	812025	3.35599	2	1.5	3	G	1	6	2	Blanket Bog	8	1.908402	4	0.140745	1	32	5	10
305	257300	812136	13.891609	6	0.9	2	G	1	12	2	Blanket Bog	8	1.308244	4	0.843399	1	32	5	10
306	257296	812228	8.855557	6	2	3	G	1	18	3	Blanket Bog	8	2.573068	4	0.351853	1	32	5	15
307	257300	812326	2.789269	2	3.2	8	G	1	16	3	Blanket Bog	8	3.662766	4	-0.046667	1	32	5	15
308	257200	812324	4.361598	4	3.7	8	G	1	32	4	Blanket Bog	8	1.914622	4	0.255888	1	32	5	20

309	257206	812225	3.205381	2	0.2	1	R	1.5	3	1	Minor Watercourse	6	5.24338	4	-0.13423	1	24	3	3
310	257196	812122	9.248371	6	2.2	3	G	1	18	3	Blanket Bog	8	2.061759	4	0.437473	1	32	5	15
311	257207	812020	10.451519	6	1.8	3	G	1	18	3	Blanket Bog	8	2.352105	4	0.29827	1	32	5	15
312	257192	811931	13.776635	6	1.7	3	G	1	18	3	Blanket Bog	8	2.11374	4	0.208238	1	32	5	15
313	257206	811825	8.114606	6	2	3	G	1	18	3	Blanket Bog	8	2.071731	4	0.303832	1	32	5	15
314	257206	811719	5.432759	4	0.8	2	G	1	8	2	Blanket Bog	8	7.419592	4	0.09926	1	32	5	10
315	257197	811628	10.149304	6	1	2	G	1	12	2	Minor Watercourse	6	45.563505	3	2.371406	1	18	3	6
316	257102	811630	9.214652	6	1	2	G	1	12	2	Blanket Bog	8	95.710739	3	5.941568	1	24	3	6
317	257103	811726	6.871331	4	1	2	G	1	8	2	Blanket Bog	8	1.172673	4	0.130353	1	32	5	10
318	257102	811828	12.920493	6	0.9	2	G	1	12	2	Blanket Bog	8	2.959454	4	-0.179406	1	32	5	10
319	257103	811928	16.608177	8	2.1	3	G	1	24	3	Blanket Bog	8	2.164923	4	-0.090579	1	32	5	15
320	257102	812029	8.545476	6	1.8	3	G	1	18	3	Blanket Bog	8	3.030972	4	0.432609	1	32	5	15
321	257097	812123	10.173696	6	2	3	G	1	18	3	Site Infrastructure	6	2.800585	4	-0.136593	1	24	3	9
322	257102	812225	5.158221	4	2.5	3	R	1.5	18	3	Blanket Bog	8	2.543925	4	0.185688	1	32	5	15
323	257094	812328	1.493693	1	2.2	3	G	1	3	1	Blanket Bog	8	1.471872	4	-0.001296	1	32	5	5
324	256895	812431	6.335174	4	0.7	2	G	1	8	2	Blanket Bog	8	1.145886	4	-0.020106	1	32	5	10
325	256796	812426	8.496617	6	1.5	3	R	1.5	27	3	Blanket Bog	8	1.858547	4	0.394914	1	32	5	15
326	256701	812425	9.201721	6	0.7	2	G	1	12	2	Blanket Bog	8	2.328845	4	0.528669	1	32	5	10
327	256596	812427	6.092772	4	1.8	3	R	1.5	18	3	Blanket Bog	8	2.634912	4	0.264977	1	32	5	15
328	256503	812426	13.511796	6	2	3	G	1	18	3	Blanket Bog	8	1.359115	4	0.336666	1	32	5	15
329	256400	812425	10.426408	6	2	3	G	1	18	3	Blanket Bog	8	1.408284	4	0.447443	1	32	5	15
330	256304	812432	6.619433	4	1.5	3	G	1	12	2	Blanket Bog	8	0.898345	4	0.058205	1	32	5	10
331	256202	812426	7.091425	4	1.8	3	R	1.5	18	3	Blanket Bog	8	2.437151	4	0.095824	1	32	5	15
332	256103	812428	3.558756	2	2	3	G	1	6	2	Blanket Bog	8	2.348248	4	-0.026829	1	32	5	10
333	255994	812426	3.389047	2	1.3	3	G	1	6	2	Site Infrastructure	6	0.634458	4	0.034178	1	24	3	6
334	255898	812425	5.559135	4	1	2	G	1	8	2	Blanket Bog	8	7.875437	4	0.054927	1	32	5	10
335	255802	812428	2.897256	2	2	3	G	1	6	2	Blanket Bog	8	2.288615	4	0.002096	1	32	5	10
336	255699	812426	5.717856	4	0.8	2	G	1	8	2	Blanket Bog	8	5.091999	4	0.676503	1	32	5	10
337	255695	812530	12.815787	6	1	2	G	1	12	2	Blanket Bog	8	1.901638	4	-0.926512	1	32	5	10
338	255705	812627	8.691143	6	1.2	3	G	1	18	3	Blanket Bog	8	1.645974	4	-0.206091	1	32	5	15
339	255702	812727	10.350197	6	1	2	G	1	12	2	Major Water Features	8	25.111927	3	3.535956	1	24	3	6
340	255700	812826	2.038022	2	0.3	1	R	1.5	3	1	Major Water Features	8	46.550734	3	0.539765	1	24	3	3
341	255598	812824	10.012216	6	1.5	3	G	1	18	3	Blanket Bog	8	2.673245	4	0.270519	1	32	5	15
342	255500	812825	8.234343	6	0.3	1	G	1	6	2	Blanket Bog	8	1.451573	4	-0.370926	1	32	5	10
343	255400	812827	8.179127	6	0.4	1	R	1.5	9	2	Blanket Bog	8	8.8218	4	0.984703	1	32	5	10
344	255302	812830	13.69346	6	0.2	1	R	1.5	9	2	Blanket Bog	8	85.237603	3	14.513455	2	24	3	6
345	255305	812729	8.702379	6	0.8	2	G	1	12	2	Blanket Bog	8	44.368079	3	5.089973	1	24	3	6
346	255301	812630	6.706868	4	1	2	G	1	8	2	Blanket Bog	8	13.697634	3	0.979827	1	24	3	6
347	255305	812542	4.733227	4	1.2	3	G	1	12	2	Blanket Bog	8	0.815982	4	-0.167211	1	32	5	10
348	255297	812427	4.697982	4	1.2	3	G	1	12	2	Blanket Bog	8	8.070527	4	-0.250216	1	32	5	10
349	255406	812436	3.612146	2	1.5	3	G	1	6	2	Blanket Bog	8	1.627781	4	-0.193822	1	32	5	10
350	255402	812526	3.920368	2	1.2	3	G	1	6	2	Blanket Bog	8	1.564761	4	-0.026523	1	32	5	10
351	255395	812628	4.954059	4	1.5	3	G	1	12	2	Blanket Bog	8	2.381626	4	-0.156333	1	32	5	10
352	255406	812727	6.965434	4	1.7	3	G	1	12	2	Blanket Bog	8	2.436118	4	-0.431305	1	32	5	10
353	255498	812729	5.343406	4	1	2	G	1	8	2	Blanket Bog	8	2.461856	4	0.086804	1	32	5	10
354	255599	812727	8.913549	6	1	2	G	1	12	2	Blanket Bog	8	1.233817	4	-0.223565	1	32	5	10
355	255603	812618	2.184724	2	0.8	2	G	1	4	1	Blanket Bog	8	1.876907	4	-0.028796	1	32	5	5
356	255605	812528	5.97935	4	1.2	3	G	1	12	2	Blanket Bog	8	2	4	0.042191	1	32	5	10
357	255500	812629	3.403264	2	1	2	G	1	4	1	Blanket Bog	8	2.733814	4	-0.140522	1	32	5	5
358	255497	812526	2.697111	2	2.5	3	G	1	6	2	Blanket Bog	8	1.920484	4	-0.039537	1	32	5	10
359	255505	812428	3.83491	2	1.8	3	G	1	6	2	Blanket Bog	8	2.281631	4	-0.120939	1	32	5	10
360	255600	812431	6.533013	4	2	3	G	1	12	2	Blanket Bog	8	1.361082	4	-0.367253	1	32	5	10
361	255502	812327	5.796234	4	1.8	3	R	1.5	18	3	Minor Watercourse	6	2.232349	4	-0.004861	1	24	3	9
362	255600	812325	6.827279	4	1	2	R	1.5	12	2	Blanket Bog	8	1.575236	4	0.456542	1	32	5	10
363	255701	812328	1.543011	1	2	3	G	1	3	1	Blanket Bog	8	2.882597	4	0.010948	1	32	5	5
364	255800	812327	4.31699	4	3.8	8	G	1	32	4	Blanket Bog	8	1.792847	4	0.030038	1	32	5	20
365	255800	812327	4.204215	4	1.2	3	R	1.5	18	3	Blanket Bog	8	1.795882	4	0.01955	1	32	5	15
366	255897	812530	5.322464	4	2.2	3	G	1	12	2	Blanket Bog	8	2.194768	4	-0.033546	1	32	5	10
367	255802	812528	4.115938	4	1.5	3	G	1	12	2	Blanket Bog	8	3.070856	4	-0.036259	1	32	5	10
368	255899	812333	8.136044	6	1	2	G	1	12	2	Blanket Bog	8	2.008305	4	-0.039456	1	32	5	10
369	256001	812323	5.378804	4	2.8	3	G	1	12	2	Blanket Bog	8	2.312094	4	0.057279	1	32	5	10
370	256102	812325	2.688411	2	1	2	R	1.5	6	2	Blanket Bog	8	7.562839	4	-0.189595	1	32	5	10
371	256204	812325	6.191511	4	0.5	1	R	1.5	6	2	Minor Watercourse	6	3.604448	4	-0.07721	1	24	3	6
372	256301	812328	2.915006	2	1	2	G	1	4	1	Blanket Bog	8	2.856206	4	0.139693	1	32	5	5
373	256402	812327	4.17886	4	0.6	2	G	1	8	2	Blanket Bog	8	2.3215	4	-0.001632	1	32	5	10
374	256500	812327	3.780896	2	1.8	3	G	1	6	2	Blanket Bog	8	1.299502	4	0.11088	1	32	5	10
375	256605	812331	8.03401	6	2.1	3	G	1	18	3	Blanket Bog	8	0.880493	4	0.336649	1	32	5	15
376	256700	812327	8.275915	6	2.3	3	G	1	18	3	Blanket Bog	8	1.29799	4	0.139852	1	32	5	15
377	256802	812328	6.467438	4	1.2	3	G	1	12	2	Blanket Bog	8	2.869748	4	-0.070083	1	32	5	10
378	256901	812326	0.301639	1	2	3	G	1	3	1	Blanket Bog	8	2.471426	4	-0.006877	1	32	5	5
379	257000	812328	3.383866	2	0.2	1	R	1.5	3	1	Blanket Bog	8	2.893933	4	0.138721	1	32	5	5
380	257003	812227	2.08172	2	1	2	G	1	4	1	Blanket Bog	8	1.481152	4	0.008134	1	32	5	5
381	256899	812228	3.405415	2	1.8	3	G	1	6	2	Blanket Bog	8	2.208031	4	-0.037746	1	32	5	10
382	256803	812226	4.854393	4	0.5	1	G	1	4	1	Blanket Bog	8	0.720411	4	0.112642	1	32	5	5
383	256702	812227	6.71258	4	1	2	G	1	8	2	Blanket Bog	8	2.638013	4	-0.011831	1	32	5	10
384	256598	812226	6.602496	4	2.2	3	G	1	12	2	Blanket Bog	8	1.065996	4	0.200514	1	32	5	10
385	256500	812228	8.677638	6	1	2	R	1.5	18	3	Blanket Bog	8	2.261809	4	0.140158	1	32	5	15
386	256400	812227	5.367976	4	0.3	1	G	1	4	1	Minor Watercourse	6	1.249779	4	0.139776	1	24	3	3
387	256302	812225	10.185277	6	1.3	3	G	1	18	3	Blanket Bog	8	1.867095	4	0.431198	1	32	5	15
388	256202	812228	3.025277	2	0.8	2	G	1	4	1	Blanket Bog	8	2.375486	4	0.001992	1	32	5	5
389	256098	812228	4.39017	4	1	2	G	1	8	2	Blanket Bog	8	1.763257	4	-0.050978	1	32	5	10
390	255996	812229	9.278144	6	1.5	3	R	1.5	27	3	Blanket Bog	8	2.99773	4	0.702309	1	32	5	15
391	255905	812226	7.836551	4	1.8	3	G	1	12	2	Site Infrastructure	6	1.609417	4	0.235315	1	24	3	6
392	255797	812227	3.992253	2	0.5	1	G	1	2	1	Blanket Bog	8	2.134691	4	0.023978	1	32	5	5
393	255703	812225	8.336204	6	0.4	1	G	1	6	2	Blanket Bog	8	1.541696	4	0.421911	1	32	5	10
394	255598	812234	5.411972	4	2.7	3	G	1	12	2	Blanket Bog	8	2.275165	4	0.326632	1	32	5	10
395	255601	812125	6.489029	4	2	3	R	1.5	18	3	Blanket Bog	8	2.519106	4	0.278771	1	32	5	15
396	255701	812130	7.426539	4	0.5	1	R	1.5	6	2	Blanket Bog	8	2.26699	4	0.476811	1	32	5	10
397	255797	812127	6.252646	4	1.2	3	G	1	12	2	Blanket Bog	8	2.204508	4	0.068246	1	32	5	10
398	255902	812127	6.990425	4	3.5	8	G	1	32	4	Blanket Bog	8	2.581988	4	-0.007443	1	32	5	20
399	256001	812129	6.937098	4	0.5	1	G	1	4	1	Blanket Bog	8	2.867524	4	0.335663	1	32	5	5
400	256097	812127	10.32677	6	1	2	R	1.5	18	3	Blanket Bog	8	1.893108	4	0.070787	1	32	5	15
401	256200	812129	7.09608	4	1.5	3	G	1	12	2	Blanket Bog	8	2.271135	4	0.356417	1	32	5	10
402	256305	812125	3.58084	2	1	2	G	1	4	1	Blanket Bog	8	1.60614	4	0.20151	1	32	5	5
403	256400	812128	5.250331	4	0.9	2	G	1	8	2	Site Infrastructure	6	2.383565	4	-0.18737	1	24	3	6
404	256498	812126	6.531199	4	1.5	3	G	1	12	2	Site Infrastructure	6	0.657903	4	0.13209	1	24	3	6
405	256600	812124	8.852537	6	1.3	3	G	1	18	3	Blanket Bog	8	2.688104	4	0.718151	1	32	5	15
406	256704	812125	7.474213	4	1	2	R	1.5	12	2	Blanket Bog	8	1.504751	4	0.366938	1	32	5	10
407	256800	812131	3.517598	2	1	2	R	1.5	6	2	Blanket Bog	8	1.509374	4	-0.046271	1	32	5	10
408	256900	812126	2.345707	2	1	2	R	1.5	6	2	Blanket Bog	8	4.955088	4	0.017052	1	32	5	10
409	256998	812127	7.18928	4	2	3	R	1.5	18	3	Blanket Bog	8	1.487182	4	0.087024	1	32	5	15
410	257002	812027	2.073138	2	1.8	3	G	1	6	2	Blanket Bog	8	2.541663	4	0.027837	1	32	5	10
411	256897	812024	11.641719	6	2.1	3	G	1	18	3	Blanket Bog	8	3.076967	4	0.63426	1	32	5	15
412	256798	812028	10.089429	6	1.2	3	G	1	18	3	Blanket Bog	8	2.22745	4	-0.07259	1	32	5	15
413	256702	812030	8.409512	6	0.2	1	G	1	6	2	Blanket Bog	8	2.743147	4	0.428113	1	32	5	10
414	256600	812028	9.833216	6	0.5	1	R	1.5	9	2	Blanket Bog	8	1.935285	4	0.129316	1	32	5	10
415	256499	812028	11.787581	6	0.6	2	G	1	12	2	Blanket Bog	8	1.678884	4	0.166841	1	32	5	10
416	256399	812029	10.30859	6	1.2	3	G	1	18	3	Blanket Bog	8	2.475238	4	-0.240935	1	32	5	15
417	256400	811928	10.659601	6	1.7	3	G	1	18	3	Blanket Bog	8	1.917395	4	-0.104464	1	32	5	15
418	256499	811928	10.447231	6	0.8	2	G	1	12	2	Minor Watercourse	6	10.026629	3	-0.166219	1	18	3	6
419	256603	811930	12.856872	6	1	2	R	1.5	18	3	Blanket Bog	8	1.916789	4	0.635711	1	32	5	15
420	256701	811926	8.690558	6	0.5	1	G	1	6	2	Blanket Bog	8	2.055151	4	0.007803	1	32	5	10
421	256792	811921	7.523418	4	1.2	3	G	1	12	2	Blanket Bog	8	1.830111	4	0.033233	1	32	5	10
422	256906	811933	10.934268	6	0.5	1	R	1.5	9	2	Blanket Bog	8	2.960044	4	-0.295556	1	32	5	10
423	256998	811926	12.229544	6	1	2	G	1	12	2	Blanket Bog	8	57.078749	3	6.5418	1	24	3	6
424	257701	812130	10.758018	6	0.4	1	R	1.5	9	2	Site Infrastructure	6	2.880004	4	0.852575	1	24	3	6
425	257807	812121	6.942933	4	1	2	G	1	8	2	Blanket Bog	8	1.530888	4	0.216678	1	32	5	10
426	257903	812131	5.055263	4	2	3	G	1	12	2	Blanket Bog	8	0.904328	4	0.164199	1	32	5	10
427	258000	812128	5.99626	4	1.8	3	R	1.5	18	3	Blanket Bog	8	2.087228	4	0.010786	1	32	5	15
428	258105	812131	10.559851	6	1.2	3	R	1.5	27	3	Blanket Bog	8	1.431867	4	0.549986	1	32	5	15
429	258209	812127	6.852747	4	2	3	R	1.5	18	3	Blanket Bog	8	0.615774	4	0.162385	1	32	5	15
430	258299	812128	8.37214	6	1	2	G	1	12	2	Blanket Bog	8	34.292767	3	4.298752	1	24	3	6
431	258404	812129	6.30898	4	0.2	1	G	1	4	1	Blanket Bog	8	115.599184	3	12.369652	2	24	3	3
432	258502	812130	8.106873	6	0.2	1	G	1	6	2	Blanket Bog	8	190.965134	3	28.647044	2	24	3	6
433	258604	812130	5.481016	4	0.4	1	G	1	4	1	Blanket Bog	8	249.886558	3	39.735835	2	24	3	3
434	258703	812127	6.51791	4	0.3	1	G	1	4	1	Blanket Bog	8	284.45774	3	46.758118	2	24	3	3
435	258808	812118	10.195704	6	0.8	2	G	1	12	2	Blanket Bog	8	243.406968	3	36.637238	2	24	3	6
436	258899	812129	10.977269	6	0.8	2	G	1	12	2	Blanket Bog	8	221.792956	3	25.293553	2	24	3	6
437	258991	812127	10.926258	6	0.8	2	G	1	12	2	Blanket Bog	8	229.297418	3	22.621433	2	24	3	6
438	259102	812130	8.102577	6	1	2	G	1	12	2	Blanket Bog	8	230.293811	3	10.067336	2	24	3	6
439	259104	812231	8.26898	6	0.9	2	G	1	12	2	Blanket Bog	8	130.479499	3	6.379962	1	24	3	6
440	258998	812229	12.392769	6	0.7	2	R	1.5	18	3	Blanket Bog	8	127.171601	3	11.649017	2	24	3	9
441	258891	812232	10.200747	6	2.1	3	G	1	18	3	Blanket Bog	8	119.069678	3	12.917217	2	24	3	9
442	258798	812231	11.782385	6	1	2	G	1	12	2	Blanket Bog	8	144.597104	3	24.78105	2	24	3	6
443	258701	812230	10.052637	6	0.3	1	R	1.5	9	2	Blanket Bog	8	199.551218	3	33.564544	2	24	3	6
444	258603	812226	5.491037	4	0.2	1	R	1.5	6	2	Blanket Bog	8	169.618693	3	31.647669	2	24	3	6
445	258502	812226	9.280883	6	1.3	3	G	1	18	3	Blanket Bog	8	112.304243	3	24.423247	2	24	3	9
446	258400	812224	13.314601	6	0.1	1	G	1	6	2	Blanket Bog	8	53.820754	3	10.355674	2	24	3	6
447	258300	812231	7.753211	4	0.8	2	G	1	8	2	Blanket Bog	8	0.980846	4	0.396976	1	32	5	10
448	258198	812227	12.013346	6	0.3	1	G	1	6	2	Blanket Bog	8	1.53103	4	0.103562	1	32	5	10
449	258101	812229	7.344321	4	1.6	3	G	1	12	2	Blanket Bog	8	2.737882	4	0.609605	1	32	5	10
450	258000	812229	5.681363	4	1.8	3	R	1.5	18	3	Blanket Bog	8	2.694744	4	0.450313	1	32	5	15
451	257899	812227	1.131269	1	2	3	G	1	3	1	Blanket Bog	8	1.166306	4	-0.021627	1	32	5	5
452	257799	812229	8.119249	6	1.2	3	G	1	18	3	Blanket Bog	8	2.492644	4	0.008659	1	32	5	15
453	257699	812226	8.590107	6	2.5	3	R	1.5	27	3	Site Infrastructure	6	0.319567	4	0.278801	1	24	3	9
454	257701	812327	9.088569	6	2	3	G	1	18	3	Blanket Bog	8	2.417076	4	0.396378	1	32	5	15
455	257808	812325	9.607623	6	1.9	3	R	1.5	27	3	Blanket Bog	8	4.107094	4	-0.257052	1	32	5	15
456	257904	812326	8.234286	6	1.9	3	G	1	18	3	Blanket Bog	8	0.482887	4	0.164738	1	32	5	15
457	258003	812331	10.660319	6	1.2	3	G	1	18	3	Blanket Bog	8	1.11739	4	0.282007	1	32	5	15
458	258115	812329	12.008472	6	1.7	3	G	1	18	3	Blanket Bog	8	2.48955	4	0.668974	1	32	5	15
459	258201	812326	10.74319	6	1.5	3	G	1	18	3	Blanket Bog	8	2.283861	4	0.784306	1	32	5	15
460	258300	812328	9.407942	6	1	2	G	1	12	2	Blanket Bog	8	1.738269	4	0.214225	1	32	5	10
461	258400	812328	11.268807	6	0.6	2	R	1.5	18	3	Blanket Bog	8	2.171041	4	0.244261	1	32	5	15
462	258500	812327	13.717761	6	1	2	R	1.5	18	3	Blanket Bog	8	31.608394	3	7.898549	1	24	3	9
463	258601	812327	10.483873	6	0.4	1	R	1.5	9	2	Blanket Bog	8	76.059428	3	18.52643	2	24	3	6
464	258707	812329	10.893947	6	0.1	1	R	1.5	9	2	Blanket Bog	8	105.891121	3	19.236388	2	24	3	6

