



AI#2 Appendix C

Peat Technical Note





Technical note:

Response to the SEPA Objection (17 April 2020)

1. Introduction

- 1.1.1 This technical note has been prepared to address the concerns raised by SEPA in their response (dated 17 April 2020) to the Additional Information submission (submitted in March 2020) and EIA Report (submitted in May 2019) for the proposed Stornoway Wind Farm.
- 1.1.2 The Applicant has welcomed the opportunity to engage with both SEPA and SNH in the iterative design process to minimise, where possible, the effects on peat across the Development Site. SEPA has provided positive feedback on previous iterations of this document to help assist the Applicant in avoiding areas of the deepest peat over the Development Site. Discussions have taken place between SEPA, SNH and the Applicant in terms of identifying the most appropriate locations for turbines where there is a conflict in terms of environmental constraints.
- 1.1.3 The technical note is set out as follows:
- **Section 2** sets out the concerns raised by SEPA, the consultation that has taken place with them to address the concerns, together with the methodology for addressing the concerns.
 - **Section 3** sets out the changes made to the turbine locations, together with figures to support the text.
 - **Section 4** sets out the conclusions reached summarises the proposed changes and identifies the changes in peat quantities should the proposed changes be agreed.
 - **Appendix A** includes a figure comparing the as submitted development site layout with the updates made to several turbine, hardstanding and access track locations as proposed in this technical note.

2. Approach to addressing SEPA Objection

2.1 Key Issues raised by SEPA

- 2.1.1 In their response of 1 July 2019, SEPA stated that the applicant must demonstrate, in relation to the proposed layout, how peat excavations and disturbance have been minimised, in line with Scottish Planning Policy (SPP).
- 2.1.2 In their response of the 17 April 2020, SEPA acknowledged that individual probing point depths have now been provided in a format that they are able to read, with proposed temporary and permanent infrastructure overlaid. However, this illustrated that impacts on areas of deep peat may not be minimised.
- 2.1.3 The key legislation in determining Section 36 Applications is the Electricity Act 1989. The key legislative requirement is set in paragraph 3, schedule 9 of the Electricity Act 1989 which

addresses the preservation of amenity and fisheries. Paragraph 3 sets out a number of environmental features to which regard must be had and confirms that mitigation must be considered so far as reasonable. Sub paragraph 1 states:

“(1) In formulating any relevant proposals, a licence holder or a person authorised by an exemption to generate, transmit, distribute or supply electricity -

(a) Shall have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest; and

(b) Shall do what he reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects”.

- 2.1.4 This technical note sets out what the Applicant has done to mitigate effects on Peat, and has concluded that with some small changes in the turbine location or area of hard standing location, there is the opportunity to make some further savings in terms of reducing the quantity of peat disturbance or loss within the Proposed Development. Further information on the iterative design process, is set out in **AI Chapter 3: Scheme Need, Alternatives and Iterative Design Process**, at **AI Table 3.2**.
- 2.1.5 **Table 2.1** sets out the concerns raised by SEPA in their letter dated 17 April 2020 with regard to specific turbines.

Table 2.1 Concerns raised by SEPA in Letter dated 17 April 2020

Turbine Number	Reason for the SEPA required modification
4	Turbine within peat that is 2-3m deep - should be moved into shallower peat to the north where peat depths are 0.5-2m (green area).
5	Within peat that is 3-4m deep - should be moved into shallower peat to the south-east where peat depths are 0.5-2m (green area).
11	Within peat that is 2-3m deep - should be moved into shallower peat to the north-east where peat depths are 0-2m (green area).
13	Within peat that is greater than 4m deep - should be moved into shallower peat to the south or south-west where peat depths are 0-2m (green area). Our preference would be to see this turbine re-located into the dark green probing depths (0.5-1m) which also correlate with the area of forestry.
14	Crane pad within peat 2-3m deep – should be moved into shallow peat to the south, east or west where peat depths are 0-2m (green area).
15	Within peat that is 2-3m deep - should be moved into shallower peat to the south-west where peat depths are 0-2m (green area).
18	Within peat that is greater than 4m deep - should be moved into shallower peat directly to the south where peat depths are 0-1m (white and green area along the curve of the access track). Alternatively the crane pad could be moved onto the shallower peat on the other side of the turbine.
19	Within peat that is greater than 4m deep - should be moved into shallower peat directly to the south, or elsewhere where peat depths are 0.5-2m (green area just north of junction with main access track).

Turbine Number	Reason for the SEPA required modification
26	Within peat that is greater than 4m deep - should be moved into shallower peat. There is shallower peat areas along the access track directly south (identified in light green as individual probing point depths of 1-2m) but additional peat probing may be required in this area.
27	Within peat that is 2-3m deep - should be moved into shallower peat south-west directly along the access track to where probing depths indicate 0-0.5m (white and dark green areas).
32	Within peat that is 2-3m deep - should be moved into shallower peat directly south-east along the access track, closer to where the intersection with the main track occurs, where probing depths indicate 0.5-2m (light and dark green areas). Alternatively the crane pad could be moved onto the shallower peat on the other side of the turbine.

2.1.6 A draft of the proposed edits to the wind turbine infrastructure was issued to SEPA, SNH, CnES and the ECU prior to a virtual meeting. This working draft sets out turbine location changes which would result in a reduction to peat loss or disturbance to peat. This meeting took place on 14 July 2020.

2.1.7 During the meeting, further iterations were identified and discussed and, in some circumstances, where a number of constraints were in conflict with each other, a discussion took place between each of the consultees as to how to best overcome the issues. These discussions are captured **Sections 3.2 – 3.12 below.**

3. Amendments to turbine locations

3.1 Methodology

3.1.1 For each of the areas of concern raised by SEPA in **Table 2.1**, a constraints map was overlaid over each turbine and associated infrastructure location. The following infrastructure, environmental and cultural constraints were included:

- Stornoway turbine wake separation
- Neighbouring windfarms wake separation
- Roads and tracks
- Microwave links and infrastructure
- Residential properties and buffer
- Hydrology and geotechnical constraints
- Watercourses and waterbodies
- Cultural heritage
- Archaeology
- Protected species
- Peat depth survey points and interpolated grid

- Areas of highly sensitive vegetation
- Peat slide risk

3.1.2 The affected infrastructure was then analysed to:

- Understand whether there were any opportunities to move it into areas of shallower peat to further minimise peat disturbance without impacting, or further impacting, on the constraints set out above; or
- Identifying where a balance has been struck to move a turbine closer to a constraint if there would be a significant benefit in peat reduction and the move would not result in an objection from a consultee where previously there wasn't one.

3.1.3 For infrastructure that could not be moved due to the constraints set out above, the reasons are outlined in the text. For infrastructure that did have the potential opportunity to move, the potential improvements on reduced peat disturbance have been calculated.

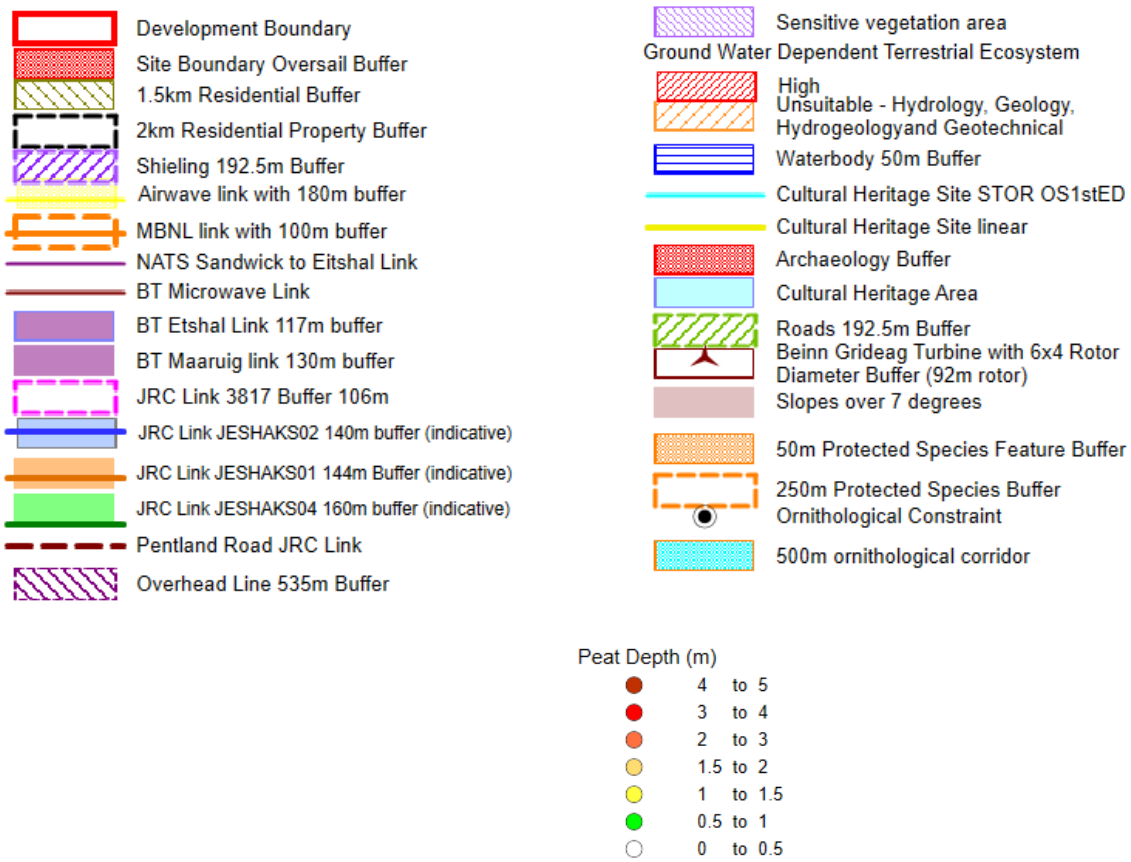
3.1.4 For each of the affected the elements of infrastructure the estimated peat volume to be excavated was calculated based of the peat depth survey data. This was then compared with the 'as submitted EIA Report 2019' calculated impact, and a potential peat disturbance comparison figure and percentage difference between the two was identified.

3.1.5 The information set out in this technical note identifies further small scale moves to turbine locations and crane pads to further reduce the amount of peat that would be disturbed as a result of the Proposed Development.

3.1.6 Please note that in addition to reviewing the location of the wind turbines in question, we have also reviewed the orientation of the crane pads to see where peat savings can be identified overall.

