Nant Mithil Energy Park, Powys.
PEDW DNS Application Ref: DNS CAS-01907-D7Q6Z1.

CPRW-RE-think Chapter 3 on

Project Description & Elements of Project (ES Ch.4 & Appendices)

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Evidence by CPRW-RE-think on:

Project Description & Elements of Project

There are unanswered questions about every aspect of the infrastructure layout and the environmental impacts. Combined with over-generalisation and postponement of information and plans until post-consent, these deficiencies prevent an informed planning decision related to the characteristics of this particular site and its location in rural Mid-Wales.

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1. INTRODUCTION

1.1. Chapter 4 describes various elements of the project supported by a number of Figures showing indicative examples of various structures, including wind turbines themselves. The description refers to Appendices 4.1 - 6 and the outline Appendix Habitat management plan, and Appendix 10.1 Transport plan. It explains that further detail will be forthcoming in various conditioned plans should consent be given.

1.2. This chapter shows that the Applicant is economical with the facts, obscuring the full nature of the development and its environmental impacts. There are unanswered questions about every aspect of the infrastructure layout and their impacts. The final Environmental Statement (ES) appears to have been hastily drawn together with discrepancies between chapters and appendices unresolved and omission of on-site development of the GGCTU line. We show that quantification is either missing or misleading and does not correspond with outline management plans. The chapter considers whether Net Benefit for Biodiversity, critical for acceptability of the project, can be established. Over-reliance on "indicative" structures and postponement of information until post-consent prevent an informed planning decision related to the characteristics of this particular site and its location in rural MidWales.

1.3. Elements which involve land take and excavation are more extensive than those listed at 4.6:

- turbines;
- borrow pits;
- upgrading/creation of the site access point and bell mouth, site access tracks, including passing places, turning heads, junctions, water crossings and drainage;
- trenches for drainage and the laying of electrical cable adjacent to the access tracks and between T6 and T13;
- temporary compounds and security cabin;
- onsite substation;
- turbine foundations with crane hard-standings and laydown/storage areas
- site entrances.

2. TURBINES AND BLADE SWEEP

2.1. The ES "*maximum parameters*" and DAS parameters "*indicative for illustration only*" show the same turbine component sizes. App. 10.2 gives a greater blade length as 81.5m (Figure 1).

Figure 1: Table 4.2 Maximum Wind Turbine Component Parameters

Table 4.2 Maximum wind turbine component parameters

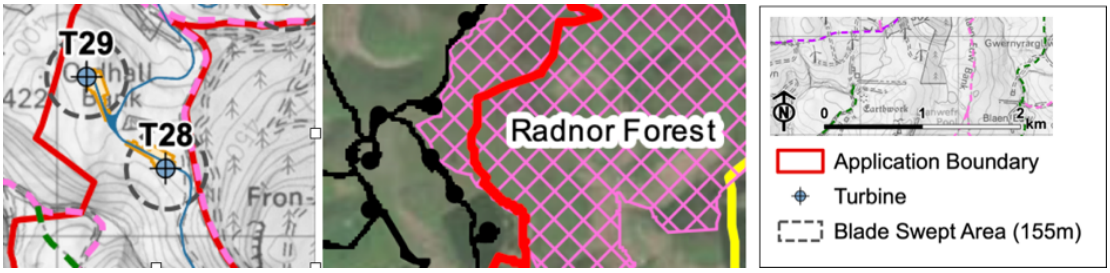
Wind Turbine Numbers	Tip Height (m)	Rotor Diameter (m)	Blade Length (m)	Hub Height (m)
T25 / T26 / T28	220	163	79.7	145.5
T1 to T24	205	155	76	130.5
T29 / T30 / T31	180	155	76	113.5

2.2. Fig.4.13 (also reproduced in the DAS) shows blade-sweep area of 155 diameter overlapping the site boundary for T3,19, 20, 23, 24, 28, 29 & 30. T8 & 26 sweep-areas touch the red line boundary. Given that the sweep area is an underestimate for T26, this sweep would also overlap the site boundary. T8 is close to plantation outside the site boundary. T19,20,28,30 &31 are also close the boundary with a forested area.

2.3. In the ES Chapter 4 review of micro-siting limitations for each turbine there are comments of the type "*needs to maintain a required bat buffer around forestry, subject to pre-construction habitat survey and any movement east needs to consider nightjar habitat*" against these marginal turbines but no mention that these areas which need buffers could be beyond the site boundary.