465	258803	812326	10.584779	6	0.5	1	G	1	6	2	Blanket Bog	8	65.128014	3	10.539504	2	24	3	6
466	258897	812332	7.670243	4	2	3	G	1	12	2	Blanket Bog	8	19.322922	3	2.044805	1	24	3	6
467	259008	812325	9.540888	6	1	2	G	1	12	2	Blanket Bog	8	31.405089	3	2.893982	1	24	3	6
468	259101	812327	6.462821	4	1	2	G	1	8	2	Blanket Bog	8	33.766233	3	0.400991	1	24	3	6
469	259101	812429	4.225787	4	1.5	3	G	1	12	2	Blanket Bog	8	3.032817	4	-0.252154	1	32	5	10
470	258995	812425	6.008076	4	2	3	G	1	12	2	Blanket Bog	8	1.493521	4	-0.0613	1	32	5	10
471	258907	812429	8.804508	6	1.5	3	G	1	18	3	Blanket Bog	8	3.228952	4	-0.056412	1	32	5	15
472	258798	812425	10.331292	6	1	2	G	1	12	2	Blanket Bog	8	1.453731	4	0.172799	1	32	5	10
473	258700	812429	9.737743	6	1	2	G	1	12	2	Blanket Bog	8	7.49976	4	1.52936	1	32	5	10
474	258599	812423	13.716254	6	1.1	3	G	1	18	3	Blanket Bog	8	1.969387	4	0.01555	1	32	5	15
475	258501	812425	13.136781	6	1	2	G	1	12	2	Blanket Bog	8	2.244766	4	0.989233	1	32	5	10
476	258401	812427	9.176286	6	1.7	3	R	1.5	27	3	Blanket Bog	8	2.555134	4	0.301557	1	32	5	15
477	258300	812427	10.559759	6	1.8	3	Not Proven	2	36	4	Blanket Bog	8	1.173053	4	0.419441	1	32	5	20
478	258299	812427	10.613993	6	1.8	3	G	1	18	3	Blanket Bog	8	0.811962	4	0.234405	1	32	5	15
479	258202	812425	12.374876	6	1.8	3	R	1.5	27	3	Blanket Bog	8	2.801283	4	0.387352	1	32	5	15
480	258095	812428	8.173357	6	3	3	G	1	18	3	Site Infrastructure	6	2.149941	4	0.257297	1	24	3	9
481	258001	812433	6.213457	4	1	2	G	1	8	2	Blanket Bog	8	3.177587	4	0.179742	1	32	5	10
482	257902	812428	3.557892	2	2.2	3	G	1	6	2	Blanket Bog	8	2.525374	4	-0.02775	1	32	5	10
483	257801	812418	4.720657	4	1.2	3	R	1.5	18	3	Blanket Bog	8	3.216852	4	0.008853	1	32	5	15
484	257715	812436	9.102052	6	1.5	3	G	1	18	3	Blanket Bog	8	8.289291	4	1.631523	1	32	5	15
485	257799	812527	10.319281	6	2.5	3	G	1	18	3	Blanket Bog	8	0.988429	4	0.23414	1	32	5	15
486	257892	812527	8.280868	6	1	2	G	1	12	2	Blanket Bog	8	16.721563	3	-1.294876	1	24	3	6
487	258002	812525	5.929084	4	1.8	3	R	1.5	18	3	Blanket Bog	8	1.903171	4	0.226002	1	32	5	15
488	258102	812526	6.303713	4	1.4	3	G	1	12	2	Blanket Bog	8	2.098323	4	0.070613	1	32	5	10
489	258206	812522	4.586169	4	3	3	G	1	12	2	Blanket Bog	8	1.914703	4	0.159004	1	32	5	10
490	258309	812527	15.323649	8	1.2	3	R	1.5	36	4	Blanket Bog	8	1.005826	4	0.379014	1	32	5	20
491	258403	812522	10.119492	6	0.8	2	R	1.5	18	3	Site Infrastructure	6	1.387838	4	0.089957	1	24	3	9
492	258497	812528	8.105061	6	1.5	3	G	1	18	3	Blanket Bog	8	2.364749	4	-0.054281	1	32	5	15
493	258599	812524	9.966788	6	1	2	G	1	12	2	Blanket Bog	8	1.749661	4	0.51629	1	32	5	10
494	258695	812525	11.663369	6	1.2	3	G	1	18	3	Blanket Bog	8	1.384164	4	0.577732	1	32	5	15
495	258799	812525	12.149028	6	1.2	3	R	1.5	27	3	Blanket Bog	8	0.874228	4	0.213732	1	32	5	15
496	258899	812525	7.070351	4	1	2	G	1	8	2	Blanket Bog	8	1.306345	4	0.189284	1	32	5	10
497	258997	812525	3.107755	2	2.5	3	R	1.5	9	2	Blanket Bog	8	2.161049	4	0.138333	1	32	5	10
498	259102	812529	3.114571	2	1.8	3	R	1.5	9	2	Blanket Bog	8	2.624619	4	0.075653	1	32	5	10
499	259002	812631	1.948129	1	2	3	G	1	3	1	Blanket Bog	8	2.076535	4	0.063224	1	32	5	5
500	258998	812731	2.904802	2	2	3	G	1	6	2	Blanket Bog	8	1.247067	4	0.073771	1	32	5	10
501	258900	812726	3.99928	2	1	2	G	1	4	1	Blanket Bog	8	0.687534	4	0.135909	1	32	5	5
502	258901	812628	3.153005	2	1.5	3	G	1	6	2	Blanket Bog	8	2.986333	4	-0.025756	1	32	5	10
503	258801	812629	5.462901	4	1	2	G	1	8	2	Blanket Bog	8	3.187354	4	0.137479	1	32	5	10
504	258797	812733	5.841842	4	1.5	3	G	1	12	2	Blanket Bog	8	2.0783	4	-0.002325	1	32	5	10
505	258604	812732	9.70582	6	1.5	3	G	1	18	3	Blanket Bog	8	0.531122	4	0.300401	1	32	5	15
506	258603	812627	8.464679	6	1	2	G	1	12	2	Blanket Bog	8	1.468972	4	0.110585	1	32	5	10
507	258503	812631	11.716188	6	1	2	G	1	12	2	Blanket Bog	8	0.705516	4	0.45787	1	32	5	10
508	258401	812629	11.661553	6	1.5	3	G	1	18	3	Blanket Bog	8	3.403188	4	1.059896	1	32	5	15
509	258403	812732	3.628557	2	3	3	G	1	6	2	Blanket Bog	8	1.245386	4	0.036835	1	32	5	10
510	258499	812729	4.444706	4	2.5	3	G	1	12	2	Blanket Bog	8	2.462771	4	0.006042	1	32	5	10
511	258601	812829	4.070129	4	2	3	G	1	12	2	Blanket Bog	8	2.669053	4	0.325718	1	32	5	10
512	258499	812828	1.277582	1	2.8	3	R	1.5	4.5	1	Blanket Bog	8	1.812657	4	0.012628	1	32	5	5
513	258401	812830	1.621464	1	2.8	3	R	1.5	4.5	1	Blanket Bog	8	2.426827	4	0.122927	1	32	5	5
514	255703	812032	4.669424	4	1.8	3	G	1	12	2	Blanket Bog	8	1.9016	4	-0.00844	1	32	5	10
515	255600	812028	9.267719	6	1.4	3	R	1.5	27	3	Blanket Bog	8	2.112005	4	0.157287	1	32	5	15
516	255501	812126	5.201957	4	1.8	3	G	1	12	2	Blanket Bog	8	2.458462	4	0.023421	1	32	5	10
517	255500	812226	4.138411	4	1	2	R	1.5	12	2	Blanket Bog	8	0.692894	4	0.183741	1	32	5	10
518	255401	812328	6.462358	4	2.7	3	R	1.5	18	3	Blanket Bog	8	2.696762	4	-0.157409	1	32	5	15
519	255801	812030	13.951343	6	0.7	2	G	1	12	2	Blanket Bog	8	2.276179	4	0.943254	1	32	5	10
520	255901	812028	14.519113	6	1.7	3	G	1	18	3	Blanket Bog	8	2.792576	4	0.040375	1	32	5	15
521	255999	812029	12.924604	6	0.8	2	R	1.5	18	3	Blanket Bog	8	2.140565	4	0.840984	1	32	5	15
522	256100	812025	9.194872	6	1.8	3	G	1	18	3	Blanket Bog	8	1.867964	4	-0.315906	1	32	5	15
523	256200	812029	9.132388	6	4	8	R	1.5	72	5	Blanket Bog	8	2.624561	4	0.654416	1	32	5	25
524	256301	812029	9.879302	6	1.3	3	G	1	18	3	Blanket Bog	8	7.766575	4	0.92657	1	32	5	15
525	256299	811929	15.909866	8	0.4	1	G	1	8	2	Blanket Bog	8	2.209196	4	1.018184	1	32	5	10
526	256202	811931	14.159273	6	2.7	3	G	1	18	3	Blanket Bog	8	1.999997	4	0.476989	1	32	5	15
527	256101	811929	21.209271	8	1	2	G	1	16	3	Blanket Bog	8	2.891167	4	1.416729	1	32	5	15
528	255997	811936	17.962744	8	1	2	G	1	16	3	Blanket Bog	8	2.104694	4	0.514435	1	32	5	15
529	255903	811928	17.821805	8	0.7	2	R	1.5	24	3	Blanket Bog	8	2.427152	4	-0.262795	1	32	5	15
530	255802	811929	22.361278	8	1.2	3	G	1	24	3	Blanket Bog	8	2.883547	4	1.416542	1	32	5	15
531	255699	811931	13.408372	6	0.4	1	R	1.5	9	2	Blanket Bog	8	0.252837	4	0.442149	1	32	5	10
532	255898	813431	9.774683	6	0.3	1	R	1.5	9	2	Blanket Bog	8	5.357451	4	0.987381	1	32	5	10
533	255900	813336	8.473095	6	0.3	1	R	1.5	9	2	Blanket Bog	8	19.711924	3	-1.221594	1	24	3	6
534	255901	813227	10.22115	6	0.4	1	G	1	6	2	Blanket Bog	8	62.810741	3	2.860277	1	24	3	6
535	255901	813133	11.836675	6	0.2	1	G	1	6	2	Blanket Bog	8	74.709164	3	-10.701161	1	24	3	6
536	255799	813131	14.789263	6	0.5	1	G	1	6	2	Blanket Bog	8	86.042154	3	17.106015	2	24	3	6
537	255802	813228	13.607641	6	0.3	1	R	1.5	9	2	Roads or Tracks	3	46.594961	3	9.742393	1	9	2	4
538	255802	813331	7.100865	4	2	3	G	1	12	2	Blanket Bog	8	3.591457	4	0.60552	1	32	5	10
539	255801	813432	6.20389	4	0.3	1	G	1	4	1	Blanket Bog	8	2.121905	4	0.313365	1	32	5	5
540	255700	813432	3.229275	2	2	3	R	1.5	9	2	Blanket Bog	8	1.947857	4	-0.109616	1	32	5	10
541	255705	813332	1.649257	1	1	2	G	1	2	1	Blanket Bog	8	1.318843	4	0.058854	1	32	5	5
542	255708	813232	4.511823	4	1.2	3	G	1	12	2	Blanket Bog	8	1.90852	4	0.007401	1	32	5	10
543	255703	813128	10.379211	6	0.6	2	G	1	12	2	Blanket Bog	8	1.597127	4	0.133376	1	32	5	10
544	257900	814130	3.430145	2	1.5	3	G	1	6	2	Blanket Bog	8	1.710085	4	0.129919	1	32	5	10
545	257801	814128	3.962954	2	1.5	3	G	1	6	2	Blanket Bog	8	3.220864	4	0.256749	1	32	5	10
546	257700	814131	4.392538	4	2.5	3	R	1.5	18	3	Blanket Bog	8	1.453149	4	0.160807	1	32	5	15
547	257600	814126	2.320345	2	1.2	3	R	1.5	9	2	Blanket Bog	8	20.021003	3	-0.666058	1	24	3	6
548	257501	814126	3.832851	2	1.7	3	G	1	6	2	Blanket Bog	8	1.665576	4	0.155754	1	32	5	10
549	257604	814227	3.424294	2	0.4	1	G	1	2	1	Blanket Bog	8	1.219102	4	0.050421	1	32	5	5
550	257701	814226	4.593538	4	1	2	G	1	8	2	Blanket Bog	8	2.428331	4	-0.10577	1	32	5	10
551	257800	814226	3.515255	2	1.9	3	G	1	6	2	Site Infrastructure	6	1.21661	4	0.133481	1	24	3	6
552	257901	814227	3.30365	2	2.1	3	G	1	6	2	Blanket Bog	8	22.734836	3	-0.103682	1	24	3	6
553	257694	814325	2.477673	2	0.5	1	G	1	2	1	Blanket Bog	8	1.565166	4	-0.057724	1	32	5	5
554	257607	814332	3.959829	2	0.4	1	G	1	2	1	Blanket Bog	8	2.096695	4	-0.044775	1	32	5	5
555	257903	814928	5.606977	4	1.3	3	G	1	12	2	Blanket Bog	8	1.698138	4	0.032554	1	32	5	10
556	258004	814926	5.326948	4	0.4	1	G	1	4	1	Blanket Bog	8	0.511952	4	-0.054758	1	32	5	5
557	258103	814926	6.551861	4	1.2	3	R	1.5	18	3	Blanket Bog	8	0.670116	4	-0.063316	1	32	5	15
558	258202	814929	8.711097	6	2.1	3	G	1	18	3	Blanket Bog	8	2.692827	4	-0.487605	1	32	5	15
559	258298	814931	6.598845	4	2.5	3	G	1	12	2	Blanket Bog	8	1.290213	4	-0.120353	1	32	5	10
560	258405	814931	6.350819	4	0.2	1	G	1	4	1	Blanket Bog	8	0.657612	4	-0.148989	1	32	5	5
561	258503	814926	6.185814	4	0.5	1	G	1	4	1	Blanket Bog	8	1.288299	4	-0.141733	1	32	5	5
562	258103	812027	6.987288	4	1	2	G	1	8	2	Blanket Bog	8	1.109749	4	0.145765	1	32	5	10
563	258009	812027	6.57386	4	2	3	G	1	12	2	Minor Watercourse	6	0.881662	4	0.134443	1	24	3	6
564	257903	812027	5.719888	4	2	3	G	1	12	2	Blanket Bog	8	0.977736	4	0.102582	1	32	5	10
565	257798	812026	4.559242	4	0.9	2	G	1	8	2	Blanket Bog	8	1.228813	4	0.13121	1	32	5	10
566	257703	812028	8.673155	6	1.2	3	G	1	18	3	Blanket Bog	8	2.294157	4	-0.080258	1	32	5	15
567	257703	811930	8.999482	6	0.4	1	R	1.5	9	2	Blanket Bog	8	1.443363	4	0.301091	1	32	5	10
568	257700	811830	6.326818	4	1.5	3	G	1	12	2	Blanket Bog	8	1.496142	4	0.380111	1	32	5	10
569	257803	811933	4.801704	4	0.3	1	R	1.5	6	2	Blanket Bog	8	2.274362	4	-0.039466	1	32	5	10
570	257902	811930	3.216887	2	1	2	G	1	4	1	Blanket Bog	8	1.588617	4	0.051367	1	32	5	5
571	257998	812629	5.710724	4	1.5	3	G	1	12	2	Blanket Bog	8	2.47742	4	0.038464	1	32	5	10
572	258099	812630	3.472669	2	1	2	G	1	4	1	Blanket Bog	8	1.212266	4	-0.075074	1	32	5	5
573	258201	812629	4.102767	4	1.8	3	G	1	12	2	Blanket Bog	8	2.762861	4	0.356963	1	32	5	10
574	258301	812630	6.588771	4	1.5	3	G	1	12	2	Blanket Bog	8	2.480416	4	0.44879	1	32	5	10
575	258302	812728	2.250633	2	1	2	G	1	4	1	Blanket Bog	8	7.652238	4	-0.175015	1	32	5	5
576	258199	812732	8.347709	6	2.4	3	G	1	18	3	Blanket Bog	8	0.446361	4	0.157981	1	32	5	15
577	258502	812936	4.645483	4	2.4	3	G	1	12	2	Blanket Bog	8	2.366888	4	-0.049229	1	32	5	10
578	258602	812925	1.798332	1	1.8	3	G	1	3	1	Blanket Bog	8	2.255388	4	-0.013479	1	32	5	5
579	258703	812924	0.528336	1	3.4	8	G	1	8	2	Blanket Bog	8	2.061448	4	-0.004699	1	32	5	10
580	258701	812830	4.538591	4	1.2	3	G	1	12	2	Blanket Bog	8	2.102579	4	0.331534	1	32	5	10
581	258705	812731	5.705668	4	1.2	3	G	1	12	2	Blanket Bog	8	0.732726	4	0.119331	1	32	5	10
582	258809	812750	5.827035	4	1.2	3	R	1.5	18	3	Site Infrastructure	6	0.924049	4	0.12772	1	24	3	9
583	258690	812627	7.734788	4	1.8	3	R	1.5	18	3	Blanket Bog	8	1.421253	4	0.03211	1	32	5	15
584	258802	812827	6.007076	4	1.8	3	G	1	12	2	Blanket Bog	8	2.448206	4	-0.121115	1	32	5	10
585	258901	812834	3.26221	2	1.4	3	G	1	6	2	Blanket Bog	8	3.469094	4	-0.148111	1	32	5	10
586	259001	812820	2.781822	2	2.4	3	G	1	6	2	Blanket Bog	8	2.506791	4	0.210486	1	32	5	10
587	259002	812928	3.518413	2	1.6	3	R	1.5	9	2	Blanket Bog	8	2.471888	4	0.021464	1	32	5	10
588	258899	812925	2.024749	2	1.7	3	R	1.5	9	2	Site Infrastructure	6	0.958272	4	0.114618	1	24	3	6
589	258801	812927	6.081827	4	1.9	3	R	1.5	18	3	Blanket Bog	8	6.236377	4	-0.305814	1	32	5	15
590	259101	813922	4.919436	4	1.5	3	R	1.5	18	3	Blanket Bog	8	2.234269	4	0.075532	1	32	5	15
591	259203	813923	3.777927	2	1.3	3	G	1	6	2	Blanket Bog	8	2.349895	4	0.041394	1	32	5	10
592	259301	813925	6.267362	4	1	2	G	1	8	2	Blanket Bog	8	2.414868	4	0.191215	1	32	5	10
593	259402	813927	6.785288	4	1	2	R	1.5	12	2	Blanket Bog	8	1.84622	4	-0.030025	1	32	5	10
594	259402	813832	3.495027	2	1.7	3	R	1.5	9	2	Blanket Bog	8	2.147228	4	-0.011629	1	32	5	10
595	259302	813827	5.242054	4	1.3	3	G	1	12	2	Blanket Bog	8	2.234532	4	-0.08874	1	32	5	10
596	259202	813826	5.420685	4	0.8	2	G	1	8	2	Blanket Bog	8	2.040394	4	-0.130443	1	32	5	10
597	259098	813831	5.187303	4	2	3	G	1	12	2	Blanket Bog	8	1.148774	4	-0.030085	1	32	5	10
598	259101	813728	4.92196	4	2	3	G	1	12	2	Blanket Bog	8	2.528622	4	0.269474	1	32	5	10
599	259203	813725	3.746986	2	2	3	R	1.5	9	2	Blanket Bog	8	0.990633	4	0.040737	1	32	5	10
600	259303	813724	5.116464	4	2.4	3	G	1	12	2	Blanket Bog	8	1.913064	4	-0.050689	1	32	5	10
601	259406	813726	4.850251	4	2.2	3	G	1	12	2	Blanket Bog	8	2.081963	4	0.136217	1	32	5	10
602	259404	813629	4.782447	4	1.2	3	G	1	12	2	Blanket Bog	8	2.484425	4	0.266117	1	32	5	10
603	259301	813629	0.123289	1	1.3	3	G	1	3	1	Blanket Bog	8	3.109393	4	-2.4E-05	1	32	5	5
604	259204	813629	4.032662	4	1.8	3	G	1	12	2	Blanket Bog	8	2.478065	4	0.183209	1	32	5	10
605	259101	813626	7.932257	4	2.4	3	G	1	12	2	Blanket Bog	8	2.212864	4	0.521909	1	32	5	10
606	259103	813529	3.120042	2	1	2	G	1	4	1	Blanket Bog	8	1.767287	4	0.092325	1	32	5	5
607	259201	813529	3.466694	2	1.7	3	G	1	6	2	Site Infrastructure	6	2.837068	4	0.293932	1	24	3	6
608	259302	813531	2.805132	2	1.5	3	R	1.5	9	2	Site Infrastructure	6	1.976727	4	-0.099085	1	24	3	6
609	259401	813530	4.446796	4	1.8	3	Not Proven	2	24	3	Blanket Bog	8	2.565538	4	0.352535	1	32	5	15
610	259497	813528	4.847914	4	2	3	G	1	12	2	Blanket Bog	8	3.400775	4	-0.118788	1	32	5	10
611	259411	813434	4.734854	4	1.6	3	R	1.5	18	3	Blanket Bog	8	3.191552	4	0.192366	1	32	5	15
612	259297	813423	3.639441	2	1.5	3	R	1.5	9	2	Blanket Bog	8	3.096714	4	-0.069977	1	32	5	10
613	259307	813326	3.872485	2	2.5	3	G	1	6	2	Blanket Bog	8	2.092106	4	0.009405	1	32	5	10
614	259204	813427	2.403082	2	1.3	3	G	1	6	2	Blanket Bog	8	1.103558	4	0.044222	1	32	5	10
615	259536	813405	3.972222	2	1.1	3	G	1	6	2	Blanket Bog	8	2.542484	4	0.329307	1	32	5	10
616	259536	813415	3.666558	2	1.5	3	G	1	6	2	Blanket Bog	8	2.542484	4	0.286694	1	32	5	10
617	259536	813425	3.675683	2	1.74	3	G	1	6	2	Blanket Bog	8	2.542484	4	0.292325	1	32	5	10
618	259536	813435	3.650505	2	1.65	3	G	1	6	2	Blanket Bog	8	2.542484	4	0.286692	1	32	5	10
619	259496	813445	3.68198	2	1.8	3	G	1	6	2	Blanket Bog	8	2.542484	4	0.292308	1	32	5	10
620	259506	813445	3.681936	2	0.85	2	G	1	4	1	Site Infrastructure	6	2.542484	4	0.292328	1	24	3	3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777	259619	813506	3.439626	2	2.5	3	G	1	6	2	Blanket Bog	8	0.391786	4	0.135787	1	32	5	10
778	259669	813506	3.526855	2	2	3	G	1	6	2	Blanket Bog	8	0.391786	4	0.134876	1	32	5	10
779	259219	812756	7.479992	4	0.55	2	G	1	8	2	Blanket Bog	8	0.391786	4	0.225978	1	32	5	10
780	259169	812806	3.754514	2	1.75	3	G	1	6	2	Blanket Bog	8	0.391786	4	0.084513	1	32	5	10
781	259219	812806	7.368754	4	2.05	3	G	1	12	2	Blanket Bog	8	0.391786	4	0.110783	1	32	5	10
782	259169	812856	4.657959	4	1.7	3	G	1	12	2	Blanket Bog	8	0.391786	4	0.125347	1	32	5	10
783	259219	812856	8.628984	6	2.05	3	G	1	18	3	Blanket Bog	8	0.382392	4	0.189995	1	32	5	15
784	259069	812906	1.173224	1	1.9	3	G	1	3	1	Blanket Bog	8	0.382391	4	-0.008165	1	32	5	5
785	259119	812906	1.748924	1	1.25	3	G	1	3	1	Blanket Bog	8	0.391786	4	-0.027046	1	32	5	5
786	259169	812906	6.423191	4	1	2	G	1	8	2	Blanket Bog	8	0.382392	4	0.058745	1	32	5	10
787	259219	812906	8.710948	6	0.9	2	G	1	12	2	Blanket Bog	8	0.391786	4	0.139755	1	32	5	10
788	257690	812071	9.41132	6	1	2	G	1	12	2	Blanket Bog	8	1.104808	4	0.419708	1	32	5	10
789	257690	812081	10.191412	6	0.8	2	G	1	12	2	Blanket Bog	8	1.104808	4	0.411587	1	32	5	10
790	257690	812091	12.875529	6	0.95	2	G	1	12	2	Blanket Bog	8	1.104808	4	0.726889	1	32	5	10
791	257690	812101	14.622868	6	0.7	2	G	1	12	2	Blanket Bog	8	1.104808	4	0.766007	1	32	5	10
792	257650	812111	11.180176	6	0.95	2	G	1	12	2	Site Infrastructure	6	1.104808	4	0.581795	1	24	3	6
793	257660	812111	11.230606	6	0.95	2	G	1	12	2	Blanket Bog	8	1.104808	4	0.580154	1	32	5	10
794	257670	812111	11.642808	6	0.6	2	G	1	12	2	Blanket Bog	8	1.104808	4	0.580166	1	32	5	10
795	257680	812111	12.814011	6	0.5	1	G	1	6	2	Site Infrastructure	6	1.104808	4	0.64373	1	24	3	6
796	257690	812111	14.134742	6	0.8	2	G	1	12	2	Site Infrastructure	6	1.104808	4	0.766007	1	24	3	6
797	257690	812121	11.446535	6	0.65	2	G	1	12	2	Site Infrastructure	6	1.104808	4	0.580152	1	24	3	6
798	257690	812131	10.786189	6	0.75	2	G	1	12	2	Site Infrastructure	6	1.104808	4	0.600483	1	24	3	6
799	257690	812141	10.708512	6	0.75	2	G	1	12	2	Site Infrastructure	6	1.104808	4	0.483422	1	24	3	6
800	257690	812151	11.150993	6	0.85	2	G	1	12	2	Site Infrastructure	6	1.104808	4	0.535579	1	24	3	6
801	257690	812161	11.180017	6	0.85	2	G	1	12	2	Site Infrastructure	6	1.104808	4	0.540581	1	24	3	6
802	257690	812061	10.154189	6	0.85	2	G	1	12	2	Site Infrastructure	6	1.174118	4	0.4248	1	24	3	6
803	257640	812111	11.138	6	1.1	3	G	1	18	3	Blanket Bog	8	1.093054	4	0.577371	1	32	5	15
804	256961	812004	8.724202	6	1.5	3	G	1	18	3	Blanket Bog	8	3.043467	4	0.154459	1	32	5	15
805	256961	812014	8.647811	6	1.25	3	G	1	18	3	Blanket Bog	8	3.043467	4	0.156359	1	32	5	15
806	256961	812024	6.648641	4	1.8	3	G	1	12	2	Blanket Bog	8	3.043467	4	0.183655	1	32	5	10
807	256961	812034	9.544933	6	1.6	3	G	1	18	3	Blanket Bog	8	3.043467	4	0.795843	1	32	5	15
808	256921	812044	11.055311	6	1	2	G	1	12	2	Blanket Bog	8	3.043466	4	0.889377	1	32	5	10
809	256931	812044	10.572682	6	0.8	2	G	1	12	2	Blanket Bog	8	3.043466	4	0.884743	1	32	5	10
810	256941	812044	10.768455	6	0.95	2	G	1	12	2	Blanket Bog	8	3.043466	4	0.86751	1	32	5	10
811	256951	812044	11.361079	6	1.15	3	G	1	18	3	Blanket Bog	8	3.043466	4	0.865996	1	32	5	15
812	256961	812044	10.906791	6	1.5	3	G	1	18	3	Blanket Bog	8	3.043467	4	0.874089	1	32	5	15
813	256971	812044	8.151088	6	1.5	3	G	1	18	3	Blanket Bog	8	3.043467	4	0.808535	1	32	5	15
814	256981	812044	5.405351	4	0.95	2	G	1	8	2	Blanket Bog	8	3.043467	4	0.324541	1	32	5	10
815	256991	812044	5.183083	4	1.7	3	G	1	12	2	Blanket Bog	8	3.043467	4	0.333682	1	32	5	10
816	257001	812044	5.496434	4	1.8	3	G	1	12	2	Blanket Bog	8	3.043467	4	0.42039	1	32	5	10
817	257011	812044	5.379129	4	1.7	3	G	1	12	2	Blanket Bog	8	3.043467	4	0.41821	1	32	5	10
818	256961	812054	10.375093	6	1.5	3	G	1	18	3	Blanket Bog	8	3.043467	4	0.836283	1	32	5	15
819	256961	812064	10.356959	6	0.95	2	G	1	12	2	Blanket Bog	8	3.043467	4	0.836261	1	32	5	10
820	256961	812074	10.371253	6	1.25	3	G	1	18	3	Site Infrastructure	6	3.043467	4	0.852186	1	24	3	9
821	256961	812084	10.438739	6	1.65	3	G	1	18	3	Blanket Bog	8	3.043467	4	0.880196	1	32	5	15
822	256961	812094	9.806606	6	1.6	3	G	1	18	3	Blanket Bog	8	3.043467	4	0.898176	1	32	5	15
823	256961	811994	7.589718	4	0.9	2	G	1	8	2	Blanket Bog	8	2.918968	4	0.030012	1	32	5	10
824	256911	812044	11.709089	6	1.55	3	G	1	18	3	Blanket Bog	8	3.029329	4	0.982551	1	32	5	15
825	257173	812107	6.264922	4	2.55	3	G	1	12	2	Blanket Bog	8	1.205144	4	0.080246	1	32	5	10
826	257173	812117	5.481887	4	1.7	3	G	1	12	2	Blanket Bog	8	1.205144	4	0.077609	1	32	5	10
827	257173	812127	5.501382	4	1.35	3	G	1	12	2	Blanket Bog	8	1.205144	4	0.077503	1	32	5	10
828	257173	812137	6.638651	4	1.7	3	G	1	12	2	Site Infrastructure	6	1.205144	4	0.093324	1	24	3	6
829	257133	812147	7.414893	4	1	2	G	1	8	2	Site Infrastructure	6	1.205143	4	0.078249	1	24	3	6
830	257143	812147	6.769345	4	1.55	3	G	1	12	2	Site Infrastructure	6	1.205144	4	0.099018	1	24	3	6
831	257153	812147	7.024691	4	1.7	3	G	1	12	2	Site Infrastructure	6	1.205144	4	0.098989	1	24	3	6
832	257163	812147	7.024852	4	1	2	G	1	8	2	Site Infrastructure	6	1.205144	4	0.099021	1	24	3	6
833	257173	812147	7.024443	4	1.85	3	G	1	12	2	Site Infrastructure	6	1.205144	4	0.098991	1	24	3	6
834	257183	812147	7.008939	4	0.95	2	G	1	8	2	Site Infrastructure	6	1.205144	4	0.099023	1	24	3	6
835	257193	812147	6.891626	4	1	2	G	1	8	2	Site Infrastructure	6	1.205144	4	0.09849	1	24	3	6
836	257203	812147	7.139775	4	1.1	3	G	1	12	2	Blanket Bog	8	1.205144	4	0.088824	1	32	5	10
837	257213	812147	10.035005	6	1.5	3	G	1	18	3	Blanket Bog	8	1.205144	4	0.134928	1	32	5	15
838	257223	812147	11.806272	6	1.55	3	G	1	18	3	Blanket Bog	8	1.205144	4	0.136062	1	32	5	15
839	257173	812157	7.137786	4	1.75	3	G	1	12	2	Blanket Bog	8	1.205144	4	0.099373	1	32	5	10
840	257173	812167	7.147013	4	0.85	2	G	1	8	2	Site Infrastructure	6	1.205144	4	0.0994	1	24	3	6
841	257173	812177	7.149345	4	1.85	3	G	1	12	2	Site Infrastructure	6	1.205144	4	0.101502	1	24	3	6
842	257173	812187	7.10539	4	1.8	3	G	1	12	2	Blanket Bog	8	1.205144	4	0.101528	1	32	5	10
843	257173	812197	6.15461	4	1.2	3	G	1	12	2	Blanket Bog	8	1.205144	4	0.094999	1	32	5	10
844	257173	812097	8.940164	6	1.85	3	G	1	18	3	Blanket Bog	8	1.338049	4	0.12448	1	32	5	15
845	257123	812147	9.700834	6	1.65	3	G	1	18	3	Blanket Bog	8	1.219243	4	0.133553	1	32	5	15
846	255481	812607	3.209428	2	1.55	3	G	1	6	2	Site Infrastructure	6	2.22491	4	-0.19586	1	24	3	6
847	255481	812617	3.326372	2	1.7	3	G	1	6	2	Blanket Bog	8	2.22491	4	-0.19942	1	32	5	10
848	255481	812627	4.042495	4	1.3	3	G	1	12	2	Blanket Bog	8	2.22491	4	-0.261089	1	32	5	10
849	255481	812637	4.250516	4	1.15	3	G	1	12	2	Blanket Bog	8	2.22491	4	-0.263323	1	32	5	10
850	255441	812647	4.512808	4	0.95	2	G	1	8	2	Blanket Bog	8	2.22491	4	-0.278214	1	32	5	10
851	255451	812647	4.504948	4	1.05	3	G	1	12	2	Blanket Bog	8	2.22491	4	-0.277335	1	32	5	10
852	255461	812647	4.514797	4	1	2	G	1	8	2	Blanket Bog	8	2.22491	4	-0.284722	1	32	5	10
853	255471	812647	4.298047	4	0.3	1	G	1	4	1	Blanket Bog	8	2.22491	4	-0.263348	1	32	5	5
854	255481	812647	4.280128	4	0.15	1	G	1	4	1	Blanket Bog	8	2.22491	4	-0.264582	1	32	5	5
855	255491	812647	4.270956	4	0.2	1	G	1	4	1	Blanket Bog	8	2.22491	4	-0.263355	1	32	5	5
856	255501	812647	4.248977	4	0.25	1	G	1	4	1	Blanket Bog	8	2.22491	4	-0.263333	1	32	5	5
857	255511	812647	4.201174	4	0.4	1	G	1	4	1	Blanket Bog	8	2.22491	4	-0.263341	1	32	5	5
858	255521	812647	3.875596	2	1.05	3	G	1	6	2	Blanket Bog	8	2.22491	4	-0.255017	1	32	5	10
859	255531	812647	3.450398	2	0.85	2	G	1	4	1	Blanket Bog	8	2.22491	4	-0.189316	1	32	5	5
860	255481	812657	4.250536	4	1.05	3	G	1	12	2	Blanket Bog	8	2.22491	4	-0.263328	1	32	5	10
861	255481	812667	4.280042	4	0.25	1	G	1	4	1	Blanket Bog	8	2.22491	4	-0.264587	1	32	5	5
862	255481	812677	4.250494	4	0.55	2	G	1	8	2	Blanket Bog	8	2.22491	4	-0.263333	1	32	5	10
863	255481	812687	4.280151	4	0.95	2	G	1	8	2	Blanket Bog	8	2.22491	4	-0.26459	1	32	5	10
864	255481	812697	4.250536	4	0.85	2	G	1	8	2	Blanket Bog	8	2.22491	4	-0.263336	1	32	5	10
865	255481	812597	3.082444	2	0.95	2	G	1	4	1	Blanket Bog	8	2.414204	4	-0.188007	1	32	5	5
866	255431	812647	4.515986	4	1.55	3	G	1	12	2	Blanket Bog	8	2.219096	4	-0.283771	1	32	5	10
867	255877	813556	4.303294	4	1.15	3	G	1	12	2	Blanket Bog	8	1.919071	4	0.070396	1	32	5	10
868	255877	813516	5.09438	4	0.95	2	G	1	8	2	Site Infrastructure	6	1.929879	4	0.096636	1	24	3	6
869	255877	813526	5.379496	4	0.85	2	G	1	8	2	Blanket Bog	8	1.929879	4	0.121158	1	32	5	10
870	255877	813536	5.392982	4	0.45	1	G	1	4	1	Site Infrastructure	6	1.929879	4	0.1241	1	24	3	3
871	255877	813546	4.463415	4	0.65	2	G	1	8	2	Site Infrastructure	6	1.929879	4	0.080388	1	24	3	6
872	255837	813556	4.243929	4	0.95	2	G	1	8	2	Site Infrastructure	6	1.929879	4	0.076148	1	24	3	6
873	255847	813556	4.307895	4	1.6	3	G	1	12	2	Site Infrastructure	6	1.929879	4	0.079753	1	24	3	6
874	255857	813556	4.300821	4	1	2	G	1	8	2	Site Infrastructure	6	1.929879	4	0.07908	1	24	3	6
875	255867	813556	4.291787	4	1.05	3	G	1	12	2	Site Infrastructure	6	1.929879	4	0.07582	1	24	3	6
876	255887	813556	4.298251	4	0.95	2	G	1	8	2	Site Infrastructure	6	1.929879	4	0.076141	1	24	3	6
877	255897	813556	4.192494	4	1.45	3	G	1	12	2	Site Infrastructure	6	1.929879	4	0.079745	1	24	3	6
878	255907	813556	4.004776	4	0.9	2	G	1	8	2	Site Infrastructure	6	1.929879	4	0.033886	1	24	3	6
879	255917	813556	3.885815	2	1.7	3	G	1	6	2	Site Infrastructure	6	1.929879	4	0.025087	1	24	3	6
880	255927	813556	3.81302	2	1.2	3	G	1	6	2	Site Infrastructure	6	1.92988	4	0.050322	1	24	3	6
881	255877	813566	4.255281	4	1	2	G	1	8	2	Site Infrastructure	6	1.929879	4	0.079035	1	24	3	6
882	255877	813576	3.95769	2	0.95	2	G	1	4	1	Site Infrastructure	6	1.929879	4	0.02771	1	24	3	3
883	255877	813586	3.984285	2	1.1	3	G	1	6	2	Site Infrastructure	6	1.929879	4	0.021156	1	24	3	6
884	255877	813596	3.921292	2	1.7	3	G	1	6	2	Site Infrastructure	6	1.929879	4	0.024402	1	24	3	6
885	255877	813606	3.825284	2	1.7	3	G	1	6	2	Site Infrastructure	6	1.929879	4	0.050327	1	24	3	6
886	255877	813506	5.009857	4	0.75	2	G	1	8	2	Blanket Bog	8	1.828176	4	0.080967	1	32	5	10
887	255827	813556	3.064994	2	1.15	3	G	1	6	2	Blanket Bog	8	1.938715	4	0.053468	1	32	5	10
888	257667	814536	5.408792	4	1.45	3	G	1	12	2	Blanket Bog	8	1.919084	4	-0.147089	1	32	5	10
889	257667	814496	1.797549	1	2	3	G	1	3	1	Blanket Bog	8	1.929891	4	0.045488	1	32	5	5
890	257667	814506	5.119887	4	1.6	3	G	1	12	2	Blanket Bog	8	1.929891	4	-0.160619	1	32	5	10
891	257667	814516	5.382923	4	1.55	3	G	1	12	2	Blanket Bog	8	1.929891	4	-0.162951	1	32	5	10
892	257667	814526	5.384986	4	1.2	3	G	1	12	2	Blanket Bog	8	1.929891	4	-0.163632	1	32	5	10
893	257627	814536	3.658861	2	1	2	G	1	4	1	Blanket Bog	8	1.929891	4	-0.082879	1	32	5	5
894	257637	814536	5.985474	4	1.3	3	G	1	12	2	Blanket Bog	8	1.929891	4	-0.229456	1	32	5	10
895	257647	814536	7.220383	4	1.55	3	G	1	12	2	Blanket Bog	8	3.091012	4	-0.327181	1	32	5	10
896	257657	814536	5.764871	4	0.95	2	G	1	8	2	Blanket Bog	8	1.929891	4	-0.15634	1	32	5	10
897	257677	814536	5.375553	4	1.5	3	G	1	12	2	Blanket Bog	8	1.929891	4	-0.158296	1	32	5	10
898	257687	814536	6.85399	4	1.7	3	G	1	12	2	Blanket Bog	8	1.929891	4	-0.208181	1	32	5	10
899	257697	814536	7.828283	4	0.95	2	G	1	8	2	Blanket Bog	8	1.929892	4	-0.223124	1	32	5	10
900	257707	814536	7.46553	4	0.1	1	G	1	4	1	Blanket Bog	8	1.929892	4	-0.226061	1	32	5	5
901	257717	814536	6.067604	4	1.5	3	G	1	12	2	Blanket Bog	8	1.929892	4	-0.178859	1	32	5	10
902	257667	814546	5.721661	4	1	2	G	1	8	2	Blanket Bog	8	1.929891	4	-0.157342	1	32	5	10
903	257667	814556	4.570627	4	1.05	3	G	1	12	2	Blanket Bog	8	1.929891	4	-0.159154	1	32	5	10
904	257667	814566	4.339553	4	0.7	2	G	1	8	2	Blanket Bog	8	5.152292	4	0.251605	1	32	5	10
905	257667	814576	3.211567	2	1.3	3	G	1	6	2	Blanket Bog	8	3.091012	4	-0.107183	1	32	5	10
906	257667	814586	2.808783	2	1.7	3	G	1	6	2	Blanket Bog	8	1.929891	4	-0.07523	1	32	5	10
907	257667	814486	2.160897	2	0.8	2	G	1	4	1	Blanket Bog	8	1.828187	4	0.022524	1	32	5	5
908	257617	814536	3.020703	2	1.75	3	G	1	6	2	Blanket Bog	8	1.938727	4	-0.079908	1	32	5	10
909	255965	813789	2.901822	2	1.4	3	G	1	6	2	Blanket Bog	8	1.73074	4	0.186962	1	32	5	10
910	256001	813820	2.584104	2	0.85	2	G	1	4	1	Blanket Bog	8	2.625919	4	0.178012	1	32	5	5
911	256040	813850	6.056741	4	0.7	2	G	1	8	2	Blanket Bog	8	1.748368	4	0.339742	1	32	5	10
912	256076	813877	3.996334	2	0.4	1	G	1	2	1	Blanket Bog	8	2.117998	4	0.117573	1	32	5	5
913	256118	813910	3.538374	2	0.9	2	G	1	4	1	Blanket Bog	8	1.765039	4	0.078037	1	32	5	5
914	256154	813938	3.829526	2	0.8	2	G	1	4	1	Blanket Bog	8	2.025199	4	0.089997	1	32	5	5
915	256193	813968	3.966557	2	0.25	1	G	1	2	1	Blanket Bog	8	2.328907	4	0.010868	1	32	5	5
916	256231	813997	3.248559	2	0.85	2	G	1	4	1	Blanket Bog	8	2.226127	4	0.191848	1	32	5	5
917	256270	814028	2.987794	2	0.65	2	G	1	4	1	Blanket Bog	8	1.744438	4	0.112055	1	32	5	5
918	256309	814058	2.993424	2	1	2	G	1	4	1	Blanket Bog	8	1.811822	4	0.064643	1	32	5	5
919	256345	814086	3.229269	2	0.75	2	G	1	4	1	Blanket Bog	8	0.99382	4	0.163279	1	32	5	5
920	256375	814046	4.962398	4	0.65	2	G	1	8	2	Blanket Bog	8	1.093962	4	0.258317	1	32	5	10
921	256302	813989	3.010128	2	0.25	1	G	1	2	1	Blanket Bog	8	2.339093	4	0.027302	1	32	5	5
922	256259	813956	3.63322	2	0.2	1	G	1	2	1	Blanket Bog	8	0.239231	4	0.129755	1	32	5	5
923	256224	813929	4.024658	4	0.65	2	G	1	8	2	Blanket Bog	8	2.112403	4	0.197128	1	32	5	10
924	256187	813900	4.030991	4	1.05	3	G	1	12	2	Blanket Bog	8	2.578091	4	0.017356	1	32	5	10
925	256145	813868	3.898214	2	0.55	2	G	1	4	1	Blanket Bog	8	11.074663	3	-0.613179	1	24	3	3
926	256109	813840	0.990818	1	0.01	1	G	1	1	1	Blanket Bog	8	6.213832	4	-0.035676	1	32	5	5
927	256067	813807	4.502415	4	0.5	1	G	1	4	1	Blanket Bog	8	6.641631	4	0.150348	1	32	5	5
928	256029	813778	2.533069	2	0.85	2	G	1	4	1	Blanket Bog	8	3.209496	4	0.109858	1	32	5	5
929	255995	813752	7.453981	4	1.6	3	G	1	12	2	Blanket Bog	8	1.499252	4	0.10448	1	32	5	10
930	256338	813988	3.852418	2	1.2	3	G	1	6	2	Blanket Bog	8	2.120189	4	0.019389	1	32	5	10
931	256348	813988	4.177908	4	0.55	2	G	1	8	2	Blanket Bog	8	2.120189	4	0.010242	1	32	5	10
932	256368	813988	3.756746	2	0.45	1	G	1	2	1	Blanket Bog	8	2.12019	4	0.035172	1	32	5	5