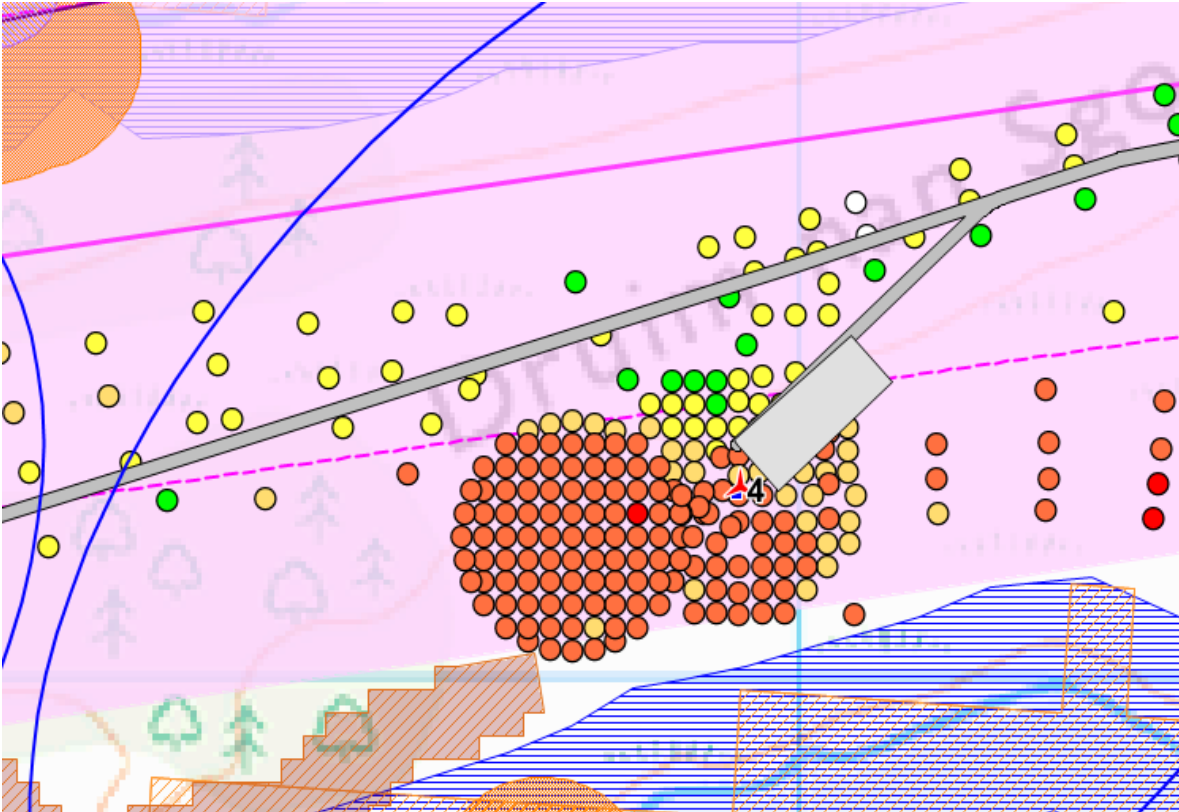
3.1.7 A screen shot of the Proposed Development layout (**Figure 4.1**) is provided in Illustration 1 to provide a point of reference to the location of the turbines that are discussed in this technical note, and to show the changes to the track layout as a result of the movement of turbine infrastructure. This is not to scale.

Figure 3-1 Constraints maps Key



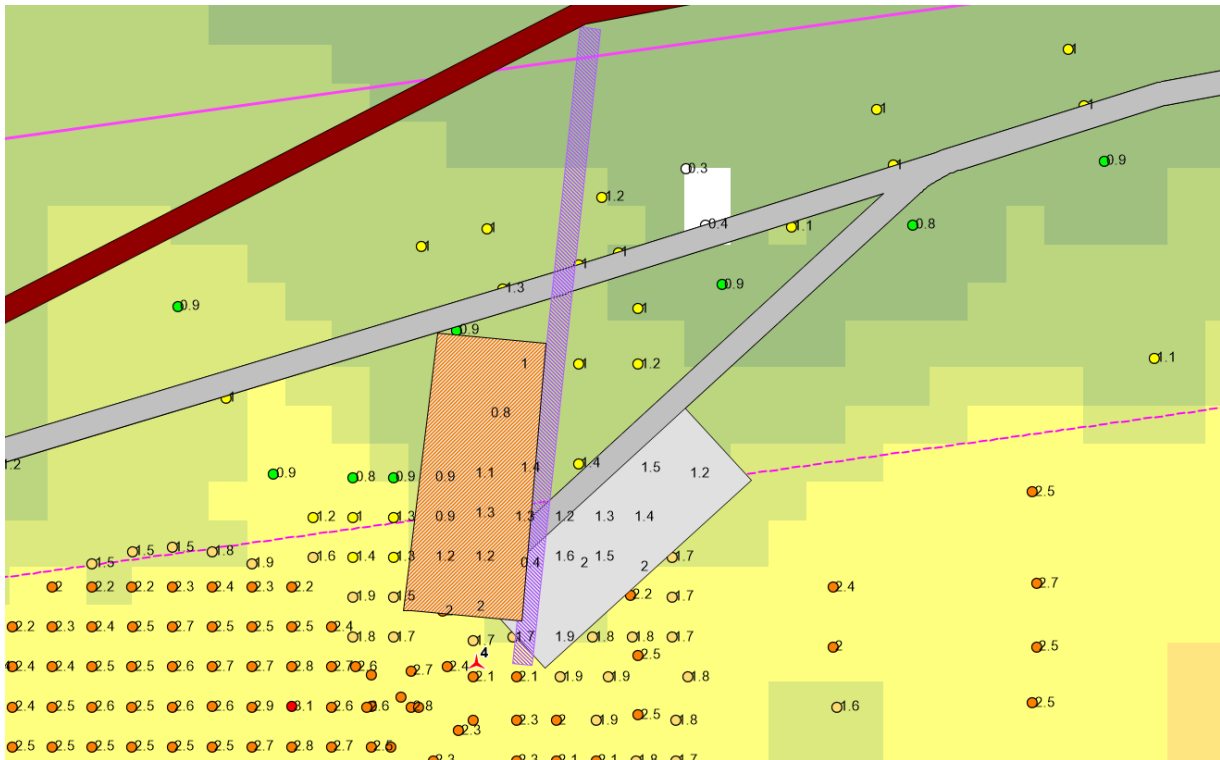
3.2 Turbine 4

Figure 3.1a As Submitted Turbine Location and infrastructure



- 3.2.1 SEPA identified that Turbine 4 (T4) is located within peat that is 2-3m deep and should be moved into shallower peat to the north where peat depths are 0.5-2m (green area).
- 3.2.2 **Figure 3.1a** shows the as submitted turbine location for T4, including all the relevant infrastructure constraints as well as the peat depths.
- 3.2.3 Of particular note, the areas in pink are a telemetry link, and the proposed turbine is currently located in the buffer zone of the link, however it is understood at this point that a micro-siting restriction north would be acceptable to ensure that no further effects would occur on the link.
- 3.2.4 The move requested by SEPA was reviewed and due to a JRC scanning telemetry link, EITSEAL WIG, there would be issues with the turbine blade moving north and therefore closer to the link. Should this move take place, it would result in an objection from JRC. However, a small move to the north east parallel to the link would be potentially feasible reducing impact on peat whilst maintaining the required distance from the telemetry link.

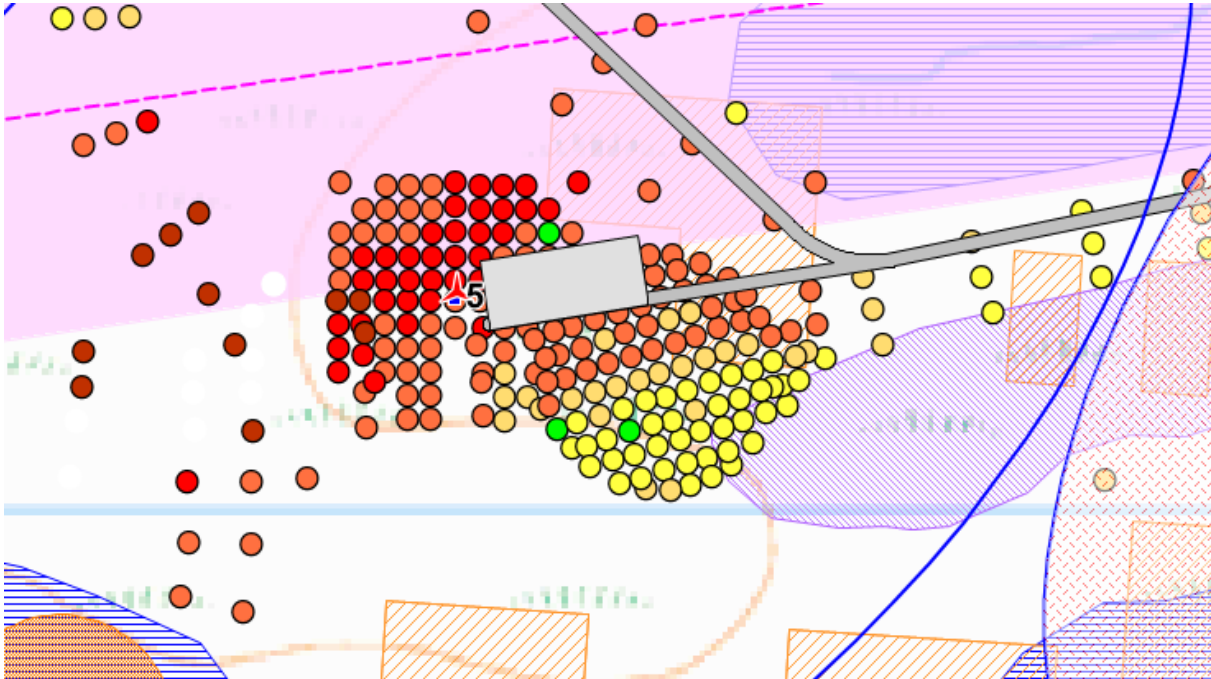
Figure 3.1b Proposed Amended Turbine Location and infrastructure



- 3.2.5 **Figure 3.1b** shows the proposed slightly amended location and orientation of the crane pad out of deeper peat.
- 3.2.6 Relocating the crane pad will also result in a small change to the layout of the access track to the north. This is because a straight section of road approximately 160m is required from crane assembly. This amendments to the road layout are identified as the maroon line. The interpolation of peat probing data suggests that peat depths in this area are lower than those to the south.
- 3.2.7 Before reaching the proposed layout, a number of other locations were reviewed (including locating the crane pad on the eastern side of the access track), however none would result in any improved saving of peat. Some options, including moving the turbine to shallower peat, actually increased the peat loss, as the move would require the crane pad to be located in deeper peat.
- 3.2.8 In relocating the crane pad and road section here, a saving of 726.8 m³ of peat (approximately 7.5%) could be achieved when compared to the as submitted scheme.

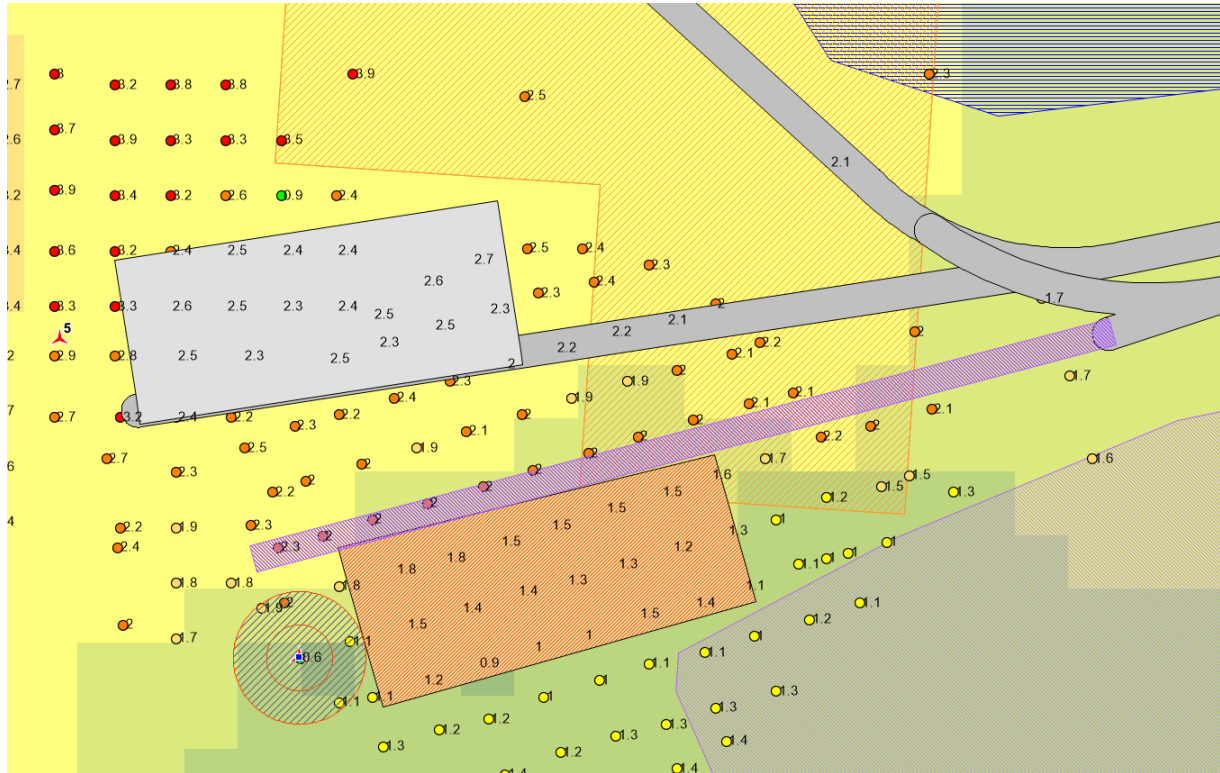
3.3 Turbine 5

Figure 3.2a As Submitted Turbine Location and infrastructure



- 3.3.1 SEPA identified that Turbine 5 (T5) is located within peat that is 3-4m deep and should be moved into shallower peat to the south-east where peat depths are 0.5-2 m (green area).
- 3.3.2 **Figure 3.2a** shows the submitted turbine location for T5, including all the relevant infrastructure constraints as well as the peat depths.
- 3.3.3 Of particular note, the areas in pink are a telemetry link, and the proposed turbine is currently located just outside the buffer zone of the link, however it is understood at this point that a micrositing restriction north would be acceptable to ensure that no further effects would occur on the link.
- 3.3.4 The move requested by SEPA was reviewed and although the peat to the south east is shallower, there are however, areas of pluvial flood hazard (orange hashed areas), and sensitive vegetation (purple hashed areas) close to the infrastructure. A move into these areas would result in a loss of the sensitive peat vegetation and may result in issues being raised by SNH.