2.4. There should also be a strict 50m blade-tip to vegetation buffer for bats. From Figures and turbine measurements presented, T11 &17 turbine blades could over-sail the SSSI boundary and may not provide adequate buffers for bat foraging. Surely a turbine should not be placed where it would limit the height of a tree growing outside the suite boundary. Investigation of these issues is severely hampered by the persistent failure to show detailed infrastructure layout in relation to other features. (Figure 2)

Figure 2: Details from ES Figures 4.13 & 7.1



Examples of 180m turbines with 155m diameter blade sweep set back. T28 Approx.100m from site boundary according to blade sweep portrayed. T11&17 an indeterminate distance from the SSSI boundary.

2.5. In fact, the **sweep areas are wrong in Fig.4.13.** The Key specifies the swept area and does not differentiate for the 220m tip-height turbines. However reference to the scale on the map suggests the sweep diameter for each turbine displayed is around 2 x 155m.

2.6. The maximum dimensions set out above will no doubt be subject to condition, however, immediately after gaining consent at Twyn Hywel, Bute successfully applied for larger blades. If Bute were to repeat this for Radnor Forest (and why wouldn't they?) We can't be confident that the issues above would be revisited post-consent.

2.7. Despite the erroneous Fig 4.13, we believe the set back from PRoWs, particularly at T11,12,13,16,18,21,23 should be considered in detail during the examination. We also believe there should be standard set-back of turbines to avoid over-sail of adjacent property (1.1 x turbine height has been quoted in the past). We would welcome the Inspector's view on these matters.

2.8. Fig 4.13 is the only illustration of blade sweep imposed on a map and one of the few ES sources where infrastructure layout is clearly shown in relation to topics of concern, yet it has a significant error of scale. Fig 4.13 must be replaced with an accurate Figure showing the correct blade sweep for each of 30 turbines at the correct scale. Fig 7.1a should be revised with layout at a scale sufficient to impacts on the SSSI.

3. BORROW PIT SEARCH AREAS (our assessed area — of bases only —3 ha. Surface area may be twice this –- 6ha)

3.1. App. 4 states that the borrow pit search areas do not represent the anticipated scale of the borrow pits. App. 10 states "*The onsite access tracks, compounds and crane hardstands will be constructed from crushed rock, and it is anticipated that 100% of the material would be obtained from the Site via the proposed borrow pits or when creating the cuttings and other earthworks. As a robust assessment however, it is assumed that 50% of crushed rock will be imported to the Site*." Also that "*it is currently proposed that all sand and aggregates required in the production of concrete on-site will be sourced from local suppliers, as opposed to from on-site borrow pits, therefore ensuring a robust assessment*." This may be a robust assessment for traffic impacts but it is the converse for on-site quarrying impacts.

3.2. We have no reliable information on the extent to which borrow pits will be used but rough calculation of the potential combined volumes of the search areas (Figs 4.8a-c & App. 4.1) suggests they could furnish a volume of stone sufficient for the ES estimate of approximately 44,000 m^3 for access tracks, substation and construction compounds. Borrow pit use is projected to last 8 months. It is preceded by collection of groundwater data from 3 wells in each of 3 borrow pit sites to allow satisfactory

drainage arrangements but no time period or weather circumstances are specified for this critical data collection. BP3, with a base covering over 1.7 ha, and which is destined to contain a temporary construction compound 1 ha in area, is halfway up the northwestern slope of Great Rhos in a particularly challenging location.

3.3. Given the economic incentive to use borrow pits until exhaustion, we anticipate disturbance from blasting which "*could be required*" ES 9.5 and other noise as well as dust associated with quarrying. Blasting could reach up to 56dB, which is unpleasantly loud, at the nearest NSR. The ES also states that "*The extent of any blasting requirement, however, cannot be determined until intrusive site investigations are completed*." By then it will all be in the hands of the developer (who may not be Bute).

3.4. **ES.10.3** gives the Land Access Team's scoping response "*If borrow pits are to be used for quarrying stone for the access tracks, the locations need to be sited away from the public rights of way to ensure that gradients and surface levels are not changed*' and the Applicant's comment about this "*Borrow Pit Two is located in proximity to but is set away from PRoW 141/1252/4 (BOAT)*." Fig4.1c shows this borrow pit overlapping the BOAT as do all other plans where it appears.