933	256378	813988	3.875941	2	1.05	3	G	1	6	2	Blanket Bog	8	2.12019	4	0.03516	1	32	5	10
934	256388	813988	3.86854	2	0.8	2	G	1	4	1	Blanket Bog	8	2.12019	4	0.036927	1	32	5	5
935	256318	813998	3.153751	2	0.8	2	G	1	4	1	Blanket Bog	8	2.120189	4	0.018056	1	32	5	5
936	256328	813998	3.236808	2	0.8	2	G	1	4	1	Blanket Bog	8	2.120189	4	0.017256	1	32	5	5
937	256338	813998	3.25484	2	1.2	3	G	1	6	2	Blanket Bog	8	2.120189	4	0.017155	1	32	5	10
938	256348	813998	3.345782	2	1.2	3	G	1	6	2	Blanket Bog	8	2.120189	4	0.01806	1	32	5	10
939	256368	813998	4.006484	4	1.7	3	G	1	12	2	Blanket Bog	8	2.129118	4	0.037065	1	32	5	10
940	256378	813998	3.861437	2	1.65	3	G	1	6	2	Blanket Bog	8	2.12019	4	0.03523	1	32	5	10
941	256388	813998	3.860119	2	1.65	3	G	1	6	2	Blanket Bog	8	2.12019	4	0.035175	1	32	5	10
942	256398	813998	3.877141	2	1.5	3	G	1	6	2	Blanket Bog	8	2.129118	4	0.037065	1	32	5	10
943	256318	814008	3.016505	2	0.7	2	G	1	4	1	Blanket Bog	8	2.120189	4	0.018087	1	32	5	5
944	256328	814008	3.202738	2	0.9	2	G	1	4	1	Blanket Bog	8	2.120189	4	0.017148	1	32	5	5
945	256338	814008	3.236634	2	0.7	2	G	1	4	1	Blanket Bog	8	2.120189	4	0.017265	1	32	5	5
946	256348	814008	3.2495	2	0.95	2	G	1	4	1	Blanket Bog	8	2.120189	4	0.01717	1	32	5	5
947	256368	814008	4.999374	4	0.2	1	G	1	4	1	Blanket Bog	8	2.12019	4	0.028956	1	32	5	5
948	256378	814008	4.33793	4	1.4	3	G	1	12	2	Blanket Bog	8	2.12019	4	0.025452	1	32	5	10
949	256388	814008	3.912911	2	1.15	3	G	1	6	2	Blanket Bog	8	2.12019	4	0.036076	1	32	5	10
950	256398	814008	3.854113	2	0.9	2	G	1	4	1	Blanket Bog	8	2.12019	4	0.035232	1	32	5	5
951	256308	814018	2.992415	2	0.5	1	G	1	2	1	Blanket Bog	8	2.120189	4	0.018082	1	32	5	5
952	256318	814018	2.966285	2	0.9	2	G	1	4	1	Blanket Bog	8	2.120189	4	0.01726	1	32	5	5
953	256328	814018	3.044811	2	0.95	2	G	1	4	1	Blanket Bog	8	2.120189	4	0.016396	1	32	5	5
954	256338	814018	3.22848	2	0.7	2	G	1	4	1	Blanket Bog	8	2.129118	4	0.016998	1	32	5	5
955	256348	814018	3.236688	2	0.9	2	G	1	4	1	Blanket Bog	8	2.120189	4	0.017229	1	32	5	5
956	256368	814018	5.164467	4	1.15	3	G	1	12	2	Blanket Bog	8	2.12019	4	0.028956	1	32	5	10
957	256378	814018	5.213947	4	0.9	2	G	1	8	2	Blanket Bog	8	2.12019	4	0.028961	1	32	5	10
958	256388	814018	4.816662	4	0.9	2	G	1	8	2	Blanket Bog	8	2.12019	4	0.028133	1	32	5	10
959	256398	814018	4.10802	4	0.1	1	G	1	4	1	Blanket Bog	8	2.12019	4	0.031734	1	32	5	5
960	256408	814018	3.855663	2	0.75	2	G	1	4	1	Blanket Bog	8	2.12019	4	0.035246	1	32	5	5
961	256308	814028	2.963821	2	0.4	1	G	1	2	1	Blanket Bog	8	2.120189	4	0.017255	1	32	5	5
962	256318	814028	3.002926	2	0.95	2	G	1	4	1	Blanket Bog	8	2.120189	4	0.018176	1	32	5	5
963	256328	814028	2.965013	2	0.95	2	G	1	4	1	Blanket Bog	8	2.120189	4	0.017265	1	32	5	5
964	256338	814028	3.085601	2	0.85	2	G	1	4	1	Blanket Bog	8	2.120189	4	0.017179	1	32	5	5
965	256348	814028	3.247724	2	0.85	2	G	1	4	1	Blanket Bog	8	2.120189	4	0.017167	1	32	5	5
966	256368	814028	4.768077	4	0.85	2	G	1	8	2	Blanket Bog	8	2.12019	4	0.027995	1	32	5	10
967	256378	814028	5.243833	4	0.75	2	G	1	8	2	Blanket Bog	8	2.12019	4	0.028961	1	32	5	10
968	256388	814028	5.227024	4	0.95	2	G	1	8	2	Blanket Bog	8	2.12019	4	0.028966	1	32	5	10
969	256398	814028	5.129349	4	0.95	2	G	1	8	2	Blanket Bog	8	2.12019	4	0.02897	1	32	5	10
970	256408	814028	4.555672	4	0.2	1	G	1	4	1	Blanket Bog	8	2.129119	4	0.022095	1	32	5	5
971	256308	814048	2.980304	2	0.95	2	G	1	4	1	Blanket Bog	8	2.120189	4	0.017255	1	32	5	5
972	256318	814048	2.992554	2	1.1	3	G	1	6	2	Blanket Bog	8	2.120189	4	0.016392	1	32	5	10
973	256328	814048	2.963569	2	0.75	2	G	1	4	1	Blanket Bog	8	2.120189	4	0.017265	1	32	5	5
974	256338	814048	2.992254	2	0.8	2	G	1	4	1	Blanket Bog	8	2.120189	4	0.016346	1	32	5	5
975	256348	814048	2.971571	2	0.7	2	G	1	4	1	Blanket Bog	8	2.120189	4	0.017213	1	32	5	5
976	256368	814048	3.689505	2	0.5	1	G	1	2	1	Blanket Bog	8	2.12019	4	0.024008	1	32	5	5
977	256378	814048	5.222438	4	0.75	2	G	1	8	2	Blanket Bog	8	2.12019	4	0.028	1	32	5	10
978	256388	814048	5.243566	4	0.4	1	G	1	4	1	Blanket Bog	8	2.12019	4	0.028005	1	32	5	5
979	256398	814048	5.242348	4	0.4	1	G	1	4	1	Blanket Bog	8	2.129118	4	0.02775	1	32	5	5
980	256408	814048	5.243833	4	0.2	1	G	1	4	1	Blanket Bog	8	2.12019	4	0.028975	1	32	5	5
981	256318	814058	2.963682	2	0.2	1	G	1	2	1	Blanket Bog	8	2.120189	4	0.01726	1	32	5	5
982	256328	814058	2.992483	2	0.4	1	G	1	2	1	Blanket Bog	8	2.120189	4	0.016396	1	32	5	5
983	256338	814058	2.964755	2	0.1	1	G	1	2	1	Blanket Bog	8	2.120189	4	0.017264	1	32	5	5
984	256348	814058	2.987399	2	0.9	2	G	1	4	1	Blanket Bog	8	2.120189	4	0.017218	1	32	5	5
985	256368	814058	3.295602	2	0.85	2	G	1	4	1	Blanket Bog	8	2.12019	4	0.017167	1	32	5	5
986	256378	814058	5.003123	4	0.85	2	G	1	8	2	Blanket Bog	8	2.12019	4	0.028	1	32	5	10
987	256388	814058	5.228555	4	0.8	2	G	1	8	2	Blanket Bog	8	2.12019	4	0.028005	1	32	5	10
988	256398	814058	5.228485	4	0.25	1	G	1	4	1	Blanket Bog	8	2.12019	4	0.02801	1	32	5	5
989	256408	814058	5.249243	4	0.5	1	G	1	4	1	Blanket Bog	8	2.12019	4	0.028014	1	32	5	5
990	256318	814068	2.99256	2	1.1	3	G	1	6	2	Blanket Bog	8	2.129118	4	0.016254	1	32	5	10
991	256328	814068	2.963569	2	0.8	2	G	1	4	1	Blanket Bog	8	2.120189	4	0.017265	1	32	5	5
992	256338	814068	2.994557	2	0.75	2	G	1	4	1	Blanket Bog	8	2.129118	4	0.016208	1	32	5	5
993	256348	814068	2.992415	2	0.2	1	G	1	2	1	Blanket Bog	8	2.120189	4	0.018046	1	32	5	5
994	256368	814068	3.081221	2	0.4	1	G	1	2	1	Blanket Bog	8	2.12019	4	0.018888	1	32	5	5
995	256378	814068	4.485033	4	0.9	2	G	1	8	2	Blanket Bog	8	2.12019	4	0.029823	1	32	5	10
996	256388	814068	5.251841	4	1.15	3	G	1	12	2	Blanket Bog	8	2.12019	4	0.028005	1	32	5	10
997	256398	814068	5.230438	4	0.9	2	G	1	8	2	Blanket Bog	8	2.12019	4	0.02801	1	32	5	10
998	256328	814078	3.043107	2	1	2	G	1	4	1	Blanket Bog	8	2.120189	4	0.013426	1	32	5	5
999	256338	814078	3.064489	2	0.9	2	G	1	4	1	Blanket Bog	8	2.120189	4	0.015214	1	32	5	5
1000	257674	814619	4.034751	4	0.95	2	G	1	8	2	Blanket Bog	8	2.131831	4	-0.127851	1	32	5	10
1001	256368	814078	3.028089	2	0.85	2	G	1	4	1	Blanket Bog	8	2.12019	4	0.01339	1	32	5	5
1002	256378	814078	4.020166	4	0.8	2	G	1	8	2	Blanket Bog	8	2.12019	4	0.027709	1	32	5	10
1003	256388	814078	5.167833	4	0.7	2	G	1	8	2	Blanket Bog	8	2.12019	4	0.040652	1	32	5	10
1004	256368	814088	3.506496	2	0.6	2	G	1	4	1	Blanket Bog	8	2.12019	4	0.023426	1	32	5	5
1005	256991	813926	4.198169	4	0.9	2	G	1	8	2	Blanket Bog	8	2.027984	4	0.256378	1	32	5	10
1006	256947	813902	4.125375	4	0.65	2	G	1	8	2	Blanket Bog	8	2.260852	4	-0.014986	1	32	5	10
1007	256902	813878	4.936583	4	0.25	1	G	1	4	1	Blanket Bog	8	14.690656	3	-0.288603	1	24	3	3
1008	256859	813855	4.048507	4	0.95	2	G	1	8	2	Blanket Bog	8	11.284895	3	-0.188673	1	24	3	6
1009	256826	813836	4.712597	4	0.75	2	G	1	8	2	Blanket Bog	8	15.711655	3	1.582504	1	24	3	6
1010	256804	813808	5.751535	4	0.5	1	G	1	4	1	Site Infrastructure	6	9.833965	4	0.953524	1	24	3	3
1011	257137	814013	3.566833	2	1.65	3	G	1	6	2	Site Infrastructure	6	2.991883	4	-0.062354	1	24	3	6
1012	257137	813973	2.720987	2	0.5	1	G	1	2	1	Site Infrastructure	6	2.890143	4	-0.038324	1	24	3	3
1013	257137	813983	3.44988	2	0.75	2	G	1	4	1	Blanket Bog	8	2.890143	4	-0.05549	1	32	5	5
1014	257137	813993	3.560523	2	1.15	3	G	1	6	2	Blanket Bog	8	2.890143	4	-0.057019	1	32	5	10
1015	257137	814003	3.55932	2	1	2	G	1	4	1	Site Infrastructure	6	2.890143	4	-0.054661	1	24	3	3
1016	257097	814013	3.618855	2	1.25	3	G	1	6	2	Site Infrastructure	6	2.890143	4	-0.056982	1	24	3	6
1017	257107	814013	3.559419	2	1.15	3	G	1	6	2	Site Infrastructure	6	2.890143	4	-0.054675	1	24	3	6
1018	257117	814013	3.558932	2	0.85	2	G	1	4	1	Site Infrastructure	6	2.890143	4	-0.057008	1	24	3	3
1019	257127	814013	3.560475	2	1.1	3	G	1	6	2	Site Infrastructure	6	2.890143	4	-0.056998	1	24	3	6
1020	257147	814013	3.624442	2	0.25	1	G	1	2	1	Site Infrastructure	6	2.890143	4	-0.056829	1	24	3	3
1021	257157	814013	3.782667	2	2	3	G	1	6	2	Site Infrastructure	6	2.890143	4	-0.027979	1	24	3	6
1022	257167	814013	5.212423	4	2.05	3	G	1	12	2	Blanket Bog	8	2.890143	4	-0.020541	1	32	5	10
1023	257177	814013	6.710298	4	1.8	3	G	1	12	2	Blanket Bog	8	2.890143	4	-0.031018	1	32	5	10
1024	257187	814013	6.904293	4	1.8	3	G	1	12	2	Blanket Bog	8	2.890144	4	-0.030011	1	32	5	10
1025	257137	814023	4.556977	4	0.85	2	G	1	8	2	Blanket Bog	8	2.890143	4	-0.000314	1	32	5	10
1026	257137	814033	7.216045	4	0.9	2	G	1	8	2	Site Infrastructure	6	2.890143	4	-0.030997	1	24	3	6
1027	257137	814043	7.088796	4	1	2	G	1	8	2	Site Infrastructure	6	2.890143	4	-0.063284	1	24	3	6
1028	257137	814053	8.246083	6	1.05	3	G	1	18	3	Blanket Bog	8	2.890143	4	-0.105167	1	32	5	15
1029	257137	814063	9.071564	6	0.95	2	G	1	12	2	Blanket Bog	8	2.890143	4	-0.122796	1	32	5	10
1030	257137	813963	2.670619	2	0.95	2	G	1	4	1	Blanket Bog	8	3.019586	4	-0.040038	1	32	5	5
1031	257087	814013	3.618927	2	1.5	3	G	1	6	2	Blanket Bog	8	2.904259	4	-0.057876	1	32	5	10
1032	257201	814084	3.341219	2	1.2	3	G	1	6	2	Site Infrastructure	6	2.942947	4	-0.304808	1	24	3	6
1033	257201	814044	5.97686	4	1.85	3	G	1	12	2	Blanket Bog	8	3.043469	4	0.430356	1	32	5	10
1034	257201	814054	11.029943	6	0.45	1	G	1	6	2	Blanket Bog	8	3.043469	4	0.776854	1	32	5	10
1035	257201	814064	10.550631	6	1.35	3	G	1	18	3	Blanket Bog	8	3.043469	4	0.817529	1	32	5	15
1036	257201	814074	4.699833	4	1.9	3	G	1	12	2	Blanket Bog	8	3.043469	4	0.453551	1	32	5	10
1037	257161	814084	12.650699	6	1.05	3	G	1	18	3	Blanket Bog	8	3.043469	4	0.860474	1	32	5	15
1038	257171	814084	11.717005	6	1.4	3	G	1	18	3	Blanket Bog	8	3.043469	4	0.820393	1	32	5	15
1039	257181	814084	9.458103	6	1.05	3	G	1	18	3	Blanket Bog	8	3.043469	4	0.372421	1	32	5	15
1040	257191	814084	4.608221	4	1.05	3	G	1	12	2	Blanket Bog	8	3.043469	4	0.348458	1	32	5	10
1041	257211	814084	4.825643	4	0.95	2	G	1	8	2	Blanket Bog	8	3.043469	4	0.395108	1	32	5	10
1042	257221	814084	4.442529	4	1.1	3	G	1	12	2	Blanket Bog	8	3.043469	4	0.324351	1	32	5	10
1043	257231	814084	4.236545	4	0.8	2	G	1	8	2	Blanket Bog	8	3.043469	4	0.319254	1	32	5	10
1044	257241	814084	4.100797	4	0.95	2	G	1	8	2	Blanket Bog	8	3.04347	4	0.303079	1	32	5	10
1045	257251	814084	4.136927	4	1.05	3	G	1	12	2	Blanket Bog	8	3.04347	4	0.310349	1	32	5	10
1046	257201	814094	6.421646	4	0.4	1	G	1	4	1	Blanket Bog	8	8.056599	4	0.549254	1	32	5	5
1047	257201	814104	7.512584	4	1.3	3	G	1	12	2	Blanket Bog	8	3.043469	4	0.219908	1	32	5	10
1048	257201	814114	8.141629	6	0.8	2	G	1	12	2	Blanket Bog	8	3.043469	4	0.331732	1	32	5	10
1049	257201	814124	8.947295	6	1.9	3	G	1	18	3	Blanket Bog	8	3.043469	4	-0.500454	1	32	5	15
1050	257201	814134	3.292227	2	2	3	G	1	6	2	Blanket Bog	8	3.043469	4	0.149529	1	32	5	10
1051	257201	814034	3.06466	2	1.7	3	G	1	6	2	Blanket Bog	8	2.91897	4	0.214358	1	32	5	10
1052	257151	814084	12.65699	6	1.2	3	G	1	18	3	Blanket Bog	8	3.029331	4	0.887916	1	32	5	15
1053	257161	814519	3.575342	2	1.35	3	G	1	6	2	Blanket Bog	8	3.043469	4	-0.034241	1	32	5	10
1054	257161	814529	3.551866	2	1.05	3	G	1	6	2	Blanket Bog	8	3.043469	4	-0.034229	1	32	5	10
1055	257161	814539	3.522738	2	1.1	3	G	1	6	2	Blanket Bog	8	3.043469	4	-0.032073	1	32	5	10
1056	257161	814549	3.570867	2	0.8	2	G	1	4	1	Blanket Bog	8	3.043469	4	-0.034217	1	32	5	5
1057	257121	814559	3.476017	2	0.9	2	G	1	4	1	Blanket Bog	8	3.043468	4	-0.062507	1	32	5	5
1058	257131	814559	3.511471	2	1.4	3	G	1	6	2	Blanket Bog	8	3.043468	4	-0.060579	1	32	5	10
1059	257141	814559	3.482866	2	1.2	3	G	1	6	2	Blanket Bog	8	3.043468	4	-0.062505	1	32	5	10
1060	257151	814559	3.554151	2	0.8	2	G	1	4	1	Blanket Bog	8	3.043469	4	-0.043438	1	32	5	5
1061	257171	814559	3.523843	2	1.15	3	G	1	6	2	Blanket Bog	8	3.043469	4	-0.036163	1	32	5	10
1062	257181	814559	3.550348	2	0.85	2	G	1	4	1	Blanket Bog	8	3.043469	4	-0.034254	1	32	5	5
1063	257191	814559	3.784107	2	0.9	2	G	1	4	1	Blanket Bog	8	3.043469	4	-0.034234	1	32	5	5
1064	257201	814559	5.34595	4	0.4	1	G	1	4	1	Blanket Bog	8	3.043469	4	0.028603	1	32	5	5
1065	257211	814559	5.70902	4	0.6	2	G	1	8	2	Blanket Bog	8	3.043469	4	0.026401	1	32	5	10
1066	257161	814569	3.523014	2	1.1	3	G	1	6	2	Blanket Bog	8	3.043469	4	-0.036171	1	32	5	10
1067	257161	814579	3.538966	2	0.95	2	G	1	4	1	Blanket Bog	8	3.043469	4	-0.043402	1	32	5	5
1068	257161	814589	3.537117	2	1.1	3	G	1	6	2	Blanket Bog	8	3.043469	4	-0.064673	1	32	5	10
1069	257161	814599	3.517863	2	1.35	3	G	1	6	2	Blanket Bog	8	3.043469	4	-0.085929	1	32	5	10
1070	257161	814609	3.662672	2	1.8	3	G	1	6	2	Blanket Bog	8	3.043469	4	-0.084026	1	32	5	10
1071	257161	814509	5.015433	4	1.8	3	G	1	12	2	Blanket Bog	8	2.91897	4	-0.1521	1	32	5	10
1072	257111	814559	3.557141	2	1.3	3	G	1	6	2	Blanket Bog	8	3.029331	4	-0.074629	1	32	5	10
1073	257009	813992	3.507308	2	0.95	2	G	1	4	1	Blanket Bog	8	0.773397	4	0.092306	1	32	5	5
1074	257051	814016	3.618927	2	0.9	2	G	1	4	1	Blanket Bog	8	2.263223	4	0.24284	1	32	5	5
1075	257075	813969	3.502926	2	1.3	3	G	1	6	2	Blanket Bog	8	2.570054	4	0.269782	1	32	5	10
1076	257032	813947	4.199788	4	0.45	1	G	1	4	1	Site Infrastructure	6	2.480367	4	-0.020595	1	24	3	3
1077	257034	813914	4.14408	4	0.35	1	G	1	4	1	Blanket Bog	8	2.020955	4	0.269226	1	32	5	5
1078	257044	813914	3.890471	2	0.8	2	G	1	4	1	Blanket Bog	8	2.020955	4	0.253301	1	32	5	5
1079	257064	813914	3.877352	2	0.65	2	G	1	4	1	Blanket Bog	8	2.020955	4	0.253288	1	32	5	5
1080	257024	813924	4.195829	4	0.3	1	G	1	4	1	Blanket Bog	8	2.020955	4	0.269206	1	32	5	5
1081	257034	813924	4.188085	4	0.2	1	G	1	4	1	Blanket Bog	8	2.020955	4	0.268269	1	32	5	5
1082	257044	813924	4.019429	4	0.85	2	G	1	8	2	Blanket Bog	8	2.020955	4	0.261104	1	32	5	10
1083	257064	813924	3.869921	2	0.85	2	G	1	4	1	Blanket Bog	8	2.020955	4	0.25331	1	32	5	5
1084	257074	813924	3.851632	2	0.6	2	G	1	4	1	Blanket Bog	8	2.020955	4	0.251227	1	32	5	5
1085	257084	813924	3.847148	2	0.75	2	G	1	4	1	Blanket Bog	8	2.020955	4	0.25027	1	32	5	5
1086	257014	813934	4.195876	4	0.45	1	G	1	4	1	Blanket Bog	8	2.020955	4	0.269229	1	32	5	5
1087	257024	813934	4.196225	4	0.5	1	G	1	4	1	Blanket Bog	8	2.020955	4	0.268281	1	32	5	5
1088	257034	813934	4.198088	4	0.4	1	G	1	4	1	Blanket Bog	8	2.020955	4	0.269204	1	32	5	5