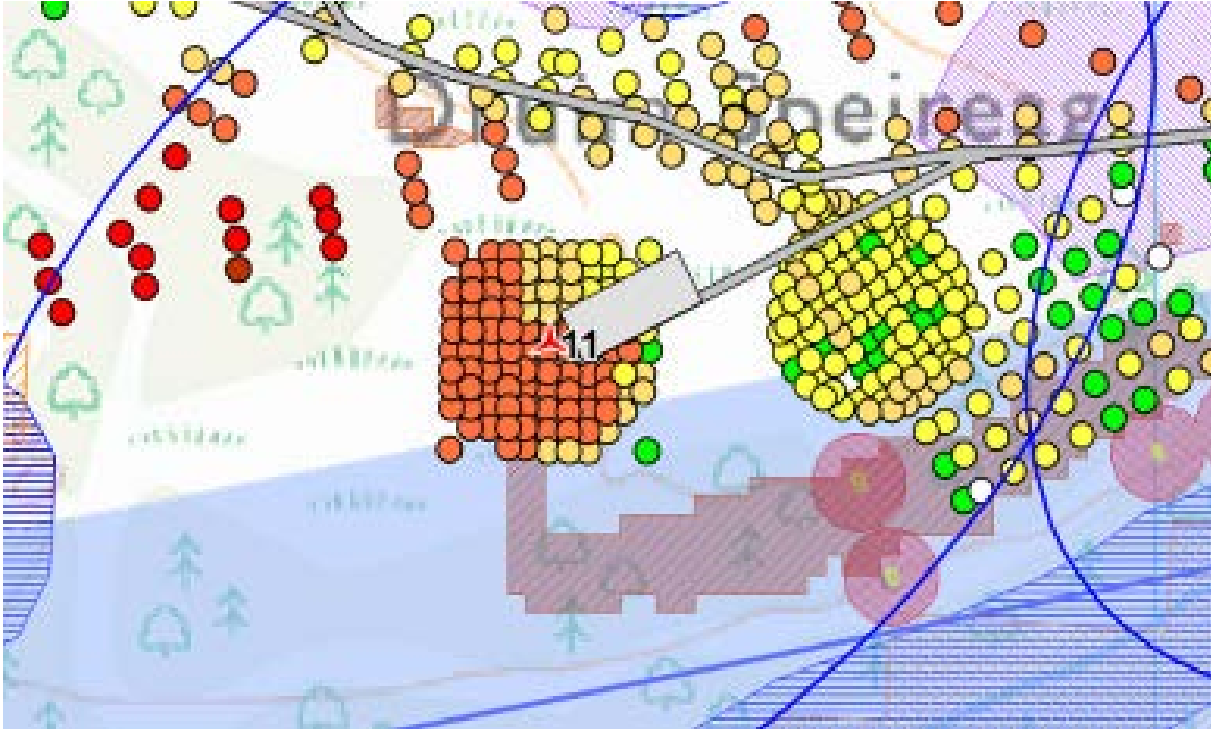
Figure 3.2b Proposed Amended Turbine Location and infrastructure



- 3.3.5 **Figure 3.2b** shows the proposed slightly amended location of T5 and re-orientation of the crane pad.
- 3.3.6 There is potential to move the turbine slightly to the south and flip the crane pad to reduce effects on peat. This would reduce the maximum peat depths to 2.5m.
- 3.3.7 Relocating T5 would result in a small change to the layout of the access track to blend into the new location.
- 3.3.8 Before reaching this conclusion, a number of other locations were identified, and dismissed as they would not result in a saving of peat, or an increase in peat loss.
- 3.3.9 In relocating the turbine, crane pad and road section here a saving of -1,711.9m³ of peat, (approximately 42%) could be achieved when compared to the as submitted scheme.

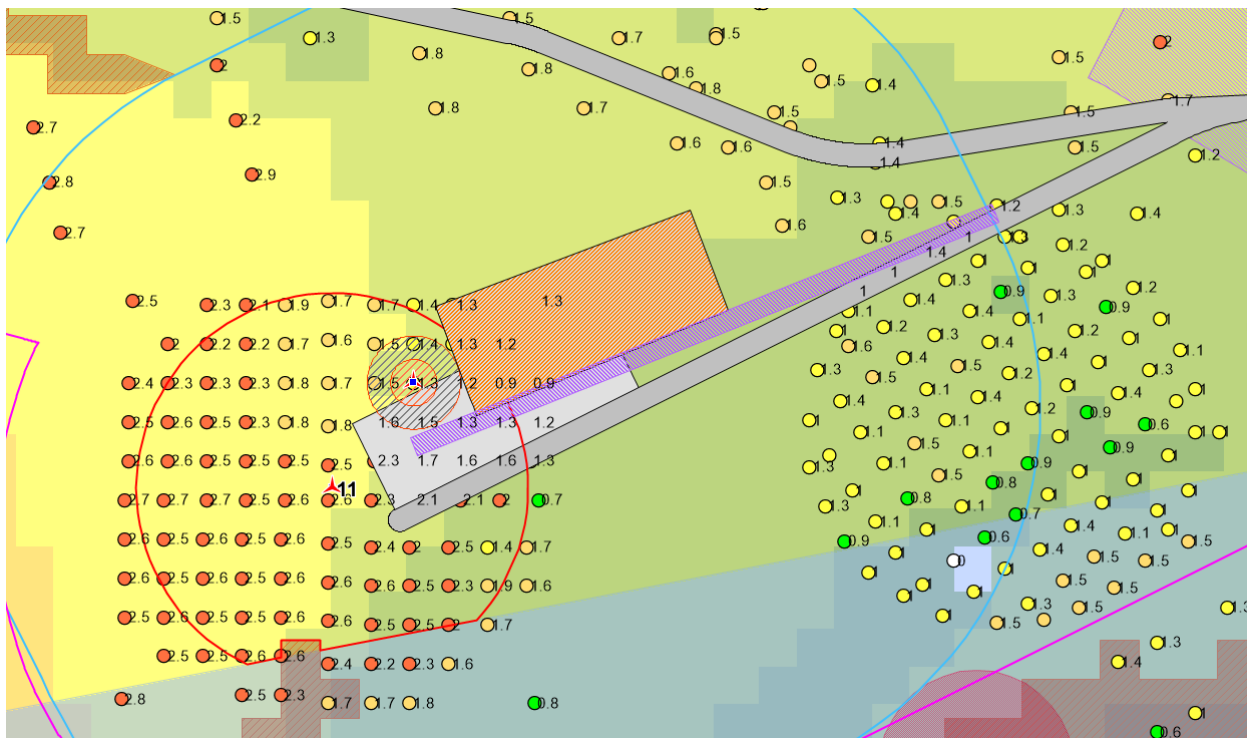
3.4 Turbine 11

Figure 3.3a As Submitted Turbine Location and infrastructure



- 3.4.1 SEPA identified that Turbine 11 (T11) is located within peat that is 2-3m deep and should be moved into shallower peat to the north-east where peat depths are 0-2m (green area).
- 3.4.2 **Figure 3.3a** shows the as submitted turbine location for T11, including all the relevant infrastructure constraints as well as the peat depths.
- 3.4.3 The move requested by SEPA was reviewed, and currently T11 is 590m from T10 and 660m from T13. Based on a wake separation of 5x3 rotor diameters (750m x 450m at 220 degrees), there may be scope to move a little north east. However as shown in the **Figure 3.3a** for Turbine 11, there is limited scope to move north east without causing significant issues in terms of wake effect, and therefore turbine efficiency, especially if T13 (see **Section 3.5**) is moved south through micrositing.

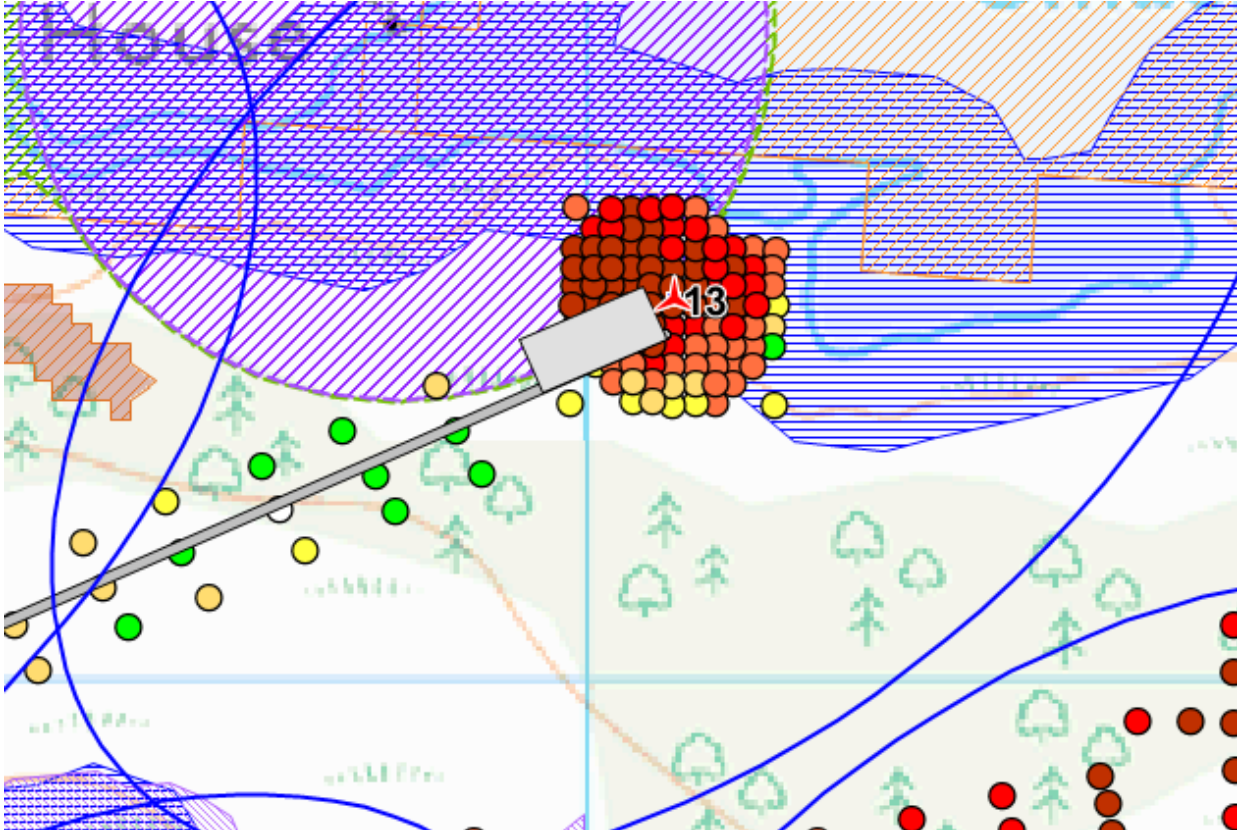
Figure 3.3b Proposed Amended Turbine Location and infrastructure



- 3.4.4 **Figure 3.3b** shows the proposed amended location of T11. This moves the turbine slightly north east, and out of peat depths of 2.6m, into a peat depth of 1.3m and moves the crane pad into shallower peat. The relocation of T11 would result in a slight change to the road infrastructure.
- 3.4.5 Before reaching this conclusion, a number of other locations were reviewed including positions further north, and dismissed as they would result in significant wake separation issues, in particular T13 as its alternative position would be south of its current position and toward T11. Moving to the south would have significant additional peat excavation issues and would not result in any peat savings.
- 3.4.6 In relocating the turbine, crane pad and road section here a saving of 412m³ of peat (approximately 21%) could be achieved when compared to the as submitted scheme.