3.5. Action needed**:** Clarity about borrow pits use, drainage and relation to PROWs.

4. TRACKS WITH CABLES AND DRAINAGE (we estimate these cover well over 30ha)

4.1. DAS Fig 1 says tracks are 4.5m wide. ES Fig 4.4 says tracks are 4.5m wide with no mention of cabling and drainage. App. 10.1 says "*The access tracks will generally be 5.0m in width*" but ES Ch.4 says on-site access tracks are 5.5m without cabling and drainage. Ch.4.50 says "*In total, approximately 23.61 km of track will be required for the Proposed Development. Approximately 21.81 km of new track will be constructed and 1.8 km of existing track will be upgraded for the Proposed Development, as shown in Figures 4.1a-h. The nominal running width will be approximately 5.5 m and existing tracks will be upgraded to this width (approximately a 2.5 m increase in width). Track widths may be wider in some sections to accommodate bends in the track alignment and to include passing bays. An indicative access track arrangement is shown in Figure 4.10*." 4.51 says " *If both the cabling and drainage are located on the same side of the access track then a 10 m verge on one side will be required*." so, in this case, the minimal width of ground disturbance for infrastructure is 15.5m.

4.2. We do not know how much track this 10m verge requirement applies to. There is no explanation of why and where a width of 10m which is over and above the sum of cable trench and drainage ditch is required for cables and ditches on the same side of the road. Where the cabling and drainage are on opposite sides of the track, the allowance for each is unclear (Figs 4.5 & 10.) We understand that a 1in 2 slope is too steep to be acceptable as SUDS. This means ES Fig 4.10 and the corresponding App.

11.2 figure need revision. Fig 4.10 seems to show that a 5m track has two 0.5m shoulders, increasing the track construction width to 6.0m before cables and drainage are added. It is also unclear whether such drainage ditches are acceptable on steep slopes such as the approach from the South to T25 so that alternatives (see ES11.100) requiring greater soil areas and volumes will be needed.

4.3. In addition to cables alongside tracks there is a 50m wide corridor for cables connecting T6 with T13 stretching about 1.6km (area 8 Ha). The second cable trench between T20 and T26 shown in the PAC documents has since been dropped adding further complication to construction of the track to T25-T31(see below).

4.4. The volume of soil in a trench 0.5m wide and 0.5m deep along 23m of tracks, is 5750mcu. Cable trenches are over 1m deep and over 1 wide, therefore representing well over 20,000mcu volume of disturbed soil. This is just the cable trenches, ignoring drainage ditches, track-building, cut and fill and the working area either side of the track to achieve the depth required. The soil strip volume for access tracks is estimated at 19,262 m^3. Presumably this is intended to cover drainage and cable trenches and any backfill is deducted but we simply don't know.

4.5. Action needed: clear information, eliminating internal contradictions, about areas of permanent land-take and surface area disturbance with arrangements for cables and drainage and protecting PROWs, noting that we do not have previous experience of windfarm construction for turbines this size.

5. STEEP GRADIENTS, CUT AND FILL, WATER-CROSSINGS

5.1. There is no discussion of difficulties presented by site topography. Extensive cut and fill will be required for tracks. We note that the soil depth is between 0 and 15cm throughout most of the infrastructure layout area so that most construction and all cut and fill will require much excavation and/or movement of bedrock. Three areas of layout stand out as particularly problematic. Our measurements are rough, using the key scales on **ES** figures, giving rise/run X 100.

5.2. **Area 1: Track from T15, beyond junction where tracks diverge to T21-24 and T25-31: Cefn y Grug to T25 (Figure 3)**. To be used by all traffic for construction of T25-31 (T27 has gone). These are by far the worst inclines and also involve crossing a brook which is a site of riparian restoration according to the OHMP. Over 950m:-