1089	257044	813934	4.143247	4	0.95	2	G	1	8	2	Blanket Bog	8	2.020955	4	0.274025	1	32	5	10
1090	257064	813934	3.8505	2	0.75	2	G	1	4	1	Blanket Bog	8	2.020955	4	0.246436	1	32	5	5
1091	257074	813934	3.864213	2	0.8	2	G	1	4	1	Blanket Bog	8	2.020955	4	0.250274	1	32	5	5
1092	257084	813934	3.847635	2	1.45	3	G	1	6	2	Blanket Bog	8	2.020955	4	0.250288	1	32	5	10
1093	257094	813934	3.84406	2	1.7	3	G	1	6	2	Blanket Bog	8	2.020955	4	0.25027	1	32	5	10
1094	257004	813944	4.195945	4	0.75	2	G	1	8	2	Blanket Bog	8	2.020955	4	0.269222	1	32	5	10
1095	257014	813944	4.196298	4	0.8	2	G	1	8	2	Site Infrastructure	6	2.020955	4	0.268262	1	24	3	6
1096	257024	813944	4.198131	4	0.5	1	G	1	4	1	Blanket Bog	8	2.020955	4	0.269227	1	32	5	5
1097	257034	813944	4.199432	4	0.45	1	G	1	4	1	Blanket Bog	8	2.020955	4	0.274011	1	32	5	5
1098	257044	813944	4.193859	4	0.9	2	G	1	8	2	Blanket Bog	8	2.020955	4	0.268252	1	32	5	10
1099	257064	813944	3.888883	2	0.9	2	G	1	4	1	Blanket Bog	8	2.020955	4	0.253305	1	32	5	5
1100	257074	813944	3.846766	2	1.7	3	G	1	6	2	Blanket Bog	8	2.020955	4	0.25027	1	32	5	10
1101	257084	813944	3.839438	2	1.75	3	G	1	6	2	Blanket Bog	8	2.020955	4	0.247261	1	32	5	10
1102	257094	813944	3.826197	2	1.7	3	G	1	6	2	Blanket Bog	8	2.020955	4	0.250288	1	32	5	10
1103	257004	813954	4.196204	4	0.2	1	G	1	4	1	Blanket Bog	8	2.020955	4	0.268271	1	32	5	5
1104	257014	813954	4.198181	4	0.45	1	G	1	4	1	Site Infrastructure	6	2.020955	4	0.269226	1	24	3	3
1105	257024	813954	4.1994	4	0.6	2	G	1	8	2	Site Infrastructure	6	2.020955	4	0.273992	1	24	3	6
1106	257034	813954	4.197892	4	0.8	2	G	1	8	2	Site Infrastructure	6	2.020955	4	0.268275	1	24	3	6
1107	257044	813954	4.195969	4	0.75	2	G	1	8	2	Blanket Bog	8	2.020955	4	0.269216	1	32	5	10
1108	257064	813954	3.840452	2	1.05	3	G	1	6	2	Blanket Bog	8	2.020955	4	0.250274	1	32	5	10
1109	257074	813954	3.564529	2	1.8	3	G	1	6	2	Blanket Bog	8	2.020955	4	0.254079	1	32	5	10
1110	257084	813954	3.180537	2	1.65	3	G	1	6	2	Site Infrastructure	6	2.020955	4	0.187358	1	24	3	6
1111	257094	813954	2.895075	2	1.2	3	G	1	6	2	Blanket Bog	8	2.020955	4	0.120202	1	32	5	10
1112	257104	813954	2.729564	2	1.05	3	G	1	6	2	Blanket Bog	8	2.020955	4	0.11061	1	32	5	10
1113	257004	813974	3.963616	2	1.35	3	G	1	6	2	Blanket Bog	8	2.020955	4	0.255322	1	32	5	10
1114	257014	813974	3.761618	2	0.9	2	G	1	4	1	Blanket Bog	8	2.020955	4	0.216222	1	32	5	5
1115	257024	813974	3.646472	2	0.95	2	G	1	4	1	Site Infrastructure	6	2.020955	4	0.207603	1	24	3	3
1116	257034	813974	3.509018	2	0.85	2	G	1	4	1	Site Infrastructure	6	2.020955	4	0.207617	1	24	3	3
1117	257044	813974	3.49522	2	0.7	2	G	1	4	1	Site Infrastructure	6	2.020955	4	0.207606	1	24	3	3
1118	257064	813974	3.617153	2	1	2	G	1	4	1	Site Infrastructure	6	2.020955	4	0.202019	1	24	3	3
1119	257074	813974	3.595098	2	1.4	3	G	1	6	2	Site Infrastructure	6	2.020955	4	0.201983	1	24	3	6
1120	257084	813974	3.557443	2	0.55	2	G	1	4	1	Site Infrastructure	6	2.020955	4	0.194187	1	24	3	3
1121	257094	813974	3.515532	2	0.9	2	G	1	4	1	Site Infrastructure	6	2.020955	4	0.194197	1	24	3	3
1122	257104	813974	3.381287	2	1.5	3	G	1	6	2	Site Infrastructure	6	2.020955	4	0.198999	1	24	3	6
1123	257004	813984	3.498412	2	1.25	3	G	1	6	2	Site Infrastructure	6	2.020955	4	0.201887	1	24	3	6
1124	257014	813984	3.49491	2	1	2	G	1	4	1	Blanket Bog	8	2.020955	4	0.201863	1	32	5	5
1125	257024	813984	3.514745	2	0.9	2	G	1	4	1	Blanket Bog	8	2.020955	4	0.201889	1	32	5	5
1126	257034	813984	3.515215	2	0.8	2	G	1	4	1	Blanket Bog	8	2.020955	4	0.207602	1	32	5	5
1127	257044	813984	3.507567	2	1	2	G	1	4	1	Site Infrastructure	6	2.020955	4	0.207604	1	24	3	3
1128	257064	813984	3.618886	2	0.95	2	G	1	4	1	Site Infrastructure	6	2.020955	4	0.201978	1	24	3	3
1129	257074	813984	3.618927	2	0.85	2	G	1	4	1	Site Infrastructure	6	2.020955	4	0.201998	1	24	3	3
1130	257084	813984	3.575077	2	0.35	1	G	1	2	1	Site Infrastructure	6	2.020955	4	0.199944	1	24	3	3
1131	257094	813984	3.567624	2	0.95	2	G	1	4	1	Site Infrastructure	6	2.020955	4	0.202009	1	24	3	3
1132	257004	813994	3.526505	2	0.4	1	G	1	2	1	Site Infrastructure	6	2.020955	4	0.209678	1	24	3	3
1133	257014	813994	3.499491	2	0.95	2	G	1	4	1	Blanket Bog	8	2.020955	4	0.201861	1	32	5	5
1134	257024	813994	3.494851	2	0.95	2	G	1	4	1	Blanket Bog	8	2.020955	4	0.201874	1	32	5	5
1135	257034	813994	3.517965	2	0.8	2	G	1	4	1	Blanket Bog	8	2.020955	4	0.201864	1	32	5	5
1136	257044	813994	3.574801	2	1.45	3	G	1	6	2	Site Infrastructure	6	2.020955	4	0.206808	1	24	3	6
1137	257064	813994	3.618927	2	0.15	1	G	1	2	1	Site Infrastructure	6	2.020955	4	0.201993	1	24	3	3
1138	257074	813994	3.618912	2	0.25	1	G	1	2	1	Site Infrastructure	6	2.020955	4	0.202013	1	24	3	3
1139	257084	813994	3.614774	2	0.25	1	G	1	2	1	Site Infrastructure	6	2.020955	4	0.202	1	24	3	3
1140	257094	813994	3.560101	2	0.95	2	G	1	4	1	Site Infrastructure	6	2.020955	4	0.198968	1	24	3	3
1141	257014	814004	3.526525	2	1.15	3	G	1	6	2	Site Infrastructure	6	2.020955	4	0.209695	1	24	3	6
1142	257024	814004	3.49949	2	1.35	3	G	1	6	2	Blanket Bog	8	2.020955	4	0.20186	1	32	5	10
1143	257034	814004	3.525789	2	1.1	3	G	1	6	2	Blanket Bog	8	2.020955	4	0.20379	1	32	5	10
1144	257044	814004	3.617136	2	1.85	3	G	1	6	2	Site Infrastructure	6	2.020955	4	0.201998	1	24	3	6
1145	257064	814004	3.618925	2	1.3	3	G	1	6	2	Site Infrastructure	6	2.020955	4	0.202008	1	24	3	6
1146	257074	814004	3.618753	2	1.15	3	G	1	6	2	Site Infrastructure	6	2.020955	4	0.202009	1	24	3	6
1147	257084	814004	3.618917	2	0.5	1	G	1	2	1	Site Infrastructure	6	2.020955	4	0.201986	1	24	3	3
1148	257034	814014	3.597596	2	1.55	3	G	1	6	2	Site Infrastructure	6	2.020955	4	0.202019	1	24	3	6
1149	257064	814014	3.618882	2	1.75	3	G	1	6	2	Blanket Bog	8	2.020955	4	0.202017	1	32	5	10
1150	257074	814014	3.618886	2	0.6	2	G	1	4	1	Site Infrastructure	6	2.020955	4	0.201981	1	24	3	3
1151	257169	814555	3.55563	2	0.9	2	G	1	4	1	Site Infrastructure	6	1.473332	4	-0.059692	1	24	3	3
1152	257194	814509	3.82682	2	1.4	3	G	1	6	2	Blanket Bog	8	2.342327	4	-0.231247	1	32	5	10
1153	257044	814014	3.618843	2	0.5	1	G	1	2	1	Blanket Bog	8	2.020955	4	0.201983	1	32	5	5
1154	257188	814470	3.59459	2	1.6	3	G	1	6	2	Blanket Bog	8	1.393273	4	-0.110931	1	32	5	10
1155	257198	814470	3.576564	2	1.55	3	G	1	6	2	Blanket Bog	8	1.400817	4	-0.111427	1	32	5	10
1156	257178	814480	3.383144	2	1.7	3	G	1	6	2	Blanket Bog	8	1.394288	4	0.002461	1	32	5	10
1157	257188	814480	4.099974	4	1.35	3	G	1	12	2	Blanket Bog	8	1.393273	4	-0.217299	1	32	5	10
1158	257198	814480	4.535971	4	1.25	3	G	1	12	2	Blanket Bog	8	1.400817	4	-0.158921	1	32	5	10
1159	257168	814490	3.006269	2	0.25	1	G	1	2	1	Blanket Bog	8	1.393273	4	0.006312	1	32	5	5
1160	257178	814490	3.094298	2	0.95	2	G	1	4	1	Blanket Bog	8	1.394288	4	0.006769	1	32	5	5
1161	257188	814490	3.760723	2	0.3	1	G	1	2	1	Blanket Bog	8	1.394288	4	0.028839	1	32	5	5
1162	257198	814490	4.514551	4	0.3	1	G	1	4	1	Blanket Bog	8	1.393273	4	0.114118	1	32	5	5
1163	257158	814500	3.401707	2	0.9	2	G	1	4	1	Blanket Bog	8	1.394288	4	0.00676	1	32	5	5
1164	257168	814500	3.187693	2	0.8	2	G	1	4	1	Blanket Bog	8	1.393273	4	0.001414	1	32	5	5
1165	257178	814500	3.020209	2	0.85	2	G	1	4	1	Blanket Bog	8	1.393273	4	0.000895	1	32	5	5
1166	257188	814500	2.997192	2	0.7	2	G	1	4	1	Blanket Bog	8	1.394288	4	0.006747	1	32	5	5
1167	257198	814500	3.80303	2	1.05	3	G	1	6	2	Blanket Bog	8	1.393273	4	0.01272	1	32	5	10
1168	257158	814510	4.969627	4	1.3	3	G	1	12	2	Blanket Bog	8	1.386709	4	-0.196107	1	32	5	10
1169	257168	814510	4.693094	4	0.95	2	G	1	8	2	Blanket Bog	8	1.394288	4	-0.201907	1	32	5	10
1170	257178	814510	4.38794	4	0.65	2	G	1	8	2	Blanket Bog	8	1.393273	4	-0.201891	1	32	5	10
1171	257188	814510	4.167557	4	0.02	1	G	1	4	1	Blanket Bog	8	1.386709	4	-0.193596	1	32	5	5
1172	257198	814510	3.799801	2	0.95	2	G	1	4	1	Blanket Bog	8	1.394288	4	-0.144549	1	32	5	5
1173	257158	814530	3.561999	2	1.1	3	G	1	6	2	Blanket Bog	8	1.386709	4	-0.097679	1	32	5	10
1174	257168	814530	3.517033	2	1.1	3	G	1	6	2	Blanket Bog	8	1.393273	4	-0.093635	1	32	5	10
1175	257178	814530	3.566444	2	0.9	2	G	1	4	1	Blanket Bog	8	1.386709	4	-0.097701	1	32	5	5
1176	257188	814530	3.574288	2	0.35	1	G	1	2	1	Blanket Bog	8	1.400817	4	-0.098556	1	32	5	5
1177	257198	814530	3.52794	2	1.3	3	G	1	6	2	Blanket Bog	8	1.386709	4	-0.098703	1	32	5	10
1178	257168	814540	3.566409	2	1.1	3	G	1	6	2	Blanket Bog	8	1.393273	4	-0.098084	1	32	5	10
1179	257178	814540	3.574292	2	1.05	3	G	1	6	2	Blanket Bog	8	1.386709	4	-0.097662	1	32	5	10
1180	257188	814540	3.532833	2	0.3	1	G	1	2	1	Blanket Bog	8	1.394288	4	-0.098693	1	32	5	5
1181	257198	814540	3.588276	2	0.25	1	G	1	2	1	Blanket Bog	8	1.400817	4	-0.098561	1	32	5	5
1182	257168	814550	3.574188	2	0.85	2	G	1	4	1	Blanket Bog	8	1.394288	4	-0.098183	1	32	5	5
1183	257178	814550	3.53278	2	0.95	2	G	1	4	1	Blanket Bog	8	1.393273	4	-0.098587	1	32	5	5
1184	257188	814550	3.539523	2	1	2	G	1	4	1	Blanket Bog	8	1.386709	4	-0.097667	1	32	5	5
1185	257198	814550	4.069512	4	1	2	G	1	8	2	Blanket Bog	8	1.400817	4	-0.093024	1	32	5	10
1186	257178	814560	3.538465	2	1.2	3	G	1	6	2	Blanket Bog	8	1.400817	4	-0.09856	1	32	5	10
1187	257188	814560	3.623107	2	1	2	G	1	4	1	Blanket Bog	8	1.386709	4	-0.097684	1	32	5	5
1188	257198	814560	4.988328	4	0.7	2	G	1	8	2	Blanket Bog	8	1.393273	4	-0.119952	1	32	5	10
1189	257198	814570	5.636565	4	0.75	2	G	1	8	2	Blanket Bog	8	1.386709	4	-0.123593	1	32	5	10
1190	257161	814559	3.571065	2	0.9	2	G	1	4	1	Blanket Bog	8	2.942947	4	-0.027517	1	32	5	5
1191	258268	814393	5.912834	4	0.9	2	G	1	8	2	Blanket Bog	8	2.408999	4	0.061093	1	32	5	10
1192	258316	814382	6.845883	4	0.7	2	G	1	8	2	Blanket Bog	8	2.683158	4	0.460661	1	32	5	10
1193	258303	814334	6.877814	4	0.2	1	G	1	4	1	Blanket Bog	8	2.377583	4	0.096287	1	32	5	5
1194	258256	814345	5.489537	4	0.7	2	G	1	8	2	Blanket Bog	8	2.650443	4	0.340221	1	32	5	10
1195	258242	814298	5.833978	4	0.9	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.04974	1	32	5	10
1196	258252	814298	5.777454	4	0.8	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.048815	1	32	5	10
1197	258272	814298	5.83412	4	0.25	1	G	1	4	1	Blanket Bog	8	2.658184	4	-0.049753	1	32	5	5
1198	258282	814298	5.782631	4	0.25	1	G	1	4	1	Blanket Bog	8	2.658184	4	-0.050587	1	32	5	5
1199	258292	814298	5.83054	4	0.4	1	G	1	4	1	Blanket Bog	8	2.658184	4	-0.049729	1	32	5	5
1200	258232	814308	5.709895	4	1.3	3	G	1	12	2	Blanket Bog	8	2.658184	4	-0.049325	1	32	5	10
1201	258242	814308	5.833591	4	0.95	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.049743	1	32	5	10
1202	258252	814308	5.777463	4	0.4	1	G	1	4	1	Blanket Bog	8	2.658184	4	-0.048813	1	32	5	5
1203	258272	814308	5.83412	4	0.9	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.04975	1	32	5	10
1204	258282	814308	5.777312	4	0.75	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.048819	1	32	5	10
1205	258292	814308	5.885986	4	0.8	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.049727	1	32	5	10
1206	258302	814308	6.614385	4	0.7	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.049044	1	32	5	10
1207	258222	814318	5.089813	4	1.2	3	G	1	12	2	Blanket Bog	8	2.658184	4	-0.038687	1	32	5	10
1208	258232	814318	5.270343	4	1.2	3	G	1	12	2	Blanket Bog	8	2.658184	4	-0.038678	1	32	5	10
1209	258242	814318	5.774624	4	1.05	3	G	1	12	2	Blanket Bog	8	2.658184	4	-0.049568	1	32	5	10
1210	258252	814318	5.778767	4	0.95	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.048811	1	32	5	10
1211	258272	814318	5.834054	4	0.3	1	G	1	4	1	Blanket Bog	8	2.658184	4	-0.049748	1	32	5	5
1212	258282	814318	5.783124	4	0.9	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.048823	1	32	5	10
1213	258292	814318	6.38343	4	0.8	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.04466	1	32	5	10
1214	258302	814318	6.860824	4	0.8	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.051454	1	32	5	10
1215	258312	814318	6.895884	4	0.8	2	G	1	8	2	Blanket Bog	8	2.658185	4	-0.053213	1	32	5	10
1216	258222	814328	5.089762	4	0.3	1	G	1	4	1	Blanket Bog	8	2.658184	4	-0.038577	1	32	5	5
1217	258232	814328	5.104726	4	0.95	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.040383	1	32	5	10
1218	258242	814328	5.383167	4	1.3	3	G	1	12	2	Blanket Bog	8	2.658184	4	-0.040369	1	32	5	10
1219	258252	814328	5.805852	4	0.9	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.049729	1	32	5	10
1220	258272	814328	5.82069	4	0.85	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.049745	1	32	5	10
1221	258282	814328	6.102913	4	0.4	1	G	1	4	1	Blanket Bog	8	2.658184	4	-0.046343	1	32	5	5
1222	258292	814328	6.846732	4	0.8	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.053225	1	32	5	10
1223	258302	814328	6.871833	4	0.7	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.051529	1	32	5	10
1224	258312	814328	6.869951	4	0.8	2	G	1	8	2	Blanket Bog	8	2.658185	4	-0.051435	1	32	5	10
1225	258222	814338	5.088982	4	0.25	1	G	1	4	1	Blanket Bog	8	2.658184	4	-0.040369	1	32	5	5
1226	258232	814338	5.11561	4	0.1	1	G	1	4	1	Blanket Bog	8	2.658184	4	-0.039505	1	32	5	5
1227	258242	814338	5.100983	4	0.35	1	G	1	4	1	Blanket Bog	8	2.658184	4	-0.038712	1	32	5	5
1228	258252	814338	5.548885	4	0.9	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.043994	1	32	5	10
1229	258272	814338	5.918047	4	0.45	1	G	1	4	1	Blanket Bog	8	2.658184	4	-0.049743	1	32	5	5
1230	258282	814338	6.74917	4	0.4	1	G	1	4	1	Blanket Bog	8	2.658184	4	-0.052395	1	32	5	5
1231	258292	814338	6.860433	4	0.75	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.051447	1	32	5	10
1232	258302	814338	6.868228	4	0.45	1	G	1	4	1	Blanket Bog	8	2.658184	4	-0.051435	1	32	5	5
1233	258312	814338	6.895959	4	0.95	2	G	1	8	2	Blanket Bog	8	2.658185	4	-0.053193	1	32	5	10
1234	258222	814358	5.105398	4	1	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.041408	1	32	5	10
1235	258232	814358	5.123683	4	0.95	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.041307	1	32	5	10
1236	258242	814358	5.105088	4	0.95	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.041425	1	32	5	10
1237	258252	814358	5.052834	4	0.7	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.041329	1	32	5	10
1238	258272	814358	6.590091	4	0.9	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.068727	1	32	5	10
1239	258282	814358	6.83143	4	0.8	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.070219	1	32	5	10
1240	258292	814358	6.879988	4	1.1	3	G	1	12	2	Blanket Bog	8	2.658184	4	-0.070199	1	32	5	10
1241	258302	814358	6.85456	4	0.8	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.070175	1	32	5	10
1242	258312	814358	6.85446	4	1	2	G	1	8	2	Blanket Bog	8	2.658185	4	-0.070206	1	32	5	10
1243	258222	814368	5.137775	4	1	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.041408	1	32	5	10
1244	258232	814368	5.100586	4	1.1	3	G	1	12	2	Blanket Bog	8	2.658184	4	-0.041384	1	32	5	10