3.5 Turbine 13

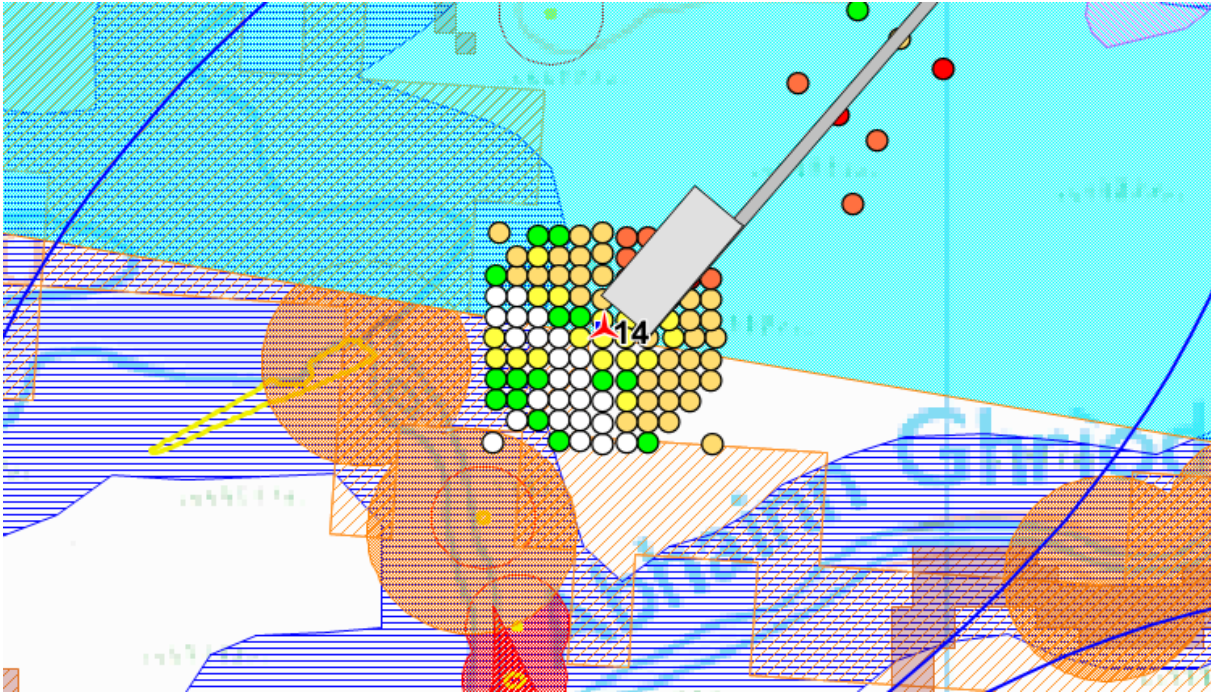
Figure 3.4a As Submitted Turbine Location and infrastructure



- 3.5.1 **Figure 3.4a** shows the as submitted turbine location for Turbine 13 (T13), including all the relevant infrastructure constraints as well as the peat depths.
- 3.5.2 SEPA identified that T13 is located within peat that is greater than 4m deep and should be moved into shallower peat to the south or south-west where peat depths are 0-2 m (green area). SEPA's preference would be to see T13 re-located into the dark green probing depths (0.5-1 m) which also correlate with the area of forestry
- 3.5.3 The move requested by SEPA was reviewed, and currently T13 is 490m from T10 and 660m from T11. Based on a wake separation of 5x3 rotor diameters (750m x 450m at 220 degrees), there may be some scope to move a little south and bring the separation buffers closer together. It may be possible to move the turbines slightly to the south and flip the hard standing to reduce effects on peat. Although this moves the infrastructure closer to the wooded area.

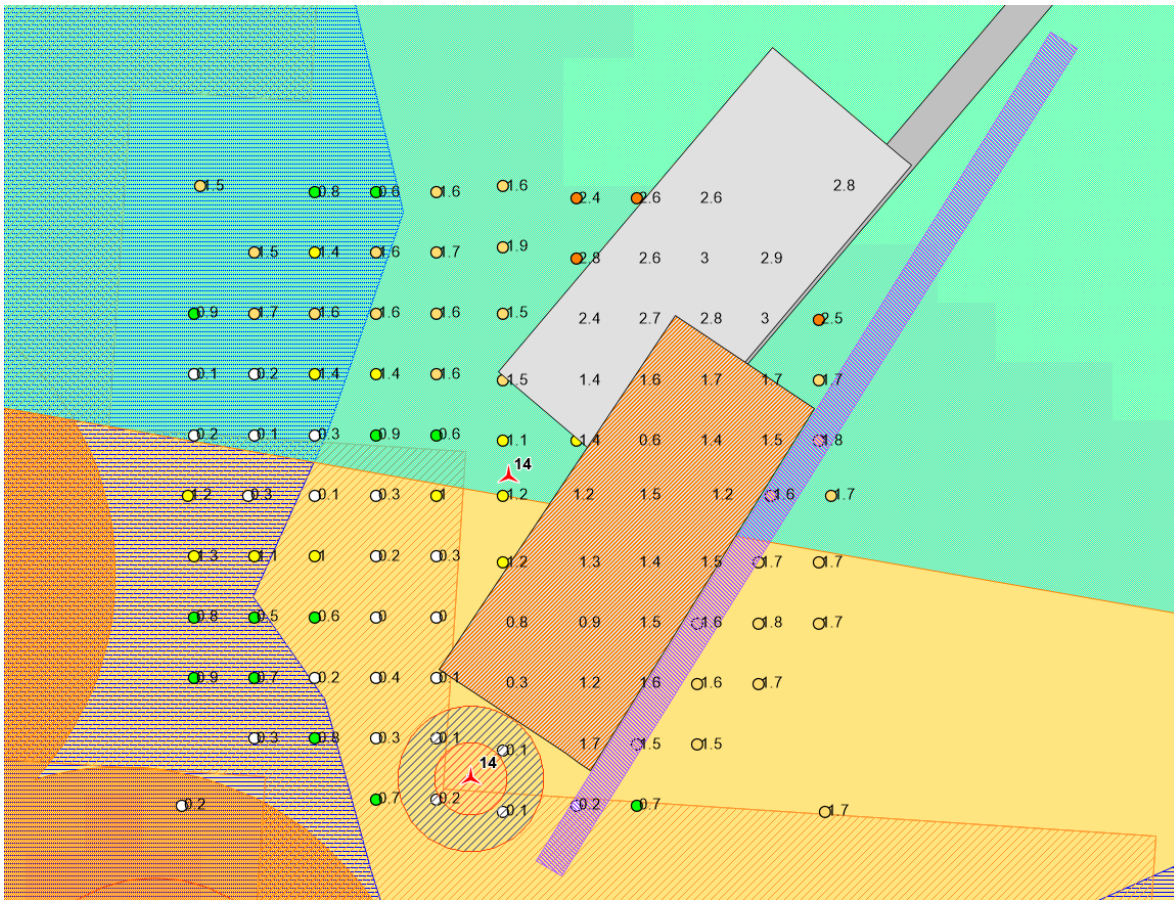
3.6 Turbine 14

Figure 3.5a As Submitted Turbine Location and infrastructure



- 3.6.1 **Figure 3.5a** shows the as submitted turbine location, including all the relevant infrastructure constraints as well as the peat depths.
- 3.6.2 SEPA identified that the Turbine 14 (T14) crane pad is located within peat 2-3m deep and should be moved into shallow peat to the south, east or west where peat depths are 0-2m (green area).
- 3.6.3 This move was reviewed and this is a highly constrained area with an area of GWDTE directly to the south-west and the diver corridor to the north-east. There are also watercourse buffers, otter holts & flood risk to the south-west.
- 3.6.4 Notwithstanding these constraints, it may be possible to move the turbine and pad slightly to the south to further minimise effects on peat.

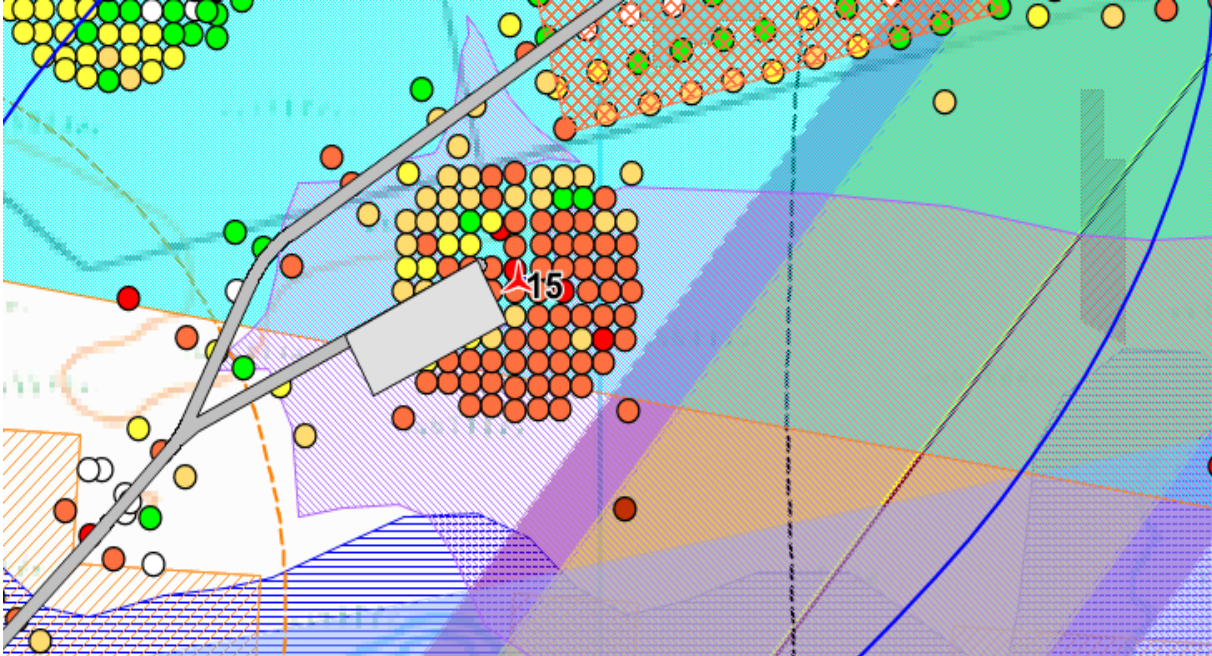
Figure 3.5b Proposed Amended Turbine Location and infrastructure



- 3.6.5 **Figure 3.5b** shows the proposed slightly amended location of T14 and its crane pad. This moves T14 out of 1.2m deep peat and into 0.1m deep peat, and moves the crane pad south into shallower peat.
- 3.6.6 Before reaching this conclusion, a number of other locations were identified but they would encroach into constraints such as sensitive otter habitat, and would not result in additional saving in terms of peat extraction. Other constraints were also identified (moderate classification GWDTEs), however this was not a determining factor on the proposed turbine and hard standing location as illustrated in **Figure 3.5b**.
- 3.6.7 In relocating the turbine, crane pad and road section here, a saving of 1,714m³ of peat (approximately 50%) could be achieved when compared to the as submitted scheme.