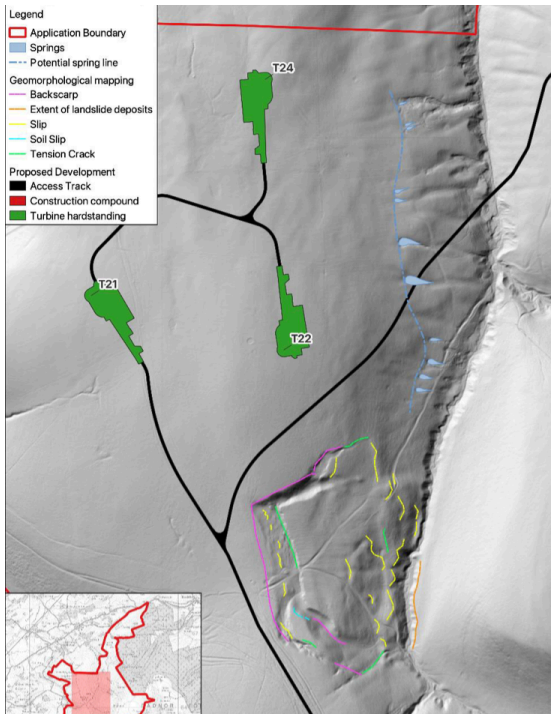
- descent from 460m to 340m in roughly 600m ***average 20%***
- steepest descent 60m in 200m ***30%.***
- Merwys Brook crossing including cable trenches - **ES Table 7.1** (responses to statutory consultees) says: "*Details of watercourse crossings have been included in the* ***OHMP*****"** (**Appendix 7.10**) but they have not. **Appendix 11.02**

(Outline Drainage Strategy) simply identifies this as Crossing 3 – a "*defined watercourse channel*".

- ascent from 340m to-420m (at T-junction T25-26) over roughly 350m ***23%***
- the steepest ascent from the stream bed is 40m over 100m ***40%.***

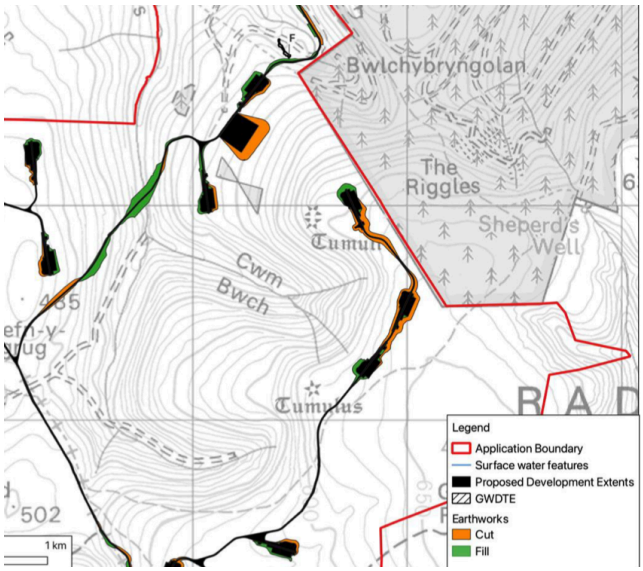
Figure 3: Area 1 — track from T15, beyond junction where tracks diverge to T21-24 and T25-31: Cefn y Grug to T25

Figure 4: App. 11.6, Fig 5.6 soil stability



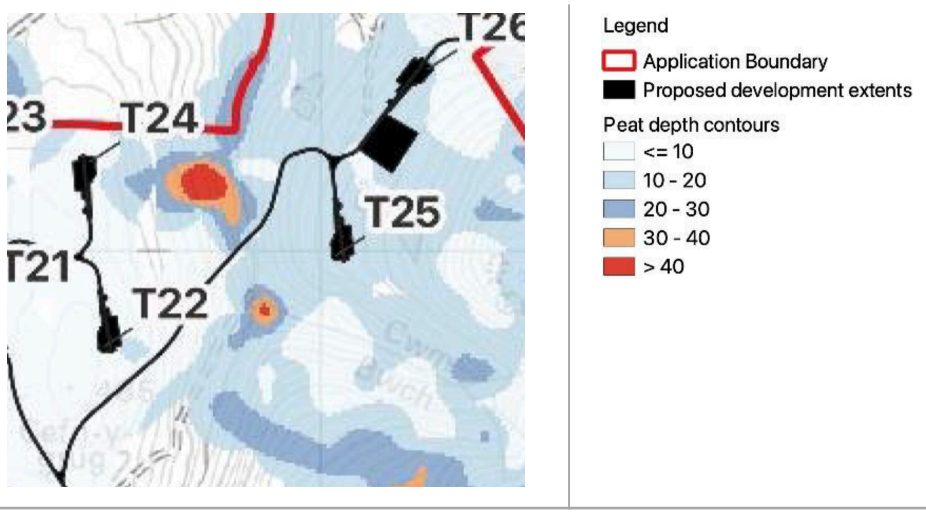
App. 11.6, Fig 5.6 shows there is a soil slip across this descent and a tension crack to the south.