1245	258242	814368	4.996045	4	0.95	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.041338	1	32	5	10	
1246	258252	814368	4.542264	4	0.45	1	G	1	4	1	Blanket Bog	8	2.658184	4	-0.045108	1	32	5	5	
1247	258272	814368	5.99179	4	0.8	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.054522	1	32	5	10	
1248	258282	814368	6.40652	4	0.65	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.059762	1	32	5	10	
1249	258292	814368	6.823074	4	0.9	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.070175	1	32	5	10	
1250	258302	814368	6.854002	4	0.95	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.070206	1	32	5	10	
1251	258312	814368	6.855177	4	1.05	3	G	1	12	2	Blanket Bog	8	2.658185	4	-0.070187	1	32	5	10	
1252	258232	814378	4.830844	4	0.2	1	G	1	4	1	Blanket Bog	8	2.658184	4	-0.046418	1	32	5	5	
1253	258242	814378	4.490141	4	0.8	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.044276	1	32	5	10	
1254	258252	814378	4.383415	4	0.85	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.043452	1	32	5	10	
1255	258272	814378	5.913239	4	0.6	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.054418	1	32	5	10	
1256	258282	814378	5.927361	4	0.85	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.054454	1	32	5	10	
1257	258292	814378	6.202343	4	0.75	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.055371	1	32	5	10	
1258	258302	814378	6.694481	4	0.6	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.069668	1	32	5	10	
1259	258242	814388	4.386633	4	1.25	3	G	1	12	2	Blanket Bog	8	2.658184	4	-0.043454	1	32	5	10	
1260	258252	814388	4.383544	4	1.05	3	G	1	12	2	Blanket Bog	8	2.658184	4	-0.043464	1	32	5	10	
1261	258272	814388	5.906238	4	0.9	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.055387	1	32	5	10	
1262	258282	814388	5.913343	4	0.95	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.054519	1	32	5	10	
1263	258292	814388	5.909593	4	0.95	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.054413	1	32	5	10	
1264	258272	814398	5.898227	4	0.85	2	G	1	8	2	Blanket Bog	8	2.658184	4	-0.054435	1	32	5	10	
1265	258212	814318	5.115399	4	1.2	3	G	1	12	2	Blanket Bog	8	2.767395	4	-0.061537	1	32	5	10	
1266	258212	814328	5.104437	4	1.15	3	G	1	12	2	Blanket Bog	8	2.767395	4	-0.060214	1	32	5	10	
1267	258212	814338	5.1054	4	1	2	G	1	8	2	Blanket Bog	8	2.767395	4	-0.062167	1	32	5	10	
1268	258212	814358	5.12264	4	1.65	3	G	1	12	2	Blanket Bog	8	2.767395	4	-0.062869	1	32	5	10	
1269	258212	814368	5.092765	4	1.85	3	G	1	12	2	Blanket Bog	8	2.767395	4	-0.063015	1	32	5	10	
1270	257265	814594	5.701198	4	1.1	3	G	1	12	2	Blanket Bog	8	1.762944	4	-0.036237	1	32	5	10	
1271	257310	814614	5.537376	4	0.8	2	G	1	8	2	Blanket Bog	8	2.028821	4	-0.071887	1	32	5	10	
1272	257356	814634	5.225505	4	1.3	3	G	1	12	2	Blanket Bog	8	2.356086	4	-0.007271	1	32	5	10	
1273	257402	814655	5.144298	4	1.15	3	G	1	12	2	Blanket Bog	8	2.246488	4	-0.20788	1	32	5	10	
1274	257458	814670	4.279745	4	1.25	3	G	1	12	2	Blanket Bog	8	1.455367	4	-0.144226	1	32	5	10	
1275	257518	814660	4.526916	4	0.6	2	G	1	8	2	Blanket Bog	8	1.372603	4	-0.181019	1	32	5	10	
1276	257564	814641	4.958216	4	1.65	3	G	1	12	2	Blanket Bog	8	0.110982	4	-0.049681	1	32	5	10	
1277	257611	814622	5.008863	4	1.3	3	G	1	12	2	Blanket Bog	8	1.886538	4	0.073446	1	32	5	10	
1278	257797	814545	0.472419	1	0.9	2	G	1	2	1	Blanket Bog	8	1.970432	4	-0.000474	1	32	5	5	
1279	257843	814527	3.005687	2	1.45	3	G	1	6	2	Minor Watercourse	6	1.299784	4	0.029316	1	24	3	6	
1280	257889	814508	2.803662	2	1.65	3	G	1	6	2	Blanket Bog	8	1.833117	4	0.044523	1	32	5	10	
1281	257936	814488	3.421732	2	1.3	3	G	1	6	2	Blanket Bog	8	3.224322	4	0.196085	1	32	5	10	
1282	257981	814470	3.126796	2	1.9	3	G	1	6	2	Blanket Bog	8	2.059987	4	0.229615	1	32	5	10	
1283	258025	814452	4.34618	4	2.75	3	G	1	12	2	Blanket Bog	8	1.578106	4	0.218871	1	32	5	10	
1284	258073	814439	4.356197	4	0.7	2	G	1	8	2	Blanket Bog	8	1.985335	4	0.081923	1	32	5	10	
1285	258121	814428	5.442574	4	2.25	3	G	1	12	2	Blanket Bog	8	2.859552	4	0.316211	1	32	5	10	
1286	258170	814416	3.701012	2	1.55	3	G	1	6	2	Blanket Bog	8	1.548843	4	0.235196	1	32	5	10	
1287	258205	814357	5.100787	4	1.6	3	G	1	12	2	Blanket Bog	8	1.676867	4	0.25815	1	32	5	10	
1288	258158	814368	2.499521	2	1	2	G	1	4	1	Blanket Bog	8	1.847782	4	0.017846	1	32	5	5	
1289	258106	814380	5.085982	4	1.8	3	G	1	12	2	Blanket Bog	8	2.032795	4	0.184043	1	32	5	10	
1290	258060	814391	5.045345	4	1.8	3	G	1	12	2	Blanket Bog	8	0.927189	4	0.140883	1	32	5	10	
1291	258007	814405	2.362046	2	0.9	2	G	1	4	1	Blanket Bog	8	1.94879	4	0.018563	1	32	5	5	
1292	257960	814425	3.669673	2	0.9	2	G	1	4	1	Blanket Bog	8	1.528421	4	0.106095	1	32	5	5	
1293	257914	814443	3.395499	2	1.5	3	G	1	6	2	Blanket Bog	8	2.176052	4	0.106477	1	32	5	10	
1294	257869	814462	3.39309	2	1.8	3	G	1	6	2	Blanket Bog	8	0.782947	4	0.119069	1	32	5	10	
1295	257821	814482	3.371955	2	2	3	G	1	6	2	Blanket Bog	8	2.235197	4	0.214723	1	32	5	10	
1296	257777	814500	4.55715	4	2.5	3	G	1	12	2	Blanket Bog	8	2.597219	4	-0.176421	1	32	5	10	
1297	257730	814519	7.356999	4	1	2	G	1	8	2	Blanket Bog	8	2.086908	4	-0.165401	1	32	5	10	
1298	257639	814556	3.371392	2	1.85	3	G	1	6	2	Blanket Bog	8	0.524368	4	0.000491	1	32	5	10	
1299	257591	814576	4.966967	4	1.65	3	G	1	12	2	Blanket Bog	8	1.725498	4	0.007434	1	32	5	10	
1300	257544	814595	4.9951	4	0.55	2	G	1	8	2	Blanket Bog	8	0.762124	4	-0.113913	1	32	5	10	
1301	257499	814614	4.664244	4	1.75	3	G	1	12	2	Blanket Bog	8	2.386911	4	-0.20382	1	32	5	10	
1302	257462	814620	4.319647	4	1.05	3	G	1	12	2	Blanket Bog	8	2.087352	4	-0.170454	1	32	5	10	
1303	257422	814609	4.705077	4	0.4	1	G	1	4	1	Blanket Bog	8	2.968124	4	-0.254748	1	32	5	5	
1304	257376	814589	5.44242	4	1.1	3	G	1	12	2	Blanket Bog	8	3.223022	4	0.008715	1	32	5	10	
1305	257331	814569	5.541075	4	0.85	2	G	1	8	2	Blanket Bog	8	3.064459	4	-0.027186	1	32	5	10	
1306	257284	814548	5.543627	4	1.3	3	G	1	12	2	Blanket Bog	8	2.117498	4	0.114481	1	32	5	10	
1307	257658	814603	2.73506	2	1.35	3	G	1	6	2	Blanket Bog	8	2.098692	4	0.010619	1	32	5	10	
1308	257704	814584	4.261774	4	0.75	2	G	1	8	2	Blanket Bog	8	2.454299	4	-0.126292	1	32	5	10	
1309	257750	814565	5.657031	4	2.35	3	G	1	12	2	Blanket Bog	8	1.453999	4	0.040525	1	32	5	10	
1310	257684	814538	6.35671	4	1.55	3	G	1	12	2	Blanket Bog	8	1.677144	4	0.104348	1	32	5	10	
1311	257674	814529	5.373802	4	0.6	2	G	1	8	2	Blanket Bog	8	2.131831	4	-0.300298	1	32	5	10	
1312	257684	814529	5.711435	4	1.7	3	G	1	12	2	Blanket Bog	8	2.131831	4	-0.298513	1	32	5	10	
1313	257694	814529	7.53118	4	1.7	3	G	1	12	2	Blanket Bog	8	2.131325	4	-0.290186	1	32	5	10	
1314	257714	814529	7.710645	4	1.5	3	G	1	12	2	Blanket Bog	8	2.131325	4	-0.296017	1	32	5	10	
1315	257724	814529	6.812908	4	1.5	3	G	1	12	2	Blanket Bog	8	2.131831	4	-0.296676	1	32	5	10	
1316	257664	814539	5.512696	4	1.05	3	G	1	12	2	Blanket Bog	8	2.131325	4	-0.278182	1	32	5	10	
1317	257674	814539	5.398516	4	1.9	3	G	1	12	2	Blanket Bog	8	2.131831	4	-0.3012	1	32	5	10	
1318	257684	814539	6.406896	4	1.3	3	G	1	12	2	Blanket Bog	8	2.131325	4	-0.253081	1	32	5	10	
1319	257694	814539	7.794708	4	1.8	3	G	1	12	2	Blanket Bog	8	2.131831	4	-0.297405	1	32	5	10	
1320	257714	814539	5.77106	4	0.75	2	G	1	8	2	Blanket Bog	8	2.131325	4	-0.180642	1	32	5	10	
1321	257724	814539	4.72393	4	1.7	3	G	1	12	2	Blanket Bog	8	2.131831	4	-0.16543	1	32	5	10	
1322	257734	814539	4.762054	4	1.85	3	G	1	12	2	Blanket Bog	8	2.131325	4	-0.165863	1	32	5	10	
1323	257654	814549	4.488766	4	0.4	1	G	1	4	1	Blanket Bog	8	2.131325	4	-0.122824	1	32	5	5	
1324	257664	814549	5.781635	4	1.1	3	G	1	12	2	Blanket Bog	8	2.131831	4	-0.469973	1	32	5	10	
1325	257674	814549	5.588552	4	1.6	3	G	1	12	2	Blanket Bog	8	2.131325	4	-0.295275	1	32	5	10	
1326	257684	814549	6.973645	4	1.9	3	G	1	12	2	Blanket Bog	8	2.131325	4	-0.298144	1	32	5	10	
1327	257694	814549	6.319989	4	1.8	3	G	1	12	2	Blanket Bog	8	2.131831	4	-0.2293	1	32	5	10	
1328	257714	814549	4.607507	4	0.3	1	G	1	4	1	Blanket Bog	8	2.131325	4	-0.165886	1	32	5	5	
1329	257724	814549	4.607397	4	1.85	3	G	1	12	2	Blanket Bog	8	2.131831	4	-0.165433	1	32	5	10	
1330	257734	814549	4.69027	4	1.95	3	G	1	12	2	Blanket Bog	8	2.131325	4	-0.165867	1	32	5	10	
1331	257744	814549	5.752681	4	1.85	3	G	1	12	2	Blanket Bog	8	2.131325	4	-0.07865	1	32	5	10	
1332	257654	814559	3.757499	2	1.6	3	G	1	6	2	Blanket Bog	8	2.131831	4	-0.157324	1	32	5	10	
1333	257664	814559	3.955426	2	1.05	3	G	1	6	2	Blanket Bog	8	2.131831	4	-0.150232	1	32	5	10	
1334	257674	814559	4.792116	4	1.25	3	G	1	12	2	Blanket Bog	8	2.131325	4	-0.208923	1	32	5	10	
1335	257684	814559	5.162825	4	1.95	3	G	1	12	2	Blanket Bog	8	2.131831	4	-0.166327	1	32	5	10	
1336	257694	814559	4.614433	4	1.75	3	G	1	12	2	Blanket Bog	8	2.131831	4	-0.166321	1	32	5	10	
1337	257714	814559	4.597578	4	0.8	2	G	1	8	2	Blanket Bog	8	2.131831	4	-0.17124	1	32	5	10	
1338	257724	814559	4.597583	4	1.6	3	G	1	12	2	Blanket Bog	8	2.131831	4	-0.171228	1	32	5	10	
1339	257734	814559	4.604976	4	1.55	3	G	1	12	2	Blanket Bog	8	2.131325	4	-0.17167	1	32	5	10	
1340	257744	814559	5.52289	4	1.85	3	G	1	12	2	Blanket Bog	8	2.131325	4	-0.078623	1	32	5	10	
1341	257654	814569	4.970581	4	1.5	3	G	1	12	2	Blanket Bog	8	2.131325	4	-0.228489	1	32	5	10	
1342	257664	814569	4.57013	4	0.9	2	G	1	8	2	Blanket Bog	8	2.131325	4	-0.232911	1	32	5	10	
1343	257674	814569	3.549076	2	0.2	1	G	1	2	1	Blanket Bog	8	2.874124	4	0.10644	1	32	5	5	
1344	257684	814569	4.276055	4	0.25	1	G	1	4	1	Blanket Bog	8	2.874124	4	0.155352	1	32	5	5	
1345	257694	814569	4.438511	4	0.5	1	G	1	4	1	Blanket Bog	8	2.873749	4	0.154355	1	32	5	5	
1346	257714	814569	4.605954	4	1.15	3	G	1	12	2	Blanket Bog	8	2.131831	4	-0.171232	1	32	5	10	
1347	257724	814569	4.601732	4	0.45	1	G	1	4	1	Blanket Bog	8	2.131831	4	-0.171233	1	32	5	5	
1348	257734	814569	4.590747	4	1	2	G	1	8	2	Blanket Bog	8	2.131325	4	-0.163709	1	32	5	10	
1349	257744	814569	5.378663	4	1.5	3	G	1	12	2	Blanket Bog	8	2.131325	4	-0.111657	1	32	5	10	
1350	257754	814569	4.172011	4	1.9	3	G	1	12	2	Blanket Bog	8	2.131831	4	-0.151857	1	32	5	10	
1351	257654	814589	3.685983	2	1.75	3	G	1	6	2	Blanket Bog	8	2.131831	4	-0.215348	1	32	5	10	
1352	257664	814589	2.784899	2	1.9	3	G	1	6	2	Blanket Bog	8	2.131831	4	-0.171131	1	32	5	10	
1353	257674	814589	3.533633	2	1.2	3	G	1	6	2	Blanket Bog	8	2.131325	4	-0.12123	1	32	5	10	
1354	257684	814589	4.208228	4	1.05	3	G	1	12	2	Blanket Bog	8	9.271917	4	0.167859	1	32	5	10	
1355	257694	814589	4.230603	4	0.85	2	G	1	8	2	Blanket Bog	8	2.873749	4	0.152802	1	32	5	10	
1356	257714	814589	4.235265	4	0.25	1	G	1	4	1	Blanket Bog	8	2.874125	4	0.153331	1	32	5	5	
1357	257724	814589	4.310936	4	1.85	3	G	1	12	2	Blanket Bog	8	2.131831	4	-0.111593	1	32	5	10	
1358	257734	814589	4.402973	4	1.85	3	G	1	12	2	Blanket Bog	8	2.131325	4	-0.120738	1	32	5	10	
1359	257744	814589	4.395051	4	2.05	3	G	1	12	2	Blanket Bog	8	2.131325	4	-0.157267	1	32	5	10	
1360	257754	814589	2.463157	2	1.9	3	G	1	6	2	Blanket Bog	8	2.131325	4	-0.134539	1	32	5	10	
1361	257654	814599	2.821702	2	0.75	2	G	1	4	1	Blanket Bog	8	2.131325	4	-0.176894	1	32	5	5	
1362	257664	814599	2.778456	2	1.7	3	G	1	6	2	Blanket Bog	8	2.131325	4	-0.175999	1	32	5	10	
1363	257674	814599	3.684386	2	1.85	3	G	1	6	2	Blanket Bog	8	2.131325	4	-0.121243	1	32	5	10	
1364	257684	814599	4.166689	4	1	2	G	1	8	2	Blanket Bog	8	5.529782	4	0.109032	1	32	5	10	
1365	257694	814599	4.263506	4	0.85	2	G	1	8	2	Blanket Bog	8	8.773815	4	-0.12159	1	32	5	10	
1366	257714	814599	4.247416	4	1.25	3	G	1	12	2	Blanket Bog	8	2.131831	4	-0.111604	1	32	5	10	
1367	257724	814599	4.00392	4	0.8	2	G	1	8	2	Blanket Bog	8	2.873749	4	0.157007	1	32	5	10	
1368	257734	814599	3.324096	2	1.8	3	G	1	6	2	Blanket Bog	8	2.131325	4	-0.110369	1	32	5	10	
1369	257744	814599	2.29351	2	2.2	3	G	1	6	2	Blanket Bog	8	2.131325	4	0.055076	1	32	5	10	
1370	257664	814609	2.795698	2	1.15	3	G	1	6	2	Blanket Bog	8	2.131831	4	-0.179103	1	32	5	10	
1371	257674	814609	3.839172	2	0.3	1	G	1	2	1	Blanket Bog	8	2.131831	4	-0.12295	1	32	5	5	
1372	257684	814609	4.140585	4	1.65	3	G	1	12	2	Blanket Bog	8	2.131831	4	-0.125691	1	32	5	10	
1373	257694	814609	4.185035	4	1.45	3	G	1	12	2	Blanket Bog	8	2.131831	4	-0.111594	1	32	5	10	
1374	257714	814609	2.756386	2	1.5	3	G	1	6	2	Blanket Bog	8	2.873749	4	0.098744	1	32	5	10	
1375	257724	814609	1.836652	1	1.05	3	G	1	3	1	Blanket Bog	8	2.131325	4	0.090979	1	32	5	5	
1376	257734	814609	2.096746	2	1.2	3	G	1	6	2	Blanket Bog	8	2.87375	4	0.039886	1	32	5	10	
1377	257744	814609	1.282818	1	1	2	G	1	2	1	Blanket Bog	8	2.131325	4	-0.01817	1	32	5	5	
1378	257684	814619	4.241616	4	2	3	G	1	12	2	Blanket Bog	8	2.131831	4	-0.124287	1	32	5	10	
1379	257694	814619	2.909865	2	1.75	3	G	1	6	2	Blanket Bog	8	2.131325	4	0.012703	1	32	5	10	5 TO 10
1380	257714	814619	1.637489	1	1.4	3	G	1	3	1	Blanket Bog	8	5.67781	4	-0.103969	1	32	5	5	
1381	257724	814619	2.047021	2	0.9	2	G	1	4	1	Blanket Bog	8	2.873749	4	0.039871	1	32	5	5	
1382	257734	814619	2.616397	2	0.5	1	G	1	2	1	Blanket Bog	8	2.131325	4	0.038452	1	32	5	5	
1383	257694	814629	5.784844	4	1.05	3	G	1	12	2	Blanket Bog	8	2.131325	4	-0.256449	1	32	5	10	
1384	257714	814629	1.552015	1	0.85	2	G	1	2	1	Blanket Bog	8	5.529783	4	-0.167221	1	32	5	5	11 TO 16
1385	258220	814405	4.393887	4	1.75	3	G	1	12	2	Blanket Bog	8	1.592604	4	0.225544	1	32	5	10	
1386	257218	814574	5.69901	4	1.1	3	G	1	12	2	Blanket Bog	8	2.12027	4	-0.17251	1	32	5	10	
1387	257238	814528	5.542127	4	0.15	1	G	1	4	1	Blanket Bog	8	2.276752	4	0.071307	1	32	5	5	
1388	257218	814470	3.655388	2	1	2	G	1	4	1	Blanket Bog	8	1.394288	4	-0.092062	1	32	5	5	17 TO 25
1389	257228	814470	3.837886	2	1.1	3	G	1	6	2	Blanket Bog	8	1.393274	4	-0.054639	1	32	5	10	
1390	257218	814480	3.886716	2	1.5	3	G	1	6	2	Blanket Bog	8	1.386709	4	-0.1106	1	32	5	10	
1391	257228	814480	3.702932	2	1.2	3	G	1	6	2	Blanket Bog	8	1.400817	4	-0.060418	1	32	5	10	
1392	257238	814480	3.769877	2	1.1	3	G	1	6	2	Blanket Bog	8	1.393274	4	-0.06106	1	32	5	10	
1393	257248	814480	3.845229	2	0.5	1	G	1	2	1	Blanket Bog	8	1.400817	4	-0.05648	1	32	5	5	
1394	257218	814490	5.916283	4	1.4	3	G	1	12	2	Blanket Bog	8	1.386709	4	-0.264288	1	32	5	10	
1395	257228	814490	3.604668	2	1.4	3	G	1	6	2	Blanket Bog	8	1.386709	4	-0.276848	1	32	5	10	
1396	257238	814490	4.481587	4	1.15	3	G	1	12	2	Blanket Bog	8	1.400817	4	-0.101351	1	32	5	10	
1397	257248	814490	4.700143	4	0.8	2	G	1	8	2	Blanket Bog	8	1.386709	4	-0.122462	1	32	5	10	
1398	257218	814500	3.493893	2	1.55	3	G	1	6	2	Blanket Bog	8	1.394288	4	0.077865	1	32	5	10	
1399	257228	814500	1.429489	1	1.55	3	G	1	3	1	Blanket Bog	8	1.386709	4	-0.061668	1	32	5	5	
1400	257238	814500	4.610198	4	0.7	2	G	1	8	2	Blanket Bog	8	1.400817	4	-0.063795	1	32	5	10	