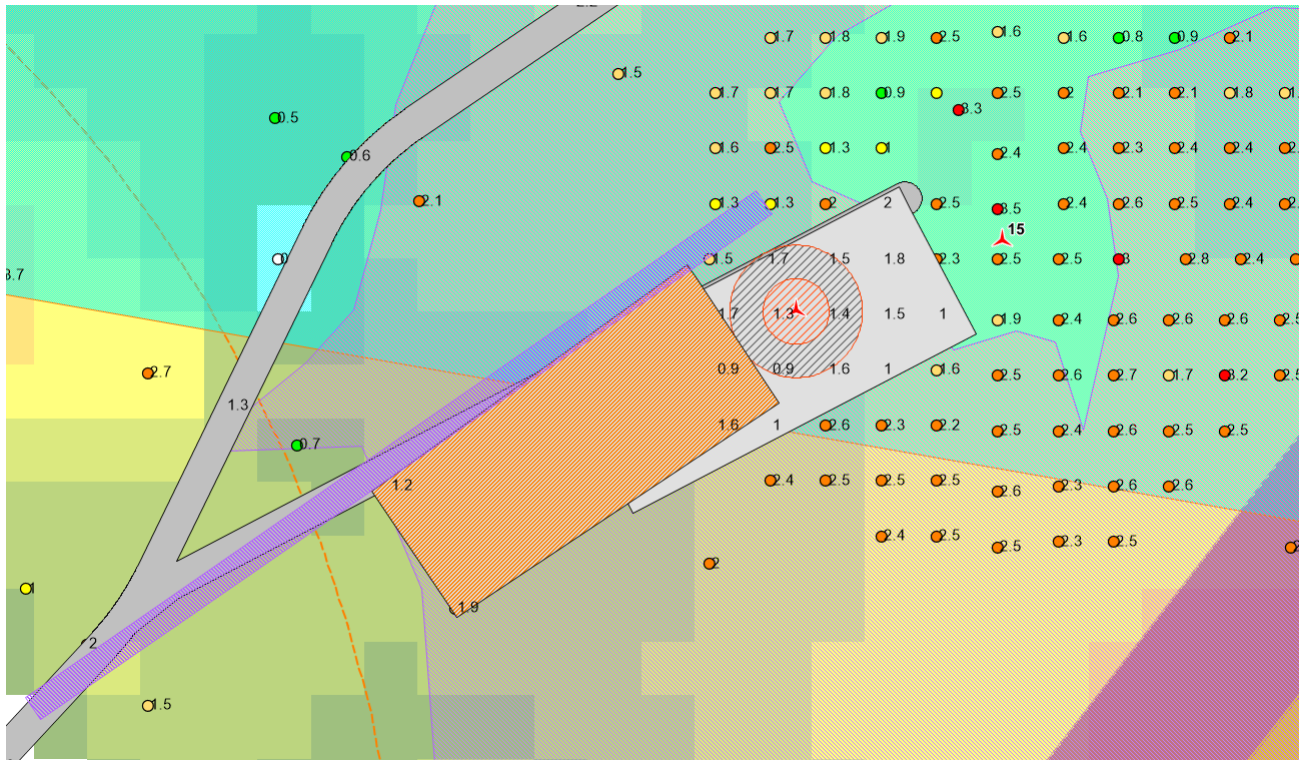
3.7 Turbine 15

Figure 3.6a As Submitted Turbine Location and infrastructure



- 3.7.1 **Figure 3.6a** shows the as submitted turbine location, including all the relevant infrastructure constraints as well as the peat depths.
- 3.7.2 SEPA identified that Turbine 15 (T15) is located within peat that is 2-3m deep and should be moved into shallower peat to the south-west where peat depths are 0-2m (green area).
- 3.7.3 This move was reviewed and T15 is located in a highly constrained area with limited opportunity for movement. Notwithstanding these constraints, there is some limited scope to move the turbine south west by approximately 10-20m, which would reduce effects on peat.

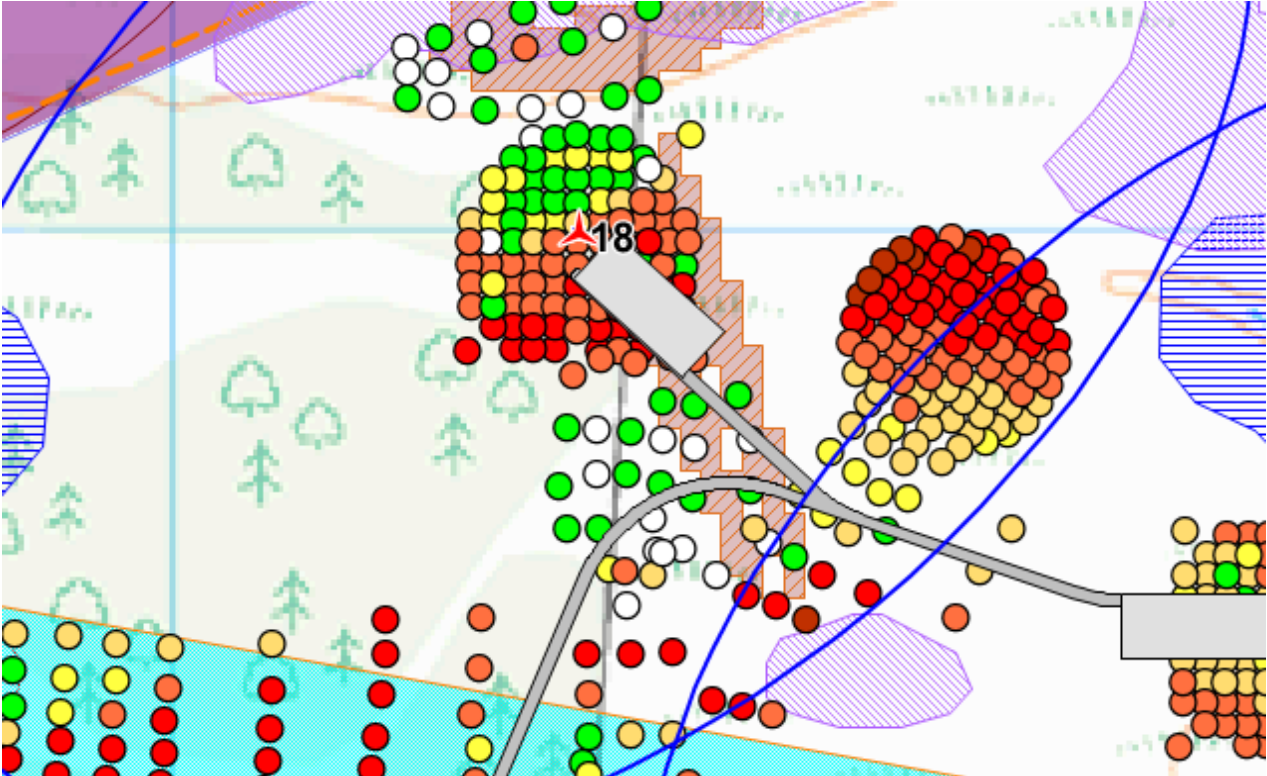
Figure 3.6b Proposed Amended Turbine Location and infrastructure



- 3.7.4 **Figure 3.6b** shows the proposed slightly amended location of T15. This moves T15 from 2.5m deep peat to 1.3m deep peat, and moves the crane hard stand back towards the south west slighting, towards shallower peat.
- 3.7.5 Before reaching this conclusion, a number of other locations were identified (including a move south of the as submitted turbine location, but north of the now proposed location). Moving the turbine south west would bring the turbine further away from the diver corridor, which would be of benefit to ornithology, however it would also bring the area of hard standing closer to protected species, located to the south west. The compromise is a moved slightly south west but without encroachment on to the protected species buffers.
- 3.7.6 In relocating the turbine, crane pad and road section here, a saving of 754m³ of peat (approximately 30%) could be achieved when compared to the as submitted scheme.

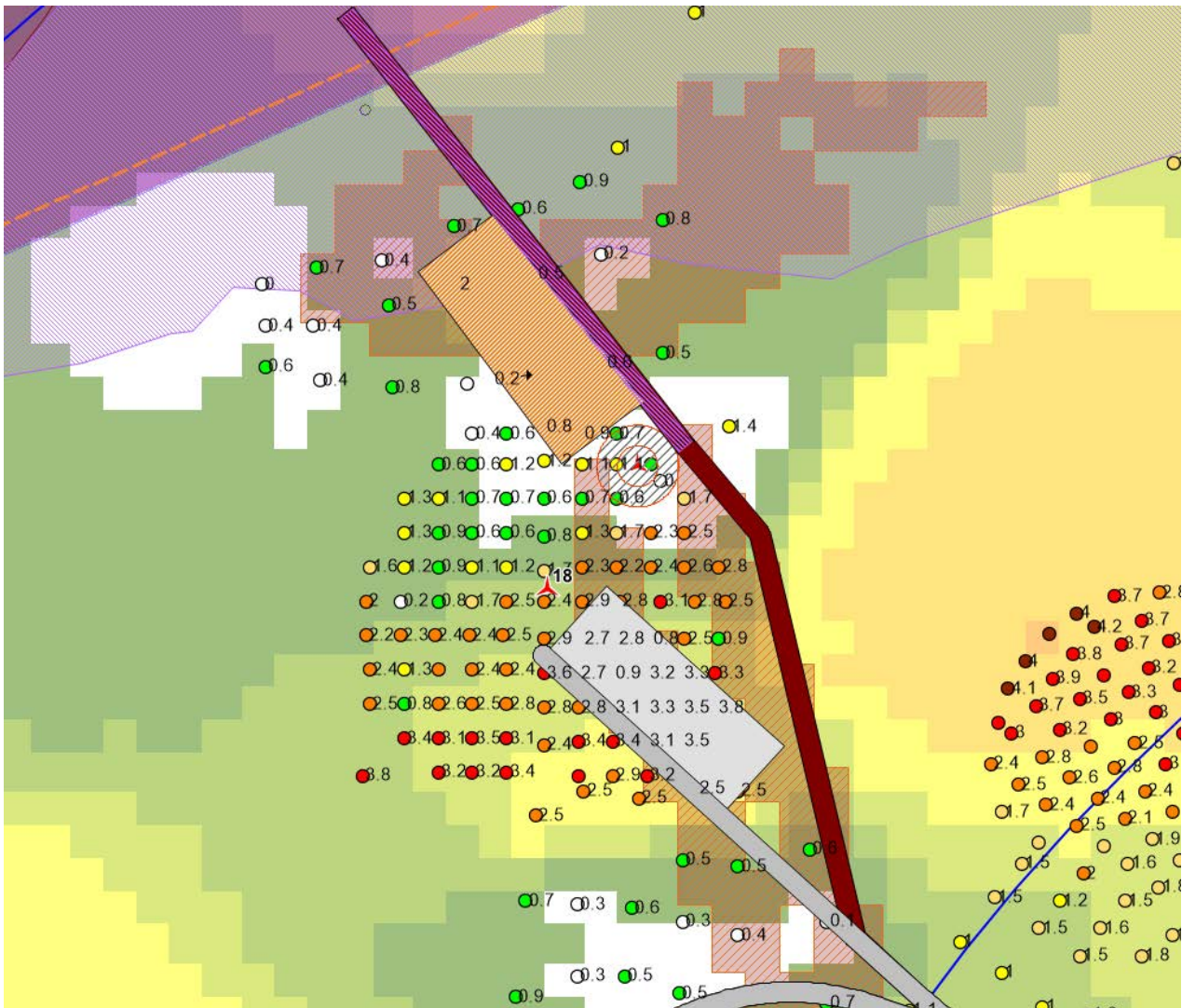
3.8 Turbine 18

Figure 3.7a As Submitted Turbine Location and infrastructure



- 3.8.1 **Figure 3.7a** shows the as submitted Turbine 18 (T18) location, including all the relevant infrastructure constraints as well as the peat depths.
- 3.8.2 SEPA identified that T18 is located within peat that is greater than 4m deep and should be moved into shallower peat directly to the south where peat depths are 0-1m (white and green area along the curve of the access track). Alternatively, the crane pad could be moved onto the shallower peat on the other side of the turbine.
- 3.8.3 This move was reviewed, and peat depths located approximately 6 – 10m to the north are below 2m and in some places, depths are below 1m. There may be scope to move T18 to the north east to this area of shallower peat and move the hard standing to the north east slightly. Alternatively, the pad could orientate 90 degrees and change the access track across the area of deeper peat. However, any movement further south would mean the turbines wake would severely encroach on the wake buffer of T17.