Figure 5: App. 11.2, Fig 2.6 Cut and Fill



This series of Figures is the clearest indication of cut and fill in the ES. Roughly 700m of fill are shown descending about 40m and ascending about 30m with a continuous fill on both sides of the track for 300m over the brook crossing.

Figure 6: App. 11. Peat Map



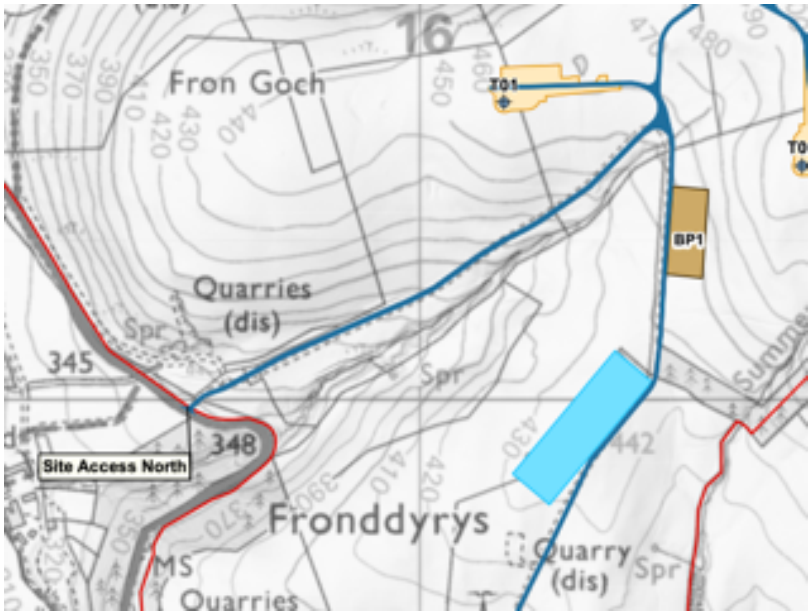
The OSMP shows this fill will be in a vulnerable peat area**.** The **ES** presents figures of an "*indicative watercourse crossing*" and an "*indicative track*" which do not explain:

- how a transporter for 80m blades will negotiate the stream crossing in Cwm Merwys;

- how the extreme-weather water flows in the brook will be addressed;
- how drainage will be achieved at steep gradients;
- how biodiversity and valuable soil impacts are addressed;
- how track stability and safety will be addressed.

5.3. **Area 2:** Site Access North track to T junction with track between Borrow Pit 1 and T1. Although this is less steep than Areas 1 and 3, every vehicle will have to arrive via this.

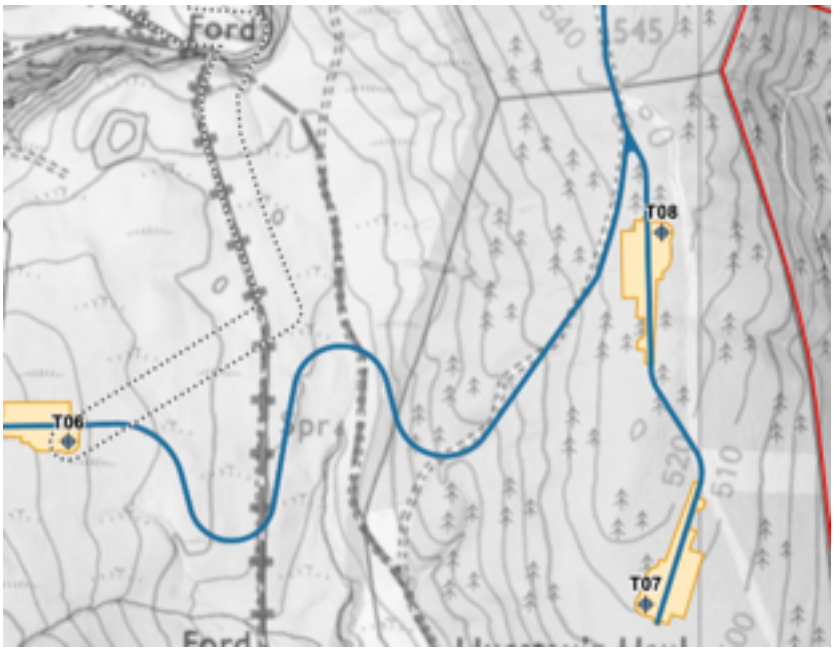
Figure 7: Detail of Site Access North



Ascent roughly100m over 800m: average incline: ***12.5%,*** steeper to north with no cut/fill.