1401	257248	814500	4.641824	4	0.35	1	G	1	4	1	Blanket Bog	8	1.386709	4	-0.058274	1	32	5	5
1402	257258	814500	4.771339	4	1.2	3	G	1	12	2	Blanket Bog	8	1.394288	4	-0.100713	1	32	5	10
1403	257218	814510	3.20872	2	0.3	1	G	1	2	1	Blanket Bog	8	1.386709	4	0.084787	1	32	5	5
1404	257228	814510	4.281111	4	0.8	2	G	1	8	2	Blanket Bog	8	1.394288	4	-0.063119	1	32	5	10
1405	257238	814510	4.635183	4	0.85	2	G	1	8	2	Blanket Bog	8	1.393274	4	-0.057977	1	32	5	10
1406	257248	814510	4.615022	4	1.7	3	G	1	12	2	Blanket Bog	8	1.394288	4	-0.063091	1	32	5	10
1407	257258	814510	4.635862	4	1.5	3	G	1	12	2	Blanket Bog	8	1.386709	4	-0.062697	1	32	5	10
1408	257218	814530	5.625465	4	0.5	1	G	1	4	1	Blanket Bog	8	1.393274	4	-0.12534	1	32	5	5
1409	257228	814530	5.682097	4	0.6	2	G	1	8	2	Blanket Bog	8	1.386709	4	-0.125089	1	32	5	10
1410	257238	814530	5.551677	4	0.45	1	G	1	4	1	Blanket Bog	8	1.400817	4	-0.152292	1	32	5	5
1411	257248	814530	5.537839	4	0.95	2	G	1	8	2	Blanket Bog	8	1.386709	4	-0.155834	1	32	5	10
1412	257258	814530	5.530321	4	0.8	2	G	1	8	2	Blanket Bog	8	1.400817	4	-0.157711	1	32	5	10
1413	257218	814540	5.708061	4	1	2	G	1	8	2	Blanket Bog	8	1.400817	4	-0.125035	1	32	5	10
1414	257228	814540	5.68902	4	0.15	1	G	1	4	1	Blanket Bog	8	1.386709	4	-0.119193	1	32	5	5
1415	257238	814540	5.627023	4	0.05	1	G	1	4	1	Blanket Bog	8	1.393274	4	-0.129335	1	32	5	5
1416	257248	814540	5.53654	4	0.95	2	G	1	8	2	Blanket Bog	8	1.386709	4	-0.156382	1	32	5	10
1417	257258	814540	5.55215	4	1.05	3	G	1	12	2	Blanket Bog	8	1.393274	4	-0.156942	1	32	5	10
1418	257218	814550	5.705552	4	0.85	2	G	1	8	2	Blanket Bog	8	1.393274	4	-0.12485	1	32	5	10
1419	257228	814550	5.707155	4	1.05	3	G	1	12	2	Blanket Bog	8	1.394288	4	-0.124244	1	32	5	10
1420	257238	814550	5.685161	4	0.8	2	G	1	8	2	Blanket Bog	8	1.393274	4	-0.119912	1	32	5	10
1421	257248	814550	5.592425	4	1.7	3	G	1	12	2	Blanket Bog	8	1.394288	4	-0.151684	1	32	5	10
1422	257218	814560	5.699802	4	1.25	3	G	1	12	2	Blanket Bog	8	1.393274	4	-0.124378	1	32	5	10
1423	257228	814560	5.69639	4	0.3	1	G	1	4	1	Blanket Bog	8	1.386709	4	-0.124629	1	32	5	5
1424	257238	814560	5.724838	4	0.75	2	G	1	8	2	Blanket Bog	8	1.393274	4	-0.124368	1	32	5	10
1425	257218	814570	5.705209	4	0.9	2	G	1	8	2	Blanket Bog	8	1.400817	4	-0.12551	1	32	5	10
1426	256795	813875	5.962822	4	0.2	1	G	1	4	1	Blanket Bog	8	1.350885	4	0.290609	1	32	5	5
1427	256839	813901	4.125369	4	0.4	1	G	1	4	1	Blanket Bog	8	18.116395	3	-1.133464	1	24	3	3
1428	256881	813924	4.125399	4	0.15	1	G	1	4	1	Site Infrastructure	6	3.121557	4	0.370258	1	24	3	3
1429	256924	813947	4.125466	4	0.85	2	G	1	8	2	Site Infrastructure	6	0.47447	4	0.113906	1	24	3	6
1430	256964	813968	4.198595	4	0.45	1	G	1	4	1	Blanket Bog	8	1.77342	4	0.034685	1	32	5	5
1431	256757	813825	5.992696	4	0.45	1	G	1	4	1	Blanket Bog	8	36.899775	3	-3.486625	1	24	3	3
1432	255672	813189	7.694839	4	0.2	1	G	1	4	1	Blanket Bog	8	2.859186	4	-0.078791	1	32	5	5
1433	255682	813157	9.550879	6	0.75	2	G	1	12	2	Site Infrastructure	6	1.995014	4	-0.026243	1	24	3	6
1434	255702	813107	11.31252	6	1.2	3	G	1	18	3	Blanket Bog	8	2.456202	4	-0.134832	1	32	5	15
1435	255748	813063	11.579199	6	0.15	1	G	1	6	2	Blanket Bog	8	39.216165	3	6.396156	1	24	3	6
1436	255788	813033	15.761636	8	0.4	1	G	1	8	2	Blanket Bog	8	71.238759	3	15.184564	2	24	3	6
1437	255814	813076	14.081731	6	0.01	1	G	1	6	2	Roads or Tracks	3	61.10357	3	-13.599552	1	9	2	4
1438	255774	813105	12.19035	6	0.4	1	G	1	6	2	Roads or Tracks	3	59.674582	3	13.329544	2	9	2	4
1439	255746	813130	10.993694	6	0.2	1	G	1	6	2	Site Infrastructure	6	33.495071	3	7.21607	1	18	3	6
1440	255729	813175	5.749464	4	0.85	2	G	1	8	2	Blanket Bog	8	16.217456	3	0.593003	1	24	3	6
1441	255686	813242	0.664087	1	0.95	2	G	1	2	1	Roads or Tracks	3	2.776388	4	-0.045838	1	12	2	2
1442	255634	813249	17.733051	8	0.2	1	G	1	8	2	Blanket Bog	8	9.782016	4	-2.725913	1	32	5	10
1443	255658	813402	10.191264	6	0.95	2	G	1	12	2	Blanket Bog	8	0.797439	4	0.012042	1	32	5	10
1444	255701	813395	3.510039	2	2.35	3	G	1	6	2	Blanket Bog	8	2.340966	4	0.13638	1	32	5	10
1445	255737	813410	3.016619	2	1.2	3	G	1	6	2	Blanket Bog	8	1.996235	4	0.062706	1	32	5	10
1446	255769	813447	3.519149	2	0.7	2	G	1	4	1	Blanket Bog	8	1.028981	4	0.077367	1	32	5	5
1447	255804	813492	6.036662	4	0.85	2	G	1	8	2	Blanket Bog	8	0.82856	4	0.143496	1	32	5	10
1448	255877	813505	5.009865	4	0.2	1	G	1	4	1	Blanket Bog	8	2.529367	4	0.189986	1	32	5	5
1449	255844	813462	5.01252	4	0.8	2	G	1	8	2	Blanket Bog	8	1.296554	4	0.087183	1	32	5	10
1450	255809	813417	6.091392	4	0.7	2	G	1	8	2	Blanket Bog	8	0.653328	4	0.150909	1	32	5	10
1451	255769	813372	3.187156	2	0.85	2	G	1	4	1	Blanket Bog	8	0.901682	4	0.104872	1	32	5	5
1452	255705	813346	1.649266	1	1.65	3	G	1	3	1	Blanket Bog	8	1.540965	4	0.05708	1	32	5	5
1453	255644	813354	14.923514	6	0.7	2	G	1	12	2	Blanket Bog	8	2.496786	4	0.41637	1	32	5	10
1454	255763	813434	3.290845	2	1.15	3	G	1	6	2	Blanket Bog	8	2.272218	4	0.147733	1	32	5	10
1455	255763	813394	3.209141	2	1.35	3	G	1	6	2	Blanket Bog	8	2.400986	4	0.132892	1	32	5	10
1456	255763	813404	3.206886	2	1.15	3	G	1	6	2	Blanket Bog	8	2.400986	4	0.131903	1	32	5	10
1457	255763	813414	3.225784	2	1.8	3	G	1	6	2	Blanket Bog	8	2.400986	4	0.132905	1	32	5	10
1458	255763	813424	3.266478	2	1.05	3	G	1	6	2	Blanket Bog	8	2.400986	4	0.146432	1	32	5	10
1459	255723	813434	2.257969	2	2.65	3	G	1	6	2	Blanket Bog	8	2.400985	4	0.146435	1	32	5	10
1460	255733	813434	3.300008	2	2.55	3	G	1	6	2	Blanket Bog	8	2.400986	4	0.147127	1	32	5	10
1461	255743	813434	3.317083	2	1.2	3	G	1	6	2	Blanket Bog	8	2.400986	4	0.153959	1	32	5	10
1462	255753	813434	3.296695	2	1.65	3	G	1	6	2	Blanket Bog	8	2.400986	4	0.146435	1	32	5	10
1463	255773	813434	3.458953	2	1.7	3	G	1	6	2	Blanket Bog	8	2.400986	4	0.208939	1	32	5	10
1464	255783	813434	6.152957	4	1	2	G	1	8	2	Blanket Bog	8	2.400986	4	0.168173	1	32	5	10
1465	255793	813434	6.221018	4	0.45	1	G	1	4	1	Blanket Bog	8	2.400986	4	0.16817	1	32	5	5
1466	255803	813434	6.202612	4	1.1	3	G	1	12	2	Blanket Bog	8	2.400986	4	0.16815	1	32	5	10
1467	255813	813434	6.175977	4	0.25	1	G	1	4	1	Blanket Bog	8	2.400986	4	0.168168	1	32	5	5
1468	255763	813444	3.193633	2	0.9	2	G	1	4	1	Blanket Bog	8	2.400986	4	0.20177	1	32	5	5
1469	255763	813454	3.290722	2	0.95	2	G	1	4	1	Blanket Bog	8	2.400986	4	0.20176	1	32	5	5
1470	255763	813464	3.384789	2	0.75	2	G	1	4	1	Blanket Bog	8	2.400986	4	0.208393	1	32	5	5
1471	255763	813474	3.670286	2	0.15	1	G	1	2	1	Blanket Bog	8	2.400986	4	0.17519	1	32	5	5
1472	255763	813484	4.027312	4	0.3	1	G	1	4	1	Blanket Bog	8	2.400986	4	0.175205	1	32	5	5
1473	255763	813384	3.213655	2	1.05	3	G	1	6	2	Blanket Bog	8	2.117137	4	0.128721	1	32	5	10
1474	255713	813434	2.505727	2	2.75	3	G	1	6	2	Blanket Bog	8	2.395599	4	0.083653	1	32	5	10
1475	255817	813465	5.998743	4	0.15	1	G	1	4	1	Blanket Bog	8	2.203064	4	0.131644	1	32	5	5
1476	255837	813465	5.556983	4	1	2	G	1	8	2	Blanket Bog	8	2.203064	4	0.136064	1	32	5	10
1477	255797	813475	6.015748	4	0.95	2	G	1	8	2	Blanket Bog	8	2.203064	4	0.125504	1	32	5	10
1478	255807	813475	6.025347	4	1.05	3	G	1	12	2	Blanket Bog	8	2.203064	4	0.131124	1	32	5	10
1479	255817	813475	6.034238	4	1.7	3	G	1	12	2	Blanket Bog	8	2.203064	4	0.130593	1	32	5	10
1480	255837	813475	5.46293	4	1.3	3	G	1	12	2	Blanket Bog	8	2.203064	4	0.144616	1	32	5	10
1481	255847	813475	5.009858	4	0.9	2	G	1	8	2	Blanket Bog	8	2.203065	4	0.158125	1	32	5	10
1482	255857	813475	5.01009	4	0.8	2	G	1	8	2	Blanket Bog	8	2.203065	4	0.158095	1	32	5	10
1483	255787	813485	6.008654	4	0.9	2	G	1	8	2	Blanket Bog	8	2.203064	4	0.131098	1	32	5	10
1484	255797	813485	6.035739	4	0.7	2	G	1	8	2	Blanket Bog	8	2.203064	4	0.130594	1	32	5	10
1485	255807	813485	6.041491	4	0.6	2	G	1	8	2	Blanket Bog	8	2.203064	4	0.136047	1	32	5	10
1486	255817	813485	6.032875	4	1.6	3	G	1	12	2	Blanket Bog	8	2.203064	4	0.131643	1	32	5	10
1487	255837	813485	5.343393	4	0.4	1	G	1	4	1	Blanket Bog	8	2.203064	4	0.147719	1	32	5	5
1488	255847	813485	5.010025	4	1.1	3	G	1	12	2	Blanket Bog	8	2.203065	4	0.158131	1	32	5	10
1489	255857	813485	5.011906	4	1.05	3	G	1	12	2	Blanket Bog	8	2.203065	4	0.158105	1	32	5	10
1490	255867	813485	4.993104	4	1.35	3	G	1	12	2	Blanket Bog	8	2.203065	4	0.15813	1	32	5	10
1491	255787	813495	6.027584	4	1.35	3	G	1	12	2	Blanket Bog	8	2.203064	4	0.131635	1	32	5	10
1492	255797	813495	6.034079	4	0.95	2	G	1	8	2	Blanket Bog	8	2.203064	4	0.131641	1	32	5	10
1493	255807	813495	6.025639	4	0.75	2	G	1	8	2	Blanket Bog	8	2.203064	4	0.131124	1	32	5	10
1494	255817	813495	6.034344	4	1.35	3	G	1	12	2	Blanket Bog	8	2.203064	4	0.130589	1	32	5	10
1495	255837	813495	5.215349	4	1.05	3	G	1	12	2	Blanket Bog	8	2.203064	4	0.151889	1	32	5	10
1496	255847	813495	5.010027	4	0.45	1	G	1	4	1	Blanket Bog	8	2.203065	4	0.158138	1	32	5	5
1497	255857	813495	4.991349	4	0.85	2	G	1	8	2	Blanket Bog	8	2.203065	4	0.158115	1	32	5	10
1498	255867	813495	5.013274	4	1.1	3	G	1	12	2	Blanket Bog	8	2.203065	4	0.157099	1	32	5	10
1499	255777	813505	2.914355	2	2.5	3	G	1	6	2	Blanket Bog	8	2.203064	4	0.029718	1	32	5	10
1500	255787	813505	5.440887	4	1.6	3	G	1	12	2	Blanket Bog	8	2.203064	4	0.133763	1	32	5	10
1501	255797	813505	6.036173	4	1.4	3	G	1	12	2	Blanket Bog	8	2.203064	4	0.136035	1	32	5	10
1502	255807	813505	6.043619	4	1	2	G	1	8	2	Blanket Bog	8	2.203064	4	0.136043	1	32	5	10
1503	255817	813505	6.032939	4	0.95	2	G	1	8	2	Blanket Bog	8	2.203064	4	0.131636	1	32	5	10
1504	255837	813505	5.104654	4	1.85	3	G	1	12	2	Blanket Bog	8	2.203064	4	0.155016	1	32	5	10
1505	255847	813505	5.007242	4	1.65	3	G	1	12	2	Blanket Bog	8	2.203065	4	0.15812	1	32	5	10
1506	255857	813505	5.009662	4	0.4	1	G	1	4	1	Blanket Bog	8	2.203065	4	0.157596	1	32	5	5
1507	255867	813505	5.010078	4	1.05	3	G	1	12	2	Blanket Bog	8	2.203065	4	0.157054	1	32	5	10
1508	255877	813505	5.009862	4	0.85	2	G	1	8	2	Blanket Bog	8	2.203065	4	0.157086	1	32	5	10
1509	255777	813525	1.966194	1	2.05	3	G	1	3	1	Blanket Bog	8	2.203064	4	0.034646	1	32	5	5
1510	255787	813525	1.960811	1	1.35	3	G	1	3	1	Blanket Bog	8	2.203064	4	0.034644	1	32	5	5
1511	255797	813525	2.924868	2	2.4	3	G	1	6	2	Blanket Bog	8	2.203064	4	0.034644	1	32	5	10
1512	255807	813525	5.468863	4	1.2	3	G	1	12	2	Blanket Bog	8	2.203064	4	0.138681	1	32	5	10
1513	255817	813525	6.027591	4	1.6	3	G	1	12	2	Blanket Bog	8	2.203064	4	0.131635	1	32	5	10
1514	255837	813525	5.024426	4	2	3	G	1	12	2	Blanket Bog	8	2.203064	4	0.158135	1	32	5	10
1515	255847	813525	5.013168	4	1.75	3	G	1	12	2	Blanket Bog	8	2.203065	4	0.157071	1	32	5	10
1516	255857	813525	5.018284	4	0.9	2	G	1	8	2	Blanket Bog	8	2.203065	4	0.1571	1	32	5	10
1517	255867	813525	5.190234	4	0.8	2	G	1	8	2	Blanket Bog	8	2.203065	4	0.173433	1	32	5	10
1518	255877	813525	5.36484	4	0.9	2	G	1	8	2	Blanket Bog	8	2.203065	4	0.191777	1	32	5	10
1519	255777	813535	1.041995	1	2.15	3	G	1	3	1	Site Infrastructure	6	2.203064	4	0.086555	1	24	3	3
1520	255787	813535	2.222907	2	1	2	G	1	4	1	Site Infrastructure	6	2.203064	4	0.043948	1	24	3	3
1521	255797	813535	2.046956	2	1.75	3	G	1	6	2	Blanket Bog	8	2.203064	4	0.035163	1	32	5	10
1522	255807	813535	2.929255	2	2.05	3	G	1	6	2	Blanket Bog	8	2.203064	4	0.034633	1	32	5	10
1523	255817	813535	5.461688	4	1.85	3	G	1	12	2	Blanket Bog	8	2.203064	4	0.133251	1	32	5	10
1524	255837	813535	5.031302	4	1.9	3	G	1	12	2	Blanket Bog	8	2.203064	4	0.157588	1	32	5	10
1525	255847	813535	5.075194	4	1.9	3	G	1	12	2	Blanket Bog	8	2.203065	4	0.157081	1	32	5	10
1526	255867	813535	5.3931	4	0.7	2	G	1	8	2	Site Infrastructure	6	2.203065	4	0.191777	1	24	3	6
1527	255877	813535	5.401526	4	0.4	1	G	1	4	1	Site Infrastructure	6	2.203065	4	0.196194	1	24	3	3
1528	255787	813545	1.201023	1	1.8	3	G	1	3	1	Site Infrastructure	6	2.203064	4	0.086555	1	24	3	3
1529	255797	813545	2.566793	2	1.2	3	G	1	6	2	Site Infrastructure	6	2.203064	4	0.066496	1	24	3	6
1530	255807	813545	2.393268	2	1.8	3	G	1	6	2	Site Infrastructure	6	2.203064	4	0.057138	1	24	3	6
1531	255817	813545	3.140553	2	2.5	3	G	1	6	2	Blanket Bog	8	2.203064	4	0.028148	1	32	5	10
1532	255837	813545	5.049333	4	1.5	3	G	1	12	2	Blanket Bog	8	2.203064	4	0.167975	1	32	5	10
1533	255847	813545	5.096545	4	1	2	G	1	8	2	Blanket Bog	8	2.203065	4	0.191823	1	32	5	10
1534	255857	813545	4.984518	4	1.65	3	G	1	12	2	Blanket Bog	8	2.203065	4	0.175445	1	32	5	10
1535	255867	813545	4.742938	4	1.15	3	G	1	12	2	Site Infrastructure	6	2.203065	4	0.145929	1	24	3	6
1536	255787	813555	3.212407	2	1.25	3	G	1	6	2	Site Infrastructure	6	2.203064	4	-0.085373	1	24	3	6
1537	255807	813555	2.659447	2	0.85	2	G	1	4	1	Site Infrastructure	6	2.203064	4	0.066496	1	24	3	3
1538	255817	813555	2.657687	2	1.85	3	G	1	6	2	Site Infrastructure	6	2.203064	4	0.061551	1	24	3	6
1539	255837	813555	4.31359	4	1	2	G	1	8	2	Blanket Bog	8	2.203064	4	0.125252	1	32	5	10
1540	255847	813555	4.319875	4	1.1	3	G	1	12	2	Blanket Bog	8	2.203065	4	0.130186	1	32	5	10
1541	255857	813555	4.29744	4	1	2	G	1	8	2	Blanket Bog	8	2.203065	4	0.12966	1	32	5	10
1542	255867	813555	4.29443	4	1.85	3	G	1	12	2	Blanket Bog	8	2.203065	4	0.124738	1	32	5	10
1543	255817	813565	2.628319	2	0.95	2	G	1	4	1	Site Infrastructure	6	2.203064	4	0.066496	1	24	3	3
1544	255837	813565	3.474473	2	0.75	2	G	1	4	1	Site Infrastructure	6	2.203064	4	0.125846	1	24	3	3
1545	255847	813565	4.287357	4	0.4	1	G	1	4	1	Site Infrastructure	6	2.203065	4	0.129617	1	24	3	3
1546	256001	812219	8.743377	6	1.39	3	G	1	18	3	Site Infrastructure	6	2.950008	4	0.657997	1	24	3	9
1547	255953	812232	10.310909	6	1.72	3	G	1	18	3	Blanket Bog	8	1.293254	4	0.101008	1	32	5	15
1548	255907	812245	4.981876	4	0.51	2	G	1	8	2	Blanket Bog	8	2.20497	4	0.210989	1	32	5	10
1549	255858	812258	6.8425	4	0.41	1	G	1	4	1	Site Infrastructure	6	2.120441	4	-0.028979	1	24	3	3
1550	255812	812274	9.974742	6	1.15	3	G	1	18	3	Site Infrastructure	6	2.835463	4	0.483193	1	24	3	9
1551	255771	812297	10.527205	6	0.5	1	G	1	6	2	Blanket Bog	8	2.273847	4	0.413797	1	32	5	10
1552	255732	812322	0.051492	1	2.58	3	G	1	3	1	Blanket Bog	8	2.123133	4	-2.4E-05	1	32	5	5
1553	255711	812355	2.829662	2	0.58	2	G	1	4	1	Site Infrastructure	6	24.005459	3	1.765006	1	18	3	3
1554	255687	812398	5.95	4	0.43	1	G	1	4	1	Site Infrastructure	6	30.990326	3	2.710109	1	18	3	3
1555	255663	812444	5.068865	4	0.98	2	G	1	8	2	Blanket Bog	8	2.281371	4	0.332794	1	32	5	10
1556	255640	812486	13.470237	6	0.57	2	G	1	12	2	Blanket Bog	8	7.931688	4	-1.640012	1	32	5	10