Figure 3.7b Proposed Amended Turbine Location and infrastructure



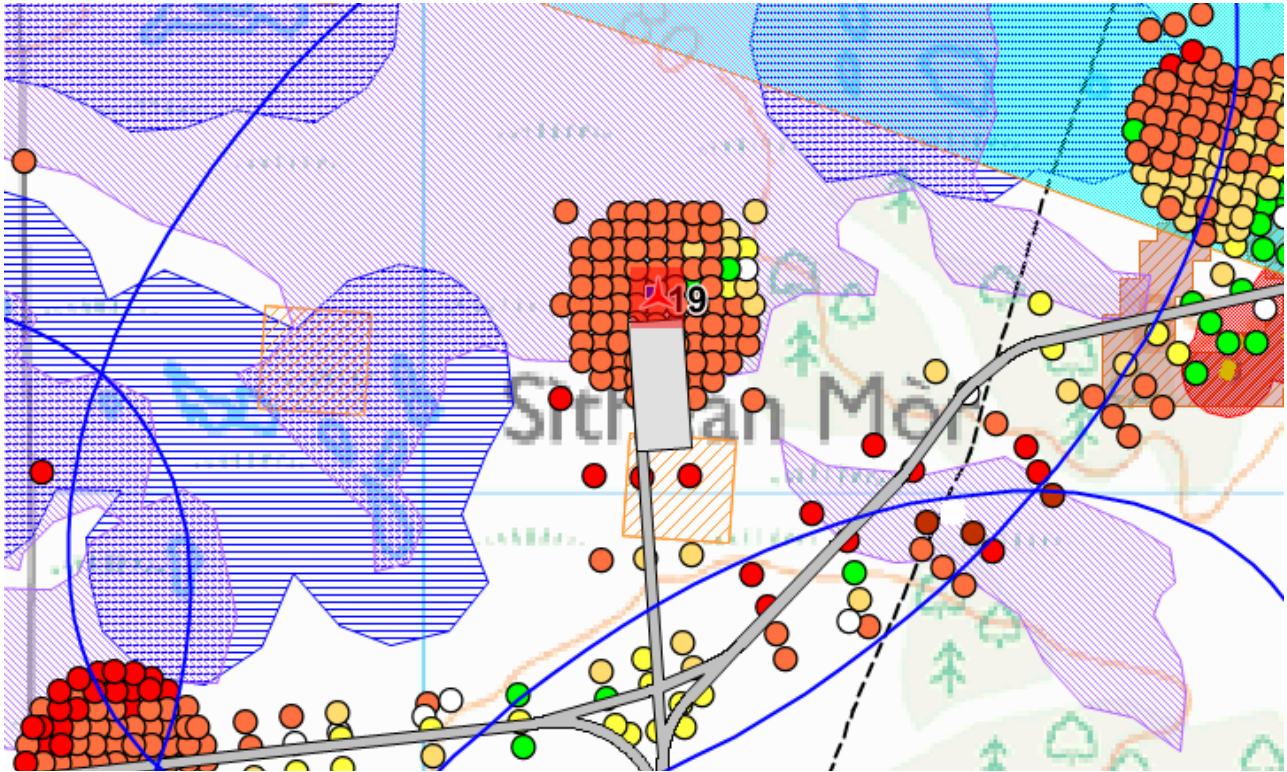
3.8.4 **Figure 3.7b** shows the proposed slightly amended location of T18.

3.8.5 As set out above, before reaching this conclusion, a number of other locations were identified and dismissed as they would result in no saving of peat, or impact on wake separation and constraints. For example, installing the crane pad on the south east side of the track was considered, however it was calculated that the proposed location shown in **Figure 3.7b** would create the most savings in terms of peat disturbance.

3.8.6 In relocating the turbine crane pad and road section here, a saving of 2,722.2m³ of peat (approximately 73%) could be achieved when compared to the as submitted scheme.

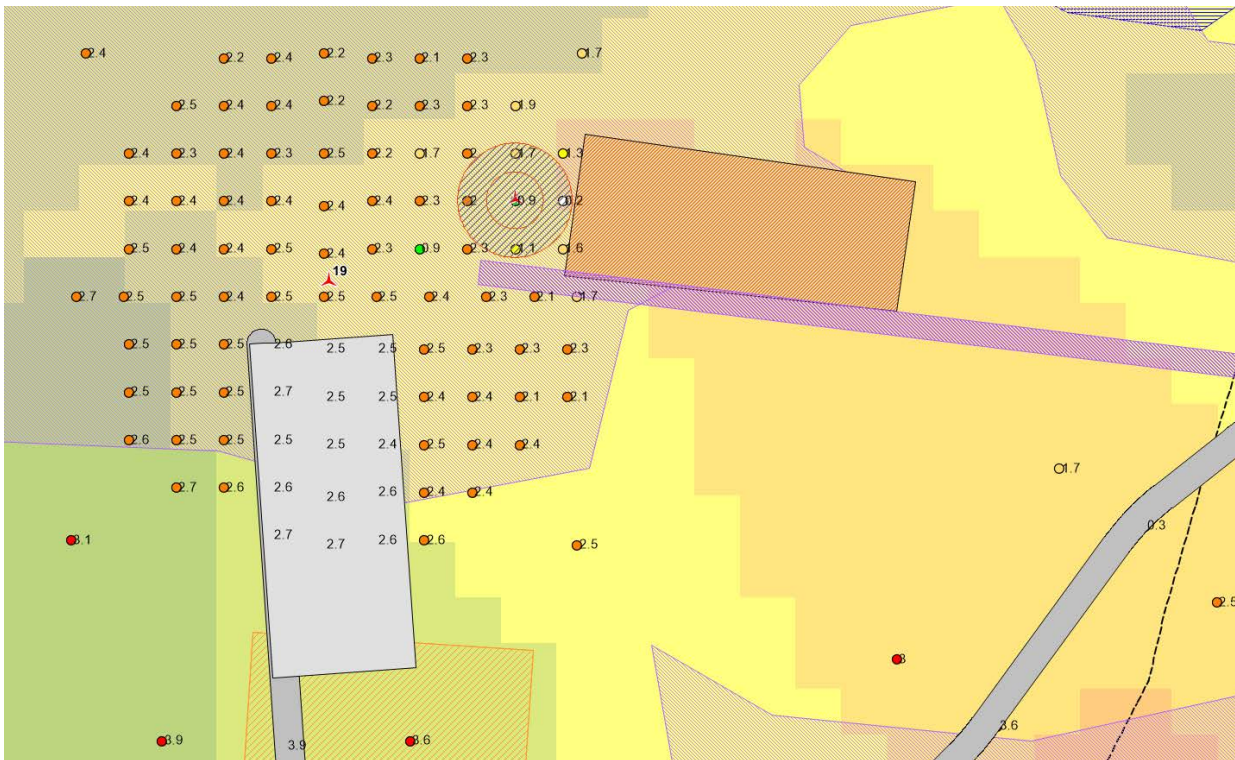
3.9 Turbine 19

Figure 3.8a As Submitted Turbine Location and infrastructure



- 3.9.1 **Figure 3.8a** shows the as submitted turbine location, including all the relevant infrastructure constraints as well as the peat depths.
- 3.9.2 SEPA identified that Turbine 19 (T19) is located within peat that is greater than 4m deep and should be moved into shallower peat directly to the south, or elsewhere where peat depths are 0.5-2m (green area just north of junction with main access track).
- 3.9.3 This move was reviewed, and the turbine and crane pad are sited on peat that is actually 2.5m and directly south there is deep peat around 3.6m in a number of locations and area of Pluvial Flood Hazard, moving to the south would majorly impact on T16 wake separation. There is an area of shallower peat to the north east approximately 40 - 50m.

Figure 3.8b Proposed Amended Turbine Location and infrastructure



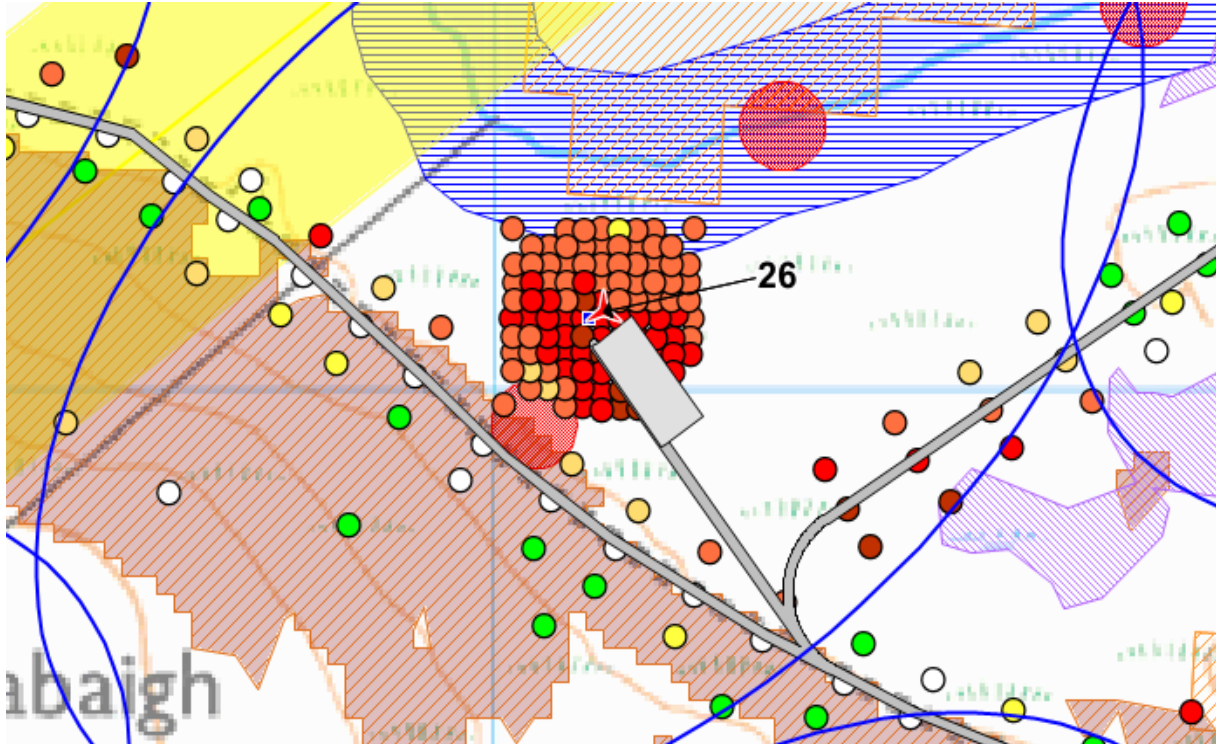
3.9.4 **Figure 3.8b** shows the proposed amended location of T19, crane pad and road section.