5.4. **Area 3:** Track from T6 to T8. All traffic for construction N of T6 will have to use this.

Figure 8: Detail of track T6 to T8 junction



Ascent 80m over 500m: ***16%*** with almost no cut/fill.

5.5. Action needed. Further detailed information about the construction of tracks and trenches with volumes and areas required for cut and fill, and drainage. Extra attention should be given to these three steep areas and to water crossings, allowing for extreme weather conditions.

6. TURNING HEADS AND 130 PASSING PLACES (area unknown).

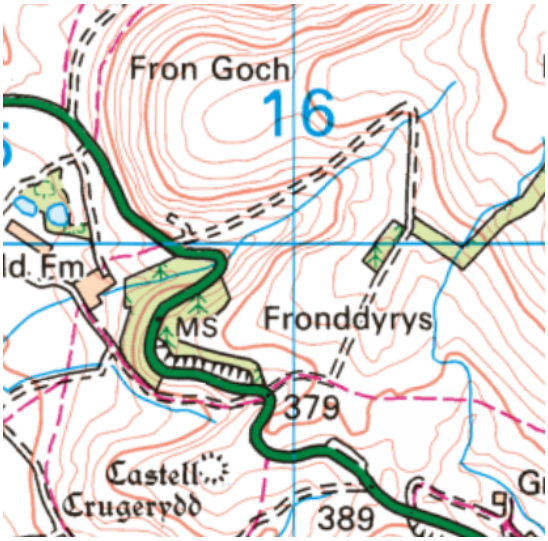
6.1. No measurements or indicative drawings are given. We do not know if they are for HGVs or may need to accommodate AILs. They can't be identified on Fig 4.1 b-h but, in order to quantify the need for passing places, we assume the Applicant is in possession of more information than we can see. There are said to be no passing places on common land which eliminates 4-5km of track. Therefore there would be 130 passing places over 18-19km/of access track elsewhere with 6 or 7 passing places per kilometer - on average one each 150m. This is significant increase in land-take with surface disturbance. If passing places were 6mx 30m in area they would cover 2.3 ha.

6.2. Action needed. Justification for passing places and areas of permanent land take and surface disturbance for these.

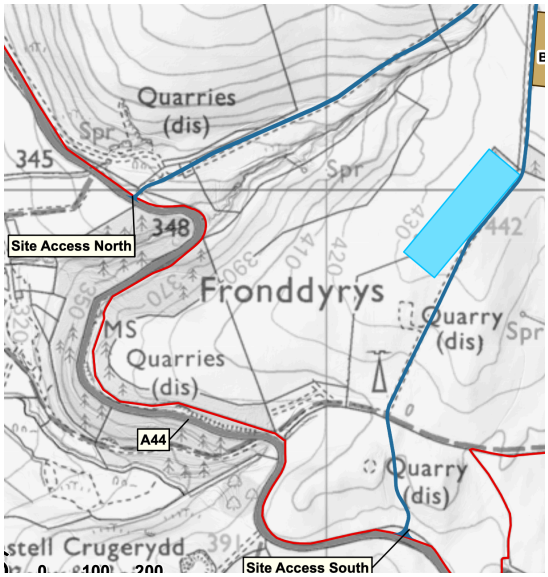
7. CREATION OF SITE ACCESS POINT INCLUDING SECURITY CABIN (area unknown)

7.1. The visibility splay plans in App. 10.2 and Figs 4.9a and b. give little clue as to the area of hard standing required for the bellmouths and there is no description of fencing, gates or modification to the A44. The drawings are all marked "*not to scale*". A security cabin has been added since the PAC ES: *"4.36 A temporary security cabin is proposed at whichever Site entrance is implemented, to monitor, control and record the access and egress of vehicles and personnel onto and off the Site during construction of the Proposed Development, shown in Figure 4.1a'.* But it is not shown in Figure 4.1a. and no dimensions are given.

Figure 9: ES description of how the two potential site access points were chosen