1557	255628	812523	10.280114	6	0.17	1	G	1	6	2	Blanket Bog	8	2.12044	4	0.008013	1	32	5	10
1558	255606	812721	7.687817	4	0.5	1	G	1	4	1	Blanket Bog	8	2.084991	4	-0.305798	1	32	5	5
1559	255601	812770	9.147638	6	1.39	3	G	1	18	3	Blanket Bog	8	2.35044	4	-0.358004	1	32	5	15
1560	255595	812824	9.790619	6	0.96	2	G	1	12	2	Blanket Bog	8	2.352869	4	-0.105496	1	32	5	10
1561	255590	812868	10.632	6	1.57	3	G	1	18	3	Blanket Bog	8	2.197182	4	-0.490999	1	32	5	15
1562	255584	812926	11.320167	6	1.15	3	G	1	18	3	Blanket Bog	8	0.121237	4	-0.248093	1	32	5	15
1563	255581	812968	11.89072	6	0.28	1	G	1	6	2	Blanket Bog	8	2.82739	4	-0.70528	1	32	5	10
1564	255585	813012	12.619411	6	0.77	2	G	1	12	2	Blanket Bog	8	1.415572	4	-0.538004	1	32		

APPENDIX D – PEAT CORE DATA

Peat Coring Assessment

A series of peat cores were obtained from the proposed wind turbine locations at the Corriegarth 2 Wind Farm on 16th and 17th September 2020 to characterise the properties of the peatland in accordance with the *Peatland Survey. Guidance on Developments on Peatland (2017)*[1]. The document, which was published jointly by the Scottish Government, Scottish Natural Heritage and SEPA, defines a consistent sampling methodology to quantify and qualify the peat material on site and provides advice on how to publish peat surveys as part of wider site investigations for development management applications, with a particular focus on wind farm developments.

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

i. Surface firmness estimation

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

Firmness of surface (P)

PO = Surface too soft to walk on

P1 = Surface just passable

P2 = Surface fairly firm

P3 = Surface firm

ii. Observations on the vegetation

The plants growing within a radius of 49 to 66 ft (15-20 m) round each bore hole are recorded, as are the boundaries between well-defined plant communities which are noted during traverses across the bog.

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[1] Scottish Government, Scottish Natural Heritage, SEPA (2017) Peatland Survey. Guidance on Developments on Peatland, on-line version only. Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2018/12/peatland-survey-guidance/documents/peatland-survey-guidance-2017/peatland-survey-guidance-2017/govscot%3Adocument/Guidance%2Bon%2Bdevelopments%2Bon%2Bpeatland%2B-%2Bpeatland%2Bsurvey%2B-%2B2017.pdf (Accessed 12/04/2022)

iii. Observations on the peat

a. Botanical observations

The universal peat formers found in both Blanket and Raised Basin Bogs are species of *Sphagnum.* Also found in most bogs are the remains of *Eriophorum vaginatum,* the leaf-sheaths of which contain fine fibres which are extraordinarily resistant to the processes of decomposition, and small twigs of *Callana vulgaris* which are generally found in the upper strata. The usual type of peat found in the lower horizons of Basin Bogs is a mixture of the remains of *Carex* species with smaller amounts of *Phragmites, Typha, Equisetum* and *Menyanthes,* all or some of which are usually present. Wood remains are frequent, even in areas which are now treeless such as Shetland. The commonest wood is *Betula* but *Pinus* is not uncommon and it is probable that *Salix, Alnus* and Cory*lus* occur more often than they are recognised. Field identification of wood fragments is somewhat uncertain. It is usually possible to ascertain the main peat-forming species in the field and this is done for all samples examined.

b. Degree of humification - von POST SCALE

The degree of humification of peat samples is estimated in the field according to the method devised by the Swedish botanist L. von Post.

A small amount of peat is squeezed in the hand and the water and / or peat exuded indicates, by its colour and consistency, the degree to which the peat has undergone humification or, more correctly, a type of decomposition which includes breakdown under anaerobic conditions. This is one of the most important observations to be made on the peat and, because it is entirely subjective, one of the most difficult to make with a minimum of error. As far as possible, the same person makes all such observations and experience counts for a great deal. It is necessary to make allowance for moisture content, oxidation of the surface horizons and for the botanical origin of the peat. Obviously for example, pieces of wood do not squeeze between the fingers and yet the matrix in which the wood fragments are embedded may be very highly humified. A very dry peat may appear to be less well humified than it actually is and vice versa. Attempts have been made by various workers to develop an objective method for the estimation of degree of humification but without conspicuous success. The von Post scale ranges from 1 to 10, the higher the number the higher the degree of humification. The full scale is as follows:

Von Post Scale (H)	
H1	Completely undecomposed peat free of amorphous material. On squeezing, clear colourless water is pressed out.
H2	Nearly undecomposed peat, free of amorphous material, yielding only yellowish brown water on pressing.

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

iv. Fibre

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

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

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

Coarse fibres, mainly rootlets (R)

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

v. Wood

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

Wood remains (W)
W0= Nil
Wl = Low content
W2 = Moderate content
W3 = High content

vi. Other observations

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

Photographs of the peat cores obtained from Corriegarth 2 along with information relating to the parameters outlined above are presented overleaf with a summary of the information gathered during the peat coring process presented in Section 4.4 of the Peat Slide Risk Assessment (PSRA).

Proposed Track Between Turbine 2 and Turbine 3			
0.0 – 0.3m	0.3 – 0.8m	0.8 – 1.2m	1.2 – 1.3m
			

Location	Depth (m)	Firmness of Surface (P)	Von Post (H)	Fine Fibres (F)	Coarse Fibres (R)	Wood Remains (W)	Other Observations (Colour)
Track between T2 & T3	0.0-0.5	3	3	3	3	0	Dark brown
	0.5-1.0	3	4	3	2	0	Dark brown
	1.0-1.5	3	7	2	1	0	Dark brown

Turbine 4		
0.0 – 0.5m	0.5 – 1.0m	1.0 – 1.5m
		

Location	Depth (m)	Firmness of Surface (P)	Von Post (H)	Fine Fibres (F)	Coarse Fibres (R)	Wood Remains (W)	Other Observations (Colour)
T4	0.0-0.5	3	7	2	1	0	Black brown
	0.5-1.0	3	8	1	1	0	Dark brown
	1.0-1.5	3	8	1	0	0	Dark brown

Turbine 6		
0.0 – 0.55m	0.55 – 0.9m	0.9 – 1.4m
		

Location	Depth (m)	Firmness of Surface (P)	Von Post (H)	Fine Fibres (F)	Coarse Fibres (R)	Wood Remains (W)	Other Observations (Colour)
T6	0.0-0.5	3	3	3	3	0	Dark brown
	0.5-1.0	3	5	3	2	0	Dark brown
	1.0-1.5	3	7	2	1	0	Dark brown

Turbine 7	
0.0 – 0.5m	0.5 – 0.9m
	

Location	Depth (m)	Firmness of Surface (P)	Von Post (H)	Fine Fibres (F)	Coarse Fibres (R)	Wood Remains (W)	Other Observations (Colour)
T7	0.0-0.5	3	2	3	2	0	Brown
	0.5-1.0	3	4	3	2	0	Brown

Turbine 8	
0.0 – 0.65m	0.65 – 1.1m
	

Location	Depth (m)	Firmness of Surface (P)	Von Post (H)	Fine Fibres (F)	Coarse Fibres (R)	Wood Remains (W)	Other Observations (Colour)
T8	0.0-0.5	3	5	3	1	0	Dark brown
	0.5-1.0	3	7	3	1	0	Dark brown
	1.0-1.1	3	7	3	1	0	Dark brown

Turbine 9		
0.0 – 0.3m	0.3 – 0.7m	0.7 – 1.0m
		

Location	Depth (m)	Firmness of Surface (P)	Von Post (H)	Fine Fibres (F)	Coarse Fibres (R)	Wood Remains (W)	Other Observations (Colour)
T9	0.0-0.5	3	3	3	2	1	Black brown
	0.5-1.0	3	7	2	1	0	Black brown

Turbine 14	
0.0 – 0.4m	0.4 – 0.75m
	

Location	Depth (m)	Firmness of Surface (P)	Von Post (H)	Fine Fibres (F)	Coarse Fibres (R)	Wood Remains (W)	Other Observations (Colour)
T9	0.0-0.5	3	4	2	1	0	Dark brown
	0.5-0.75	3	5	2	1	0	Dark brown

Turbine 16		
0.0 – 0.5m	0.5 – 1.0m	1.0 – 1.1m
		

Location	Depth (m)	Firmness of Surface (P)	Von Post (H)	Fine Fibres (F)	Coarse Fibres (R)	Wood Remains (W)	Other Observations (Colour)
T16	0.0-0.5	3	6	2	2	0	Dark brown
	0.5-1.0	3	8	2	1	0	Black brown
	1.0-1.1	3	8	2	1	0	Black brown

CORRIEGARTH 2 WIND FARM

SEI Report – Volume 3 – Technical Appendices

TA A15.1 Updated Carbon Balance Calculations

CORRIEGARTH 2 WIND FARM

SEI TECHNICAL APPENDIX A15.1

APRIL 2022

TABLE OF CONTENTS

PAYBACK TIME AND CO_2 EMISSIONS

1. Windfarm CO2 emission saving over...	Exp.	Min.	Max.
...coal-fired electricity generation (t CO2 / yr)	216,631	211,216	222,047
...grid-mix of electricity generation (t CO2 / yr)	59,710	58,217	61,203
...fossil fuel-mix of electricity generation (t CO2 / yr)	105,961	103,312	108,610
Energy output from windfarm over lifetime (MWh)	7,064,064	6,887,462	7,240,666

Total CO2 losses due to wind farm (tCO2 eq.)	Exp.	Min.	Max.
2. Losses due to turbine life (eg. manufacture, construction, decommissioning)	58,771	58,771	58,771
3. Losses due to backup	26,702	26,623	26,782
4. Losses due to reduced carbon fixing potential	1,566	565	6,090
5. Losses from soil organic matter	17,727	9,280	36,998
6. Losses due to DOC & POC leaching	2,101	21	20,006
7. Losses due to felling forestry	0	0	0
Total losses of carbon dioxide	106,867	95,259	148,647

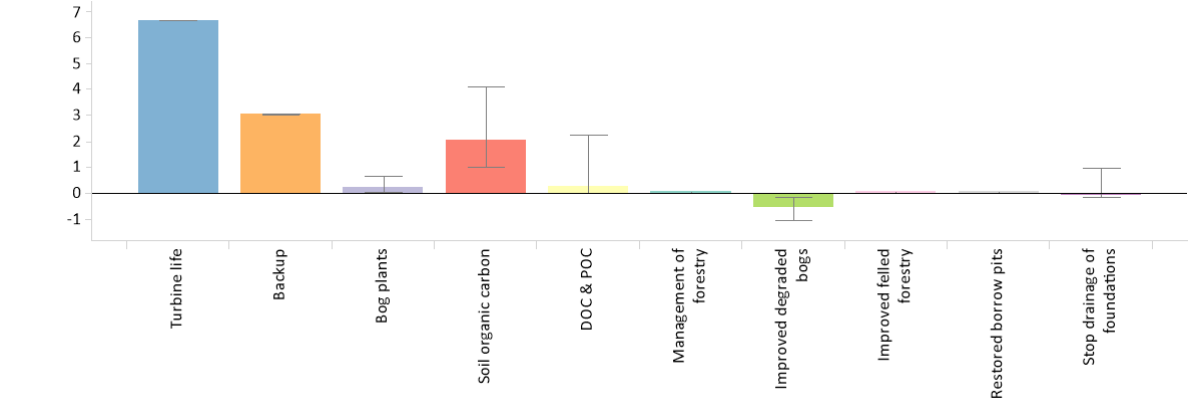
8. Total CO2 gains due to improvement of site (t CO2 eq.)	Exp.	Min.	Max.
8a. Change in emissions due to improvement of degraded bogs	-4,665	0	-8,137
8b. Change in emissions due to improvement of felled forestry	0	0	0
8c. Change in emissions due to restoration of peat from borrow pits	0	0	0
8d. Change in emissions due to removal of drainage from foundations & hardstanding	-749	0	-10,351
Total change in emissions due to improvements	-5,414	0	-18,488

RESULTS	Exp.	Min.	Max.
Net emissions of carbon dioxide (t CO2 eq.)	101,452	76,771	148,647
Carbon Payback Time			
...coal-fired electricity generation (years)	0.5	0.3	0.7
...grid-mix of electricity generation (years)	1.7	1.3	2.6
...fossil fuel-mix of electricity generation (years)	1	0.7	1.4
Ratio of soil carbon loss to gain by restoration (not used in Scottish applications)	3.66	0.5	No gains!
Ratio of CO2 eq. emissions to power generation (g/kWh) (for info. only)	14.36	10.6	21.58

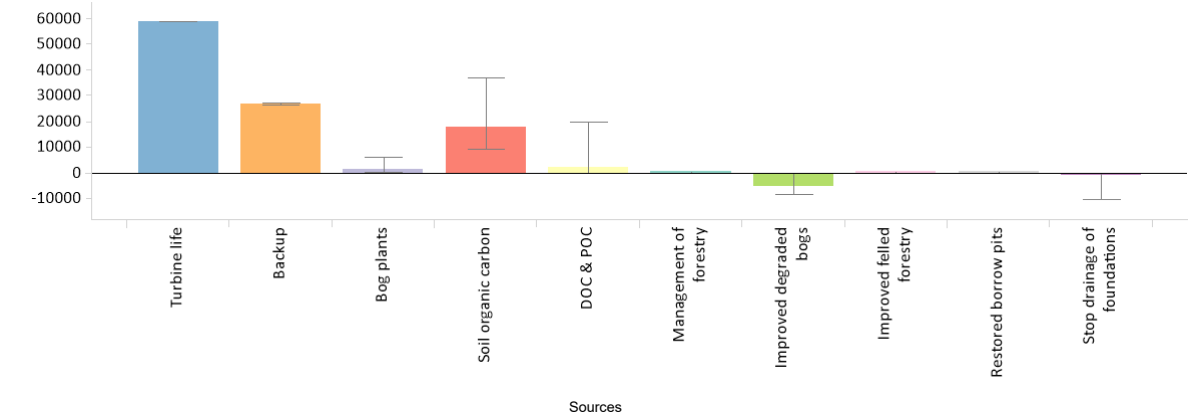
PAYBACK TIME CHARTS

Payback Time - Charts

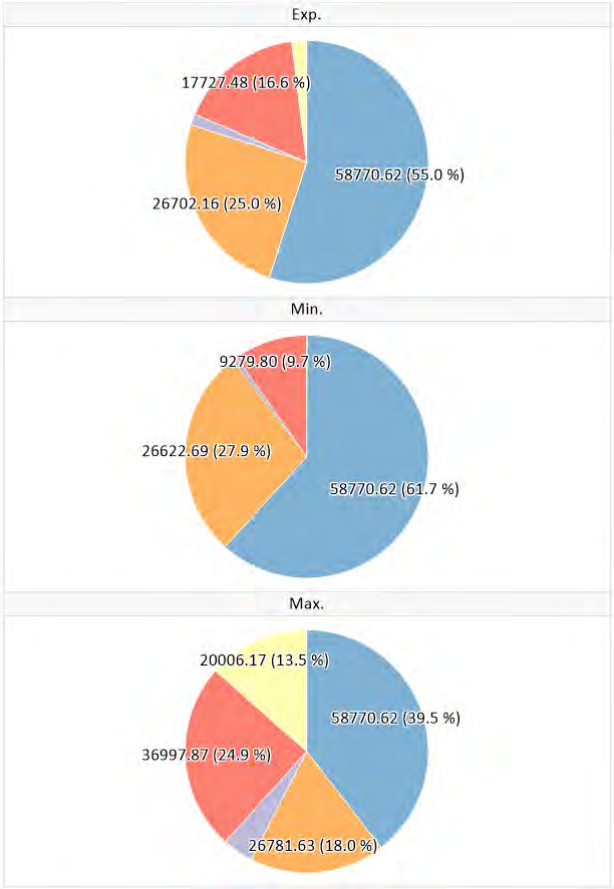
Carbon payback time (months) using fossil-fuel mix as conterfactual



Greenhouse gas emissions (t CO2 eq.)