3.9.5 As set out above, before reaching this conclusion, a number of other locations were identified, and dismissed as they would result in no saving of peat, or impact on wake separation and constraints. The proposed location of the turbine and track would also result in a simplification of the track junction to the south of the turbine location.

3.9.6 In relocating the turbine crane pad and road section here, a saving of 1,612m³ of peat (approximately 47%) could be achieved when compared to the as submitted scheme.

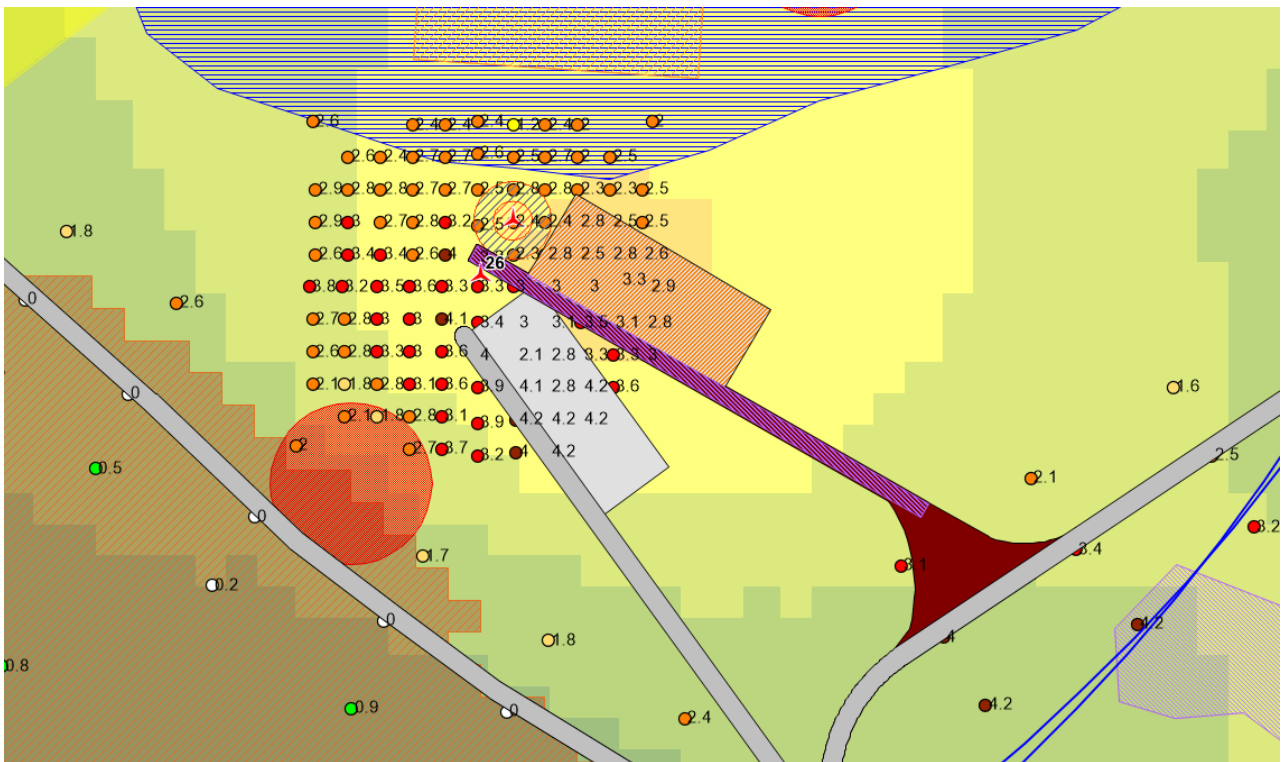
3.10 Turbine 26

Figure 3.9a As Submitted Turbine Location and infrastructure



- 3.10.1 **Figure 3.9a** shows the as submitted Turbine 26 (T26) location, including all the relevant infrastructure constraints as well as the peat depths.
- 3.10.2 SEPA identified that T26 is located within peat that is greater than 4m deep and should be moved into shallower peat. There are shallower peat areas along the access track directly south (identified in light green as individual probing point depths of 1-2m) but additional peat probing may be required in this area.
- 3.10.3 This move was reviewed and moving T26 south will impact on the wake from T23 and T24. There is an area of peat to the north east that is slightly shallower (by approximately half a meter) and it is possible to move T26 towards this area, however this would be limited by the wake from T27.

Figure 3.9b Proposed Amended Turbine Location and infrastructure



3.10.4 **Figure 3.9b** shows the proposed slightly amended location of T26.

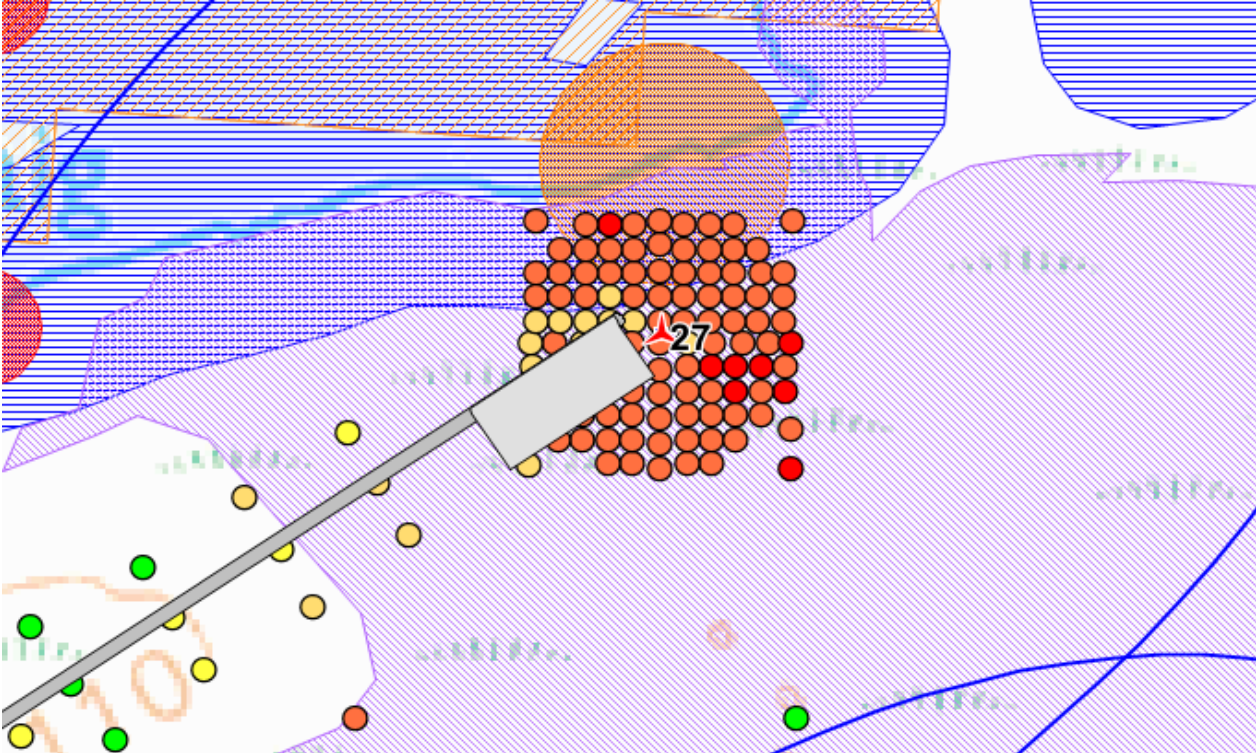
3.10.5 Before reaching this conclusion, a number of other locations were identified, and dismissed as they would result in no saving of peat or impact on other constraints.

3.10.6 Relocating T26 would result in a small change to the layout of the access track to the south. This is because a straight section of road approximately 160m is required for crane jib assembly.

3.10.7 In relocating the turbine, crane pad and road section here, a saving of 655m³ of peat (approximately 15%) could be achieved when compared to the as submitted scheme .

3.11 Turbine 27

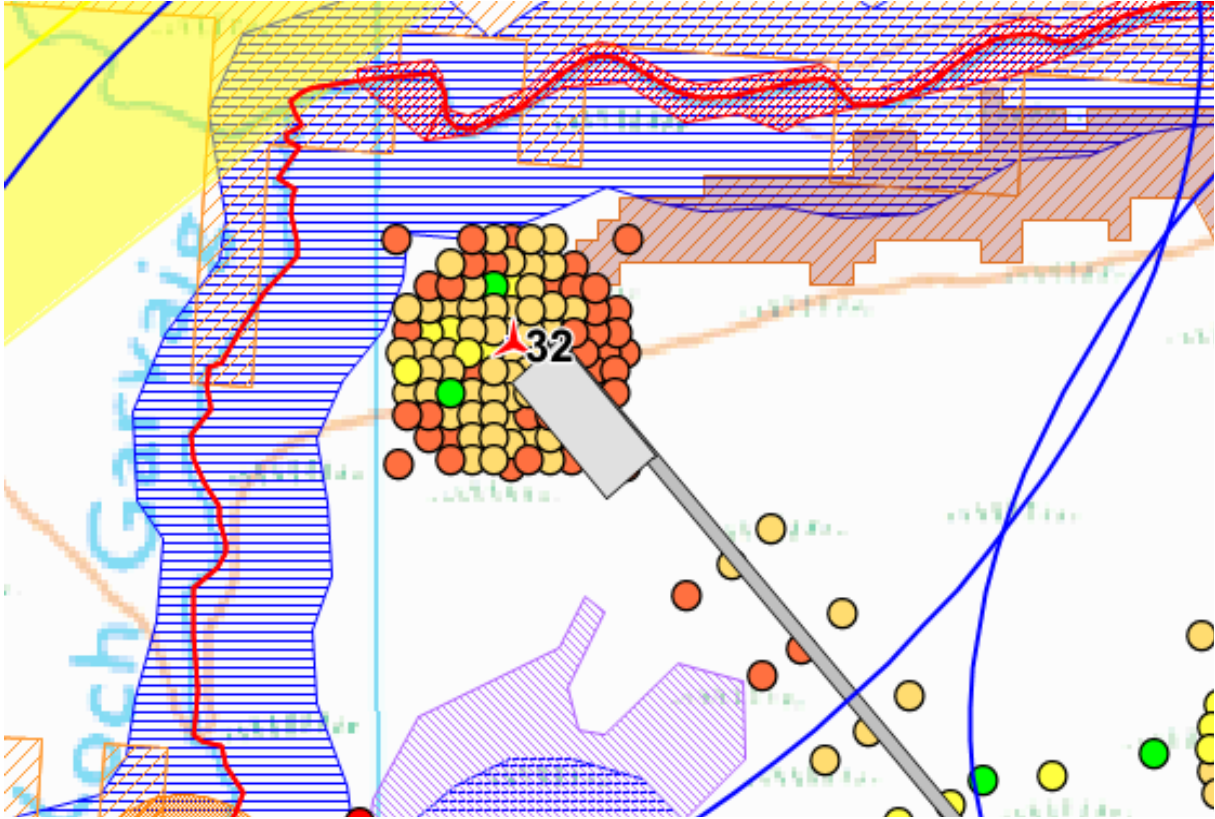
Figure 3.10a As Submitted Turbine Location and infrastructure



- 3.11.1 **Figure 3.10a** shows the as submitted Turbine 27 (T27) location, including all the relevant infrastructure constraints as well as the peat depths.
- 3.11.2 SEPA identified that T27 is located within peat that is 2-3m deep and should be moved into shallower peat south-west directly along the access track to where probing depths indicate 0-0.5m (white and dark green areas).
- 3.11.3 This move was reviewed, and T27 is currently in peat that is close to 2m, if T26 microsited north east and T27 microsited south west they would have a major impact on each other's wake separation.
- 3.11.4 However, there is some scope to move T27 slightly to the north west by approximately 10m, putting T27 into areas of peat below 2m, and slightly moving the hardstanding may further reduce peat effects slightly.

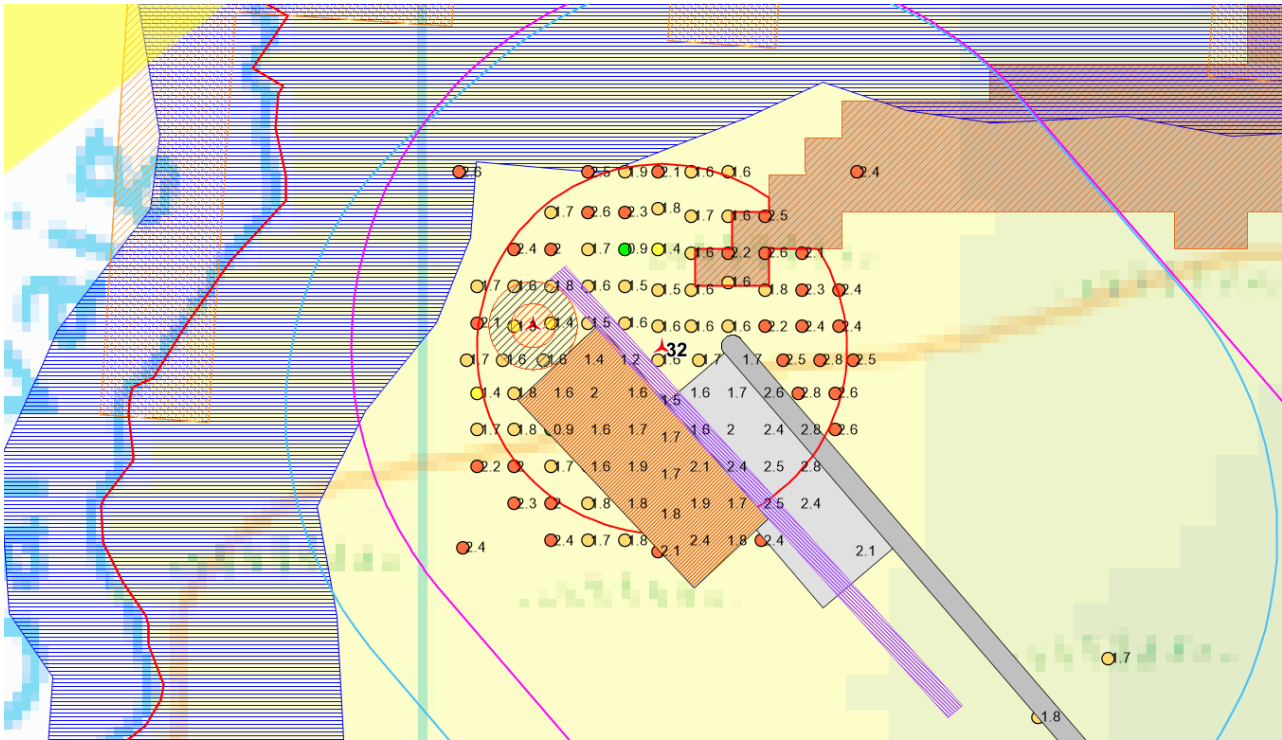
3.12 Turbine 32

Figure 3.11a As Submitted Turbine Location and infrastructure



- 3.12.1 **Figure 3.11a** shows the as submitted Turbine 32 (T32) location, including all the relevant infrastructure constraints as well as the peat depths.
- 3.12.2 SEPA identified that T32 is located within peat that is 2-3m deep and should be moved into shallower peat directly south-east along the access track, closer to where the intersection with the main track occurs, where probing depths indicate 0.5-2m (light and dark green areas). Alternatively, the crane pad could be moved onto the shallower peat on the other side of the turbine.
- 3.12.3 This move was reviewed and T32 is currently located in peat below 2m, therefore it is unlikely to be of benefit to move this turbine and moving south would further impact on the wake separation with other turbines. However, there is scope to move the turbine to the west and move the crane pad slightly west to bring the pad into areas of shallower peat.

Figure 3.11b Proposed Amended Turbine Location and infrastructure



- 3.12.4 **Figure 3.11b** shows the proposed slightly amended location of T32. This would move T32 from 1.6m deep peat to 1.3m deep peat, and would move the crane hard stand into slightly shallower peat.
- 3.12.5 The change would also result in a small change to the track alignment.
- 3.12.6 Before reaching this conclusion, a number of other locations were identified, and dismissed as they would result in no additional saving of peat.
- 3.12.7 In relocating the turbine here, a saving of 684m³ of peat (approximately 20%) could be achieved when compared to the as submitted scheme.

4. Conclusions

- 4.1.1 Consent was granted for the Stornoway Wind Farm in 2012. This consent was varied in 2016. The consented development would result in a total disturbance of peat of 306,321m³. Since consent was granted, policy to protect areas of peat habitat has been amended.
- 4.1.2 Since that time, turbine technology has greatly improved together with construction methods. An application for an optimised wind farm on the Development Site of the consented scheme was submitted in May 2019. The 'as submitted' scheme would result in a total disturbance of peat of 193,878m³.
- 4.1.3 Concerns were raised by SEPA at the scoping stage and a request was made to ensure that disturbance to peat was minimised. It was considered at the time of the submission of the application that a reduction in peat from 306,321m³ (the consented scheme) to 193,878m³ (the as submitted scheme) would comply with the concerns raised by SEPA during the scoping consultation, and would comply with the requirements of paragraph 3, schedule 9 of the Electricity Act 1989.
- 4.1.4 During the consultation stage of the Section 36 application, SEPA raised further concerns about the location of 11 turbines. They requested that these turbines be relocated to further minimise effects on peat. This activity has been carried out, in consultation with SEPA and **Section 3** above sets out where changes to turbine locations and/or areas of hard standing can be achieved. Although it is recognised that all the changes requested by SEPA have not been possible because of other constraints including protected species and effects on turbine yield, a number of changes have been achievable. These changes have resulted in further reductions to disturbance to peat.
- 4.1.5 Should the changes identified in **Section 3** above be implemented, it would result in a total disturbance of peat of 180,127m³ at the Development Site. This could potentially reduce the peat impact from the 'as submitted' infrastructure by a further 13,750.54m³ of peat, which could result in a saving of 41% when compared to the consented development.
- 4.1.6 **Table 4.1** sets out these figures for ease of reference.

Table 4.1 Comparison of peat disturbance

	Consented Development 2016	As submitted application 2019	Proposed changes 2020
Quantity of Peat to be disturbed	306,321m ³	193,878m ³	180,127 m ³
% saving when compared with the consented development 2016	0	37%	41%

- 4.1.7 As a result of these design changes, further reductions on peat disturbance can be achieved, and it is considered that the Applicant has done what he reasonably can to mitigate the effects on peat as required by the Electricity Act 1989 when balanced against the benefits of providing renewable energy.

Issued by.....
Catherine Taggart**Approved by**.....
Sue Birnie**Copyright and non-disclosure notice**

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Management systems

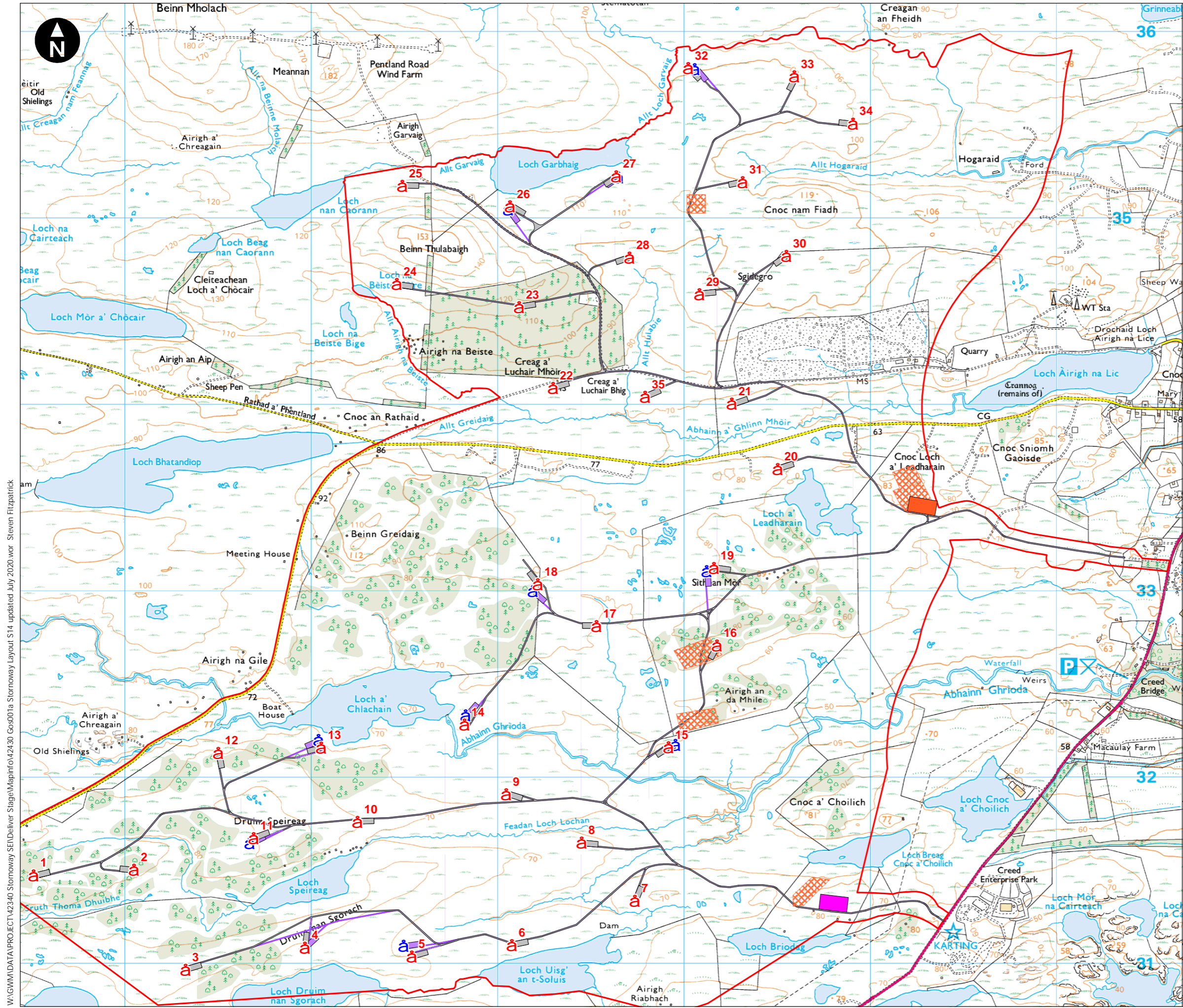
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Appendix A

Site Layout Comparison Drawing





- Key
- Site boundary
 - à Turbine location
 - à Submitted turbine location
 - Crane pad
 - Substation
 - Construction compound
 - Borrow pits
 - Onsite tracks
 - Submitted crane pad location
 - Submitted onsite tracks

0 km 1.2 km
 Scale 1:20,000 @ A3

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Stormoway Wind Farm

Figure 4.1b

Comparison between the 'as submitted layout (2019)', and the 'proposed layout (2020)'

September 2020



W:\GWM\DATA\PROJECT\42340 Stormoway_SEN\Deliver Stage\MapInfo\42430_Go5001a Stormoway Layout_S14 updated July 2020.wor Steven Fitzpatrick