Proportions of greenhouse gas emissions from different sources



INPUT DATA

Carbon Calculator v1.6.1

Corriegarth 2 Wind Farm Location: 57.189122 -4.361813

Corriegarth 2 Windfarm Limited

Core input data

Input data	Expected value	Minimum value	Maximum value	Source of data
Windfarm characteristics				
Dimensions				
No. of turbines	14	14	14	Chapter 4 - Development Description
Duration of consent (years)	30	30	30	Chapter 4 - Development Description
Performance				
Power rating of 1 turbine (MW)	4.8	4.8	4.8	Candidate Turbine = up to 4.8 MW
Capacity factor	40	39	41	Technical Estimation
Backup				
Fraction of output to backup (%)	3.36	3.35	3.37	Calculating Potential Carbon Losses & Savings from Wind Farms on Scottish Peatlands, Technical Note, Version 2.10.0, Para 19.
Additional emissions due to reduced thermal efficiency of the reserve generation (%)	10	10	10	Fixed
Total CO2 emission from turbine life (tCO2 MW^{-1}) (eg. manufacture, construction, decommissioning)	Calculate wrt installed capacity	Calculate wrt installed capacity	Calculate wrt installed capacity	
Characteristics of peatland before windfarm development				
Type of peatland	Acid bog	Acid bog	Acid bog	Technical Appendix A13.2 - Outline Peat Management Plan
Average annual air temperature at site (°C)	8.45	5	11.9	Met Office Reference: https://www.metoffice.gov.uk/research/climate/maps-and-data/uk-climate-averages/gfhtjdb28
Average depth of peat at site (m)	1.2	0.01	5.3	Chapter 13 - Geology & Soils
C Content of dry peat (% by weight)	55.5	49	62	Scottish government Guidance - Guidance on Developments on Peatland - Site Surveys
Average extent of drainage around drainage features at site (m)	10	5	50	Technical Estimation
Average water table depth at site (m)	0.1	0.05	0.3	Technical Estimation
Dry soil bulk density (g cm^{-3})	0.122	0.09	0.15	Scottish government Guidance - Guidance on Developments on Peatland - Site Surveys

Input data	Expected value	Minimum value	Maximum value	Source of data
Characteristics of bog plants				
Time required for regeneration of bog plants after restoration (years)	30	2	30	Technical Estimation - Not expected to deviate from standard regeneration timescales.
Carbon accumulation due to C fixation by bog plants in undrained peats (tC ha^{-1} yr^{-1})	0.25	0.24	0.26	SNH Guidance -Carbon Payback Calculator: Guidelines on Measurements
Forestry Plantation Characteristics				
Area of forestry plantation to be felled (ha)	0	0	0	N/A. No tree felling required.
Average rate of carbon sequestration in timber (tC ha^{-1} yr^{-1})	0	0	0	N/A. No tree felling required.
Counterfactual emission factors				
Coal-fired plant emission factor (t CO2 MWh^{-1})	0.92	0.92	0.92	
Grid-mix emission factor (t CO2 MWh^{-1})	0.25358	0.25358	0.25358	
Fossil fuel-mix emission factor (t CO2 MWh^{-1})	0.45	0.45	0.45	
Borrow pits				
Number of borrow pits	1	1	1	Chapter 4 - Development Description
Average length of pits (m)	230	230	230	Technical Appendix A4.1 Borrow Pit Assessment
Average width of pits (m)	130	130	130	Technical Appendix A4.1 Borrow Pit Assessment
Average depth of peat removed from pit (m)	0.5	0.5	0.5	Technical Estimation
Foundations and hard-standing area associated with each turbine				
Average length of turbine foundations (m)	21	21	21	Chapter 4 - Development Description
Average width of turbine foundations (m)	21	21	21	Chapter 4 - Development Description
Average depth of peat removed from turbine foundations(m)	0.9	0.9	0.9	Technical Appendix A13.1 - Peat Slide Risk Assessment

Input data	Expected value	Minimum value	Maximum value	Source of data
Average length of hard-standing (m)	40	40	40	Chapter 4 - Development Description
Average width of hard-standing (m)	35	35	35	Chapter 4 - Development Description
Average depth of peat removed from hard-standing (m)	1.2	1.2	1.2	Technical Appendix A13.2 - Outline Peat Management Plan
Volume of concrete used in construction of the ENTIRE windfarm				
Volume of concrete (m^3)	8000	8000	8000	Chapter 11 - Traffic and Transport
Access tracks				
Total length of access track (m)	18950	18947	18953	Chapter 4 - Development Description
Existing track length (m)	13000	12999	13001	Chapter 4 - Development Description
Length of access track that is floating road (m)	4900	4899	4901	Technical Appendix A13.2 - Outline Peat Management Plan
Floating road width (m)	6	6	6	Technical Appendix A13.2 - Outline Peat Management Plan
Floating road depth (m)	1	0.9	1.1	Technical Appendix A13.2 - Outline Peat Management Plan
Length of floating road that is drained (m)	4900	4899	4901	Technical Appendix A13.2 - Outline Peat Management Plan
Average depth of drains associated with floating roads (m)	0.5	0.5	0.5	Technical Appendix A13.2 - Outline Peat Management Plan
Length of access track that is excavated road (m)	1050	1049	1051	Chapter 4 - Development Description
Excavated road width (m)	5	5	5	Chapter 4 - Development Description
Average depth of peat excavated for road (m)	1	0.9	1.1	Technical Appendix A13.2 - Outline Peat Management Plan
Length of access track that is rock filled road (m)	0	0	0	Chapter 4 - Development Description
Rock filled road width (m)	5	5	5	Chapter 4 - Development Description
Rock filled road depth (m)	0.65	0.45	0.7	Chapter 4 - Development Description
Length of rock filled road that is drained (m)	0	0	0	Chapter 4 - Development Description

Input data	Expected value	Minimum value	Maximum value	Source of data
Average depth of drains associated with rock filled roads (m)	0.5	0.5	0.5	Chapter 4 - Development Description
Cable trenches				
Length of any cable trench on peat that does not follow access tracks and is lined with a permeable medium (eg. sand) (m)	0	0	0	N/A for this Development
Average depth of peat cut for cable trenches (m)	0	0	0	Technical Appendix A13.2 - Outline Peat Management Plan
Additional peat excavated (not already accounted for above)				
Volume of additional peat excavated (m^3)	0	0	0	N/A for this Development.
Area of additional peat excavated (m^2)	0	0	0	N/A for this Development.
Peat Landslide Hazard				
Peat Landslide Hazard and Risk Assessments: Best Practice Guide for Proposed Electricity Generation Developments	negligible	negligible	negligible	Fixed
Improvement of C sequestration at site by blocking drains, restoration of habitat etc				
Improvement of degraded bog				
Area of degraded bog to be improved (ha)	23.88	23.88	23.88	High Level Technical Estimation - Refined further prior to restoration.
Water table depth in degraded bog before improvement (m)	0.3	0.05	0.5	Technical Estimation
Water table depth in degraded bog after improvement (m)	0.1	0.04	0.4	High Level Technical Estimation - Refined further prior to restoration.
Time required for hydrology and habitat of bog to return to its previous state on improvement (years)	5	5	5	Technical Estimation

Input data	Expected value	Minimum value	Maximum value	Source of data
Period of time when effectiveness of the improvement in degraded bog can be guaranteed (years)	30	30	30	Technical Estimation
Improvement of felled plantation land				
Area of felled plantation to be improved (ha)	0	0	0	N/A. No tree felling anticipated.
Water table depth in felled area before improvement (m)	0.3	0.05	0.5	N/A. No tree felling anticipated.
Water table depth in felled area after improvement (m)	0.1	0.04	0.4	N/A. No tree felling anticipated.
Time required for hydrology and habitat of felled plantation to return to its previous state on improvement (years)	30	30	30	N/A. No tree felling anticipated.
Period of time when effectiveness of the improvement in felled plantation can be guaranteed (years)	30	30	30	N/A. No tree felling required.
Restoration of peat removed from borrow pits				
Area of borrow pits to be restored (ha)	3.1	3.1	3.1	Technical Appendix A4.1 - Borrow Pit Assessment
Depth of water table in borrow pit before restoration with respect to the restored surface (m)	0.3	0.05	0.5	Technical Estimation
Depth of water table in borrow pit after restoration with respect to the restored surface (m)	0.1	0.04	0.4	Technical Estimation
Time required for hydrology and habitat of borrow pit to return to its previous state on restoration (years)	30	30	30	Technical Estimation

Input data	Expected value	Minimum value	Maximum value	Source of data
Period of time when effectiveness of the restoration of peat removed from borrow pits can be guaranteed (years)	30	30	30	Technical Estimation
Early removal of drainage from foundations and hardstanding				
Water table depth around foundations and hardstanding before restoration (m)	0.3	0.05	0.5	Technical Estimation
Water table depth around foundations and hardstanding after restoration (m)	0.1	0.04	0.4	Technical Estimation
Time to completion of backfilling, removal of any surface drains, and full restoration of the hydrology (years)	5	5	5	Technical Estimation
Restoration of site after decomissioning				
Will the hydrology of the site be restored on decommissioning?	Yes	Yes	Yes	
Will you attempt to block any gullies that have formed due to the windfarm?	Yes	Yes	Yes	Details on gullies will be further refined during restoration.
Will you attempt to block all artificial ditches and facilitate rewetting?	Yes	Yes	Yes	Details on artificial ditches and rewetting further refined during restoration
Will the habitat of the site be restored on decommissioning?	Yes	Yes	Yes	
Will you control grazing on degraded areas?	Yes	Yes	Yes	Controlled grazing where possible.
Will you manage areas to favour reintroduction of species	Yes	Yes	Yes	No formal re-introduction, but improved habitats should encourage use of species not currently using the area.
Methodology				

Input data	Expected value	Minimum value	Maximum value	Source of data
Choice of methodology for calculating emission factors	Site specific (required for planning applications)			

Forestry input data

N/A

Construction input data

N/A

1 WINDFARM CO_2 EMISSION SAVING

Capacity Factor - Direct Input	Exp.	Min.	Max.
Capacity factor (%)	40	39	41

Annual energy output from windfarm (MW/yr)	Exp.	Min.	Max.
RESULTS			
Emissions saving over coal-fired electricity generation (tCO2/yr)	216,631	211,216	222,047
Emissions saving over grid-mix of electricity generation (tCO2/yr)	59,710	58,217	61,203
Emissions saving over fossil fuel - mix of electricity generation (tCO2/yr)	105,961	103,312	108,610

2 CO_2 LOSS DUE TO TURBINE LIFE

Calculations of emissions with relation to installed capacity	Exp.	Min.	Max.
Emissions due to turbine from energy output (t CO2)	4017	4017	4017
Emissions due to cement used in construction (t CO2)	2528	2528	2528

RESULTS	Exp.	Min.	Max.
Losses due to turbine life (manufacture, construction, etc.) (t CO2)	58771	58771	58771
Additional CO2 payback time of windfarm due to turbine life			
...coal-fired electricity generation (months)	3	3	3
...grid-mix of electricity generation (months)	12	12	12
...fossil fuel - mix of electricity generation (months)	7	7	6

3 CO_2 LOSS DUE TO BACKUP

	Exp.	Min.	Max.
Reserve energy (MWh/yr)	19,779	19,721	19,838
Annual emissions due to backup from fossil fuel-mix of electricity generation (tCO2/yr)	890	887	893
RESULTS			
Total emissions due to backup from fossil fuel-mix of electricity generation (tCO2)	26,702	26,623	26,782

4 LOSS OF CO_2 FIXING POTENTIAL

	Exp.	Min.	Max.
Area where carbon accumulation by bog plants is lost (ha)	28.47	20.07	106.47
Total loss of carbon accumulation up to time of restoration (tCO2 eq./ha)	55	28	57
RESULTS			
Total loss of carbon fixation by plants at the site (t CO2)	1566	565	6090
Additional CO2 payback time of windfarm due to loss of CO2 fixing potential			
...coal-fired electricity generation (months)	0	0	0
...grid-mix of electricity generation (months)	0	0	1
...fossil fuel - mix of electricity generation (months)	0	0	1

5 LOSS OF SOIL CO_2

5. Loss of Co_2	Exp.	Min.	Max.
CO2 loss from removed peat (t CO2 equiv.)	14094.61	9106.55	20786.28
CO2 loss from drained peat (t CO2 equiv.)	3632.87	173.26	16211.59
RESULTS			
Total CO2 loss from peat (removed + drained) (t CO2 equiv.)	17727.48	9279.8	36997.87
Additional CO2 payback time of windfarm due to loss of soil CO2			
...coal-fired electricity generation (months)	0.98	0.53	2
...grid-mix of electricity generation (months)	3.56	1.91	7.25
...fossil fuel - mix of electricity generation (months)	2.01	1.08	4.09

5a. Volume of peat removed	Exp.	Min.	Max.
Peat removed from borrow pits			
Area of land lost in borrow pits (m2)	29900	29900	29900
Volume of peat removed from borrow pits (m3)	14950	14950	14950
Peat removed from turbine foundations			
Area of land lost in foundation (m2)	6174	6174	6174
Volume of peat removed from foundation area (m3)	5556.6	5556.6	5556.6
Peat removed from hard-standing			
Area of land lost in hard-standing (m2)	19600	19600	19600
Volume of peat removed from hard-standing area (m3)	23520	23520	23520
Peat removed from access tracks			
Area of land lost in floating roads (m2)	29400	29394	29406
Volume of peat removed from floating roads (m3)	29400	26454.6	32346.6
Area of land lost in excavated roads (m2)	5250	5245	5255
Volume of peat removed from excavated roads (m3)	5250	4720.5	5780.5
Area of land lost in rock-filled roads (m2)	0	0	0
Volume of peat removed from rock-filled roads (m3)	0	0	0
Total area of land lost in access tracks (m2)	34650	34639	34661
Total volume of peat removed due to access tracks (m3)	34650	31175.1	38127.1
RESULTS			
Total area of land lost due to windfarm construction (m2)	90324	90313	90335
Total volume of peat removed due to windfarm construction (m3)	78676.6	75201.7	82153.7

5b. Co_2 loss from removed peat	Exp.	Min.	Max.
CO2 loss from removed peat (t CO2)	19533.22	12160.23	28014.67
CO2 loss from undrained peat left in situ (t CO2)	5438.61	3053.68	7228.39
RESULTS			
CO2 loss attributable to peat removal only (t CO2)	14094.61	9106.55	20786.28

5c. Volume of peat drained	Exp.	Min.	Max.
Total area affected by drainage around borrow pits (m2)	7600	3700	46000
Total volume affected by drainage around borrow pits (m3)	1900	925	11500
Peat affected by drainage around turbine foundation and hardstanding			
Total area affected by drainage of foundation and hardstanding area (m2)	38360	17780	303800
Total volume affected by drainage of foundation and hardstanding area (m3)	23016	10668	182280
Peat affected by drainage of access tracks			
Total area affected by drainage of access track(m2)	148400	88874	624606
Total volume affected by drainage of access track(m3)	42350	24316.5	187681.5
Peat affected by drainage of cable trenches			
Total area affected by drainage of cable trenches(m2)	0	0	0
Total volume affected by drainage of cable trenches(m3)	0	0	0
Drainage around additional peat excavated			
Total area affected by drainage (m2)	0	0	0
Total volume affected by drainage (m3)	0	0	0
RESULTS			
Total area affected by drainage due to windfarm (m2)	194360	110354	974406
Total volume affected by drainage due to windfarm (m3)	67266	35909.5	381461.5

5d. CO_2 loss from drained peat	**Exp.**	**Min.**	**Max.**
Calculations of C Loss from Drained Land if Site is NOT Restored after Decommissioning			
Total GHG emissions from Drained Land (t CO2 equiv.)	16700.28	5806.62	130079.55
Total GHG emissions from Undrained Land (t CO2 equiv.)	12744.16	5548.96	107688.71
Calculations of C Loss from Drained Land if Site IS Restored after Decommissioning			
Losses if Land is Drained			
CH4 emissions from drained land (t CO2 equiv.)	4.85	-108.38	1670.07
CO2 emissions from drained land (t CO2)	15330.86	4012.94	92511.16
Total GHG emissions from Drained Land (t CO2 equiv.)	15335.72	3904.57	94181.23
Losses if Land is Undrained			
CH4 emissions from undrained land (t CO2 equiv.)	2421.67	-90.85	24909.47
CO2 emissions from undrained land (t CO2)	9281.17	3822.16	53060.17
Total GHG emissions from Undrained Land (t CO2 equiv.)	11702.84	3731.31	77969.64
RESULTS			
Total GHG emissions due to drainage (t CO2 equiv.)	3632.87	173.26	16211.59

5e. Emission rates from soil	Exp.	Min.	Max.
Calculations following IPCC default methodology			
Flooded period (days/year)	178	178	178
Annual rate of methane emission (t CH4-C/ha year)	0.04	0.04	0.04
Annual rate of carbon dioxide emission (t CO2/ha year)	35.2	35.2	35.2
Calculations following ECOSSE based methodology			
Total area affected by drainage due to wind farm construction (ha)	19.44	11.04	97.44
Average water table depth of drained land (m)	0.35	0.33	0.39
Selected emission characteristics following site specific methodology			
Rate of carbon dioxide emission in drained soil (t CO2/ha year)	13.15	11.36	15.82
Rate of carbon dioxide emission in undrained soil (t CO2/ha year)	2.51	10.26	1.99
Rate of methane emission in drained soil (t CH4-C/ha year)	0	-0.01	0.01
Rate of methane emission in undrained soil (t CH4-C/ha year)	0.14	-0.01	0.28
RESULTS			
Selected rate of carbon dioxide emission in drained soil (t CO2/ha year)	13.15	11.36	15.82
Selected rate of carbon dioxide emission in undrained soil (t CO2/ha year)	2.51	10.26	1.99
Selected rate of methane emission in drained soil (t CH4-C/ha year)	0	-0.01	0.01
Selected rate of methane emission in undrained soil (t CH4-C/ha year)	0.14	-0.01	0.28

6 CO_2 LOSS BY DOC AND POC LOSS

	Exp.	Min.	Max.
Gross CO2 loss from restored drained land (t CO2)	6049.69	190.79	39451
Gross CH4 loss from restored drained land (t CO2 equiv.)	0	0	0
Gross CO2 loss from improved land (t CO2)	0	0	0
Gross CH4 loss from improved land (t CO2 equiv.)	1437.41	0	6299.82
Total gaseous loss of C (t C)	1684.9	52.03	10912.36
Total C loss as DOC (t C)	438.08	3.64	4364.94
Total C loss as POC (t C)	134.79	2.08	1091.24
RESULTS			
Total CO2 loss due to DOC leaching (t CO2)	1606.29	13.35	16004.94
Total CO2 loss due to POC leaching (t CO2)	494.24	7.63	4001.23
Total CO2 loss due to DOC & POC leaching (t CO2)	2100.53	20.98	20006.17
Additional CO2 payback time of windfarm due to DOC & POC			
...coal-fired electricity generation (months)	0	0	1
...grid-mix of electricity generation (months)	0	0	4
...fossil fuel - mix of electricity generation (months)	0	0	2

7 FORESTRY CO_2 LOSS

	Exp.	Min.	Max.
Area of forestry plantation to be felled (ha)	0	0	0
Carbon sequestered (t C ha-1 yr-1)	0	0	0
Lifetime of windfarm (years)	30	30	30
Carbon sequestered over the lifetime of the windfarm (t C ha-1)	0	0	0
RESULTS			
Total carbon loss due to felling of forestry (t CO2)	0	0	0
Additional CO2 payback time of windfarm due to management of forestry			
...coal-fired electricity generation (months)	0	0	0
...grid-mix of electricity generation (months)	0	0	0
...fossil fuel - mix of electricity generation (months)	0	0	0

8 CO_2 GAIN – SITE IMPROVEMENT

Degraded Bog	Exp.	Min.	Max.
1. Description of site			
Area to be improved (ha)	23.88	0	23.88
Depth of peat above water table before improvement (m)	0.3	0.01	0.5
Depth of peat above water table after improvement (m)	0.1	0.01	0.04
2. Losses with improvement			
Improved period (years)	25	25	25
Selected annual rate of methane emissions (t CH4-C ha-1 yr-1)	0.139	0.423	0.311
CH4 emissions from improved land (t CO2 equiv.)	1238.47	0	2772.571
Selected annual rate of carbon dioxide emissions (t CO2 ha-1 yr-1)	2.509	-0.644	1.758
CO2 emissions from improved land (t CO2 equiv.)	767.326	0	537.748
Total GHG emissions from improved land (t CO2 eqiv.)	2005.795	0	3310.318
3. Losses without improvement			
Improved period (years)	25	25	25
Selected annual rate of methane emissions (t CH4-C ha-1 yr-1)	0.005	0.423	0.006
CH4 emissions from improved land (t CO2 equiv.)	0	0	0
Selected annual rate of carbon dioxide emissions (t CO2 ha-1 yr-1)	11.174	-0.644	19.174
CO2 emissions from unimproved land (t CO2 equiv.)	6670.646	0	11446.98
Total GHG emissions from unimproved land (t CO2 eqiv.)	6670.646	0	11446.98
RESULTS			
4. Reduction in GHG emissions due to improvement of site			
Reduction in GHG emissions due to improvement (t CO2 equiv.)	4664.851	0	8136.661

Felled Forestry	**Exp.**	**Min.**	**Max.**
1. Description of site			
Area to be improved (ha)	0	0	0
Depth of peat above water table before improvement (m)	0.3	0.01	0.5
Depth of peat above water table after improvement (m)	0.1	0.01	0.04
2. Losses with improvement			
Improved period (years)	0	0	0
Selected annual rate of methane emissions (t CH4-C ha-1 yr-1)	0.139	0.423	0.311
CH4 emissions from improved land (t CO2 equiv.)	0	0	0
Selected annual rate of carbon dioxide emissions (t CO2 ha-1 yr-1)	2.509	-0.644	1.758
CO2 emissions from improved land (t CO2 equiv.)	0	0	0
Total GHG emissions from improved land (t CO2 eqiv.)	0	0	0
3. Losses without improvement			
Improved period (years)	0	0	0
Selected annual rate of methane emissions (t CH4-C ha-1 yr-1)	0.005	0.423	0.006
CH4 emissions from improved land (t CO2 equiv.)	0	0	0
Selected annual rate of carbon dioxide emissions (t CO2 ha-1 yr-1)	11.174	-0.644	19.174
CO2 emissions from unimproved land (t CO2 equiv.)	0	0	0
Total GHG emissions from unimproved land (t CO2 eqiv.)	0	0	0
RESULTS			
4. Reduction in GHG emissions due to improvement of site			
Reduction in GHG emissions due to improvement (t CO2 equiv.)	0	0	0

Borrow Pits	**Exp.**	**Min.**	**Max.**
1. Description of site	3.1	0	3.1
Area to be improved (ha)	0.3	0.05	0.5
Depth of peat above water table before improvement (m)	0.1	0.4	0.04
Depth of peat above water table after improvement (m)			
2. Losses with improvement	0	0	0
Improved period (years)	0.139	-0.015	0.311
Selected annual rate of methane emissions (t CH4-C ha-1 yr-1)	0	0	0
CH4 emissions from improved land (t CO2 equiv.)	2.509	14.296	1.758
Selected annual rate of carbon dioxide emissions (t CO2 ha-1 yr-1)	0	0	0
CO2 emissions from improved land (t CO2 equiv.)	0	0	0
Total GHG emissions from improved land (t CO2 eqiv.)			
3. Losses without improvement	0	0	0
Improved period (years)	0.005	0.251	0.006
Selected annual rate of methane emissions (t CH4-C ha-1 yr-1)	0	0	0
CH4 emissions from improved land (t CO2 equiv.)	11.174	0.151	19.174
Selected annual rate of carbon dioxide emissions (t CO2 ha-1 yr-1)	0	0	0
CO2 emissions from unimproved land (t CO2 equiv.)	0	0	0
Total GHG emissions from unimproved land (t CO2 eqiv.)	3.1	0	3.1
RESULTS			
4. Reduction in GHG emissions due to improvement of site			
Reduction in GHG emissions due to improvement (t CO2 equiv.)	0	0	0

Foundations and Hardstanding	**Exp.**	**Min.**	**Max.**
1. Description of site	3.836	0	30.38
Area to be improved (ha)	0.3	0.01	0.5
Depth of peat above water table before improvement (m)	0.1	0.01	0.04
Depth of peat above water table after improvement (m)			
2. Losses with improvement	25	25	25
Improved period (years)	0.139	0.423	0.311
Selected annual rate of methane emissions (t CH4-C ha-1 yr-1)	198.943	0	3527.249
CH4 emissions from improved land (t CO2 equiv.)	2.509	-0.644	1.758
Selected annual rate of carbon dioxide emissions (t CO2 ha-1 yr-1)	123.26	0	684.119
CO2 emissions from improved land (t CO2 equiv.)	322.204	0	4211.368
Total GHG emissions from improved land (t CO2 eqiv.)			
3. Losses without improvement	25	25	25
Improved period (years)	0.005	0.423	0.006
Selected annual rate of methane emissions (t CH4-C ha-1 yr-1)	0	0	0
CH4 emissions from improved land (t CO2 equiv.)	11.174	-0.644	19.174
Selected annual rate of carbon dioxide emissions (t CO2 ha-1 yr-1)	1071.549	0	14562.78
CO2 emissions from unimproved land (t CO2 equiv.)	1071.549	0	14562.78
Total GHG emissions from unimproved land (t CO2 eqiv.)	3.836	0	30.38
RESULTS			
4. Reduction in GHG emissions due to improvement of site			
Reduction in GHG emissions due to improvement (t CO2 equiv.)	749.345	0	10351.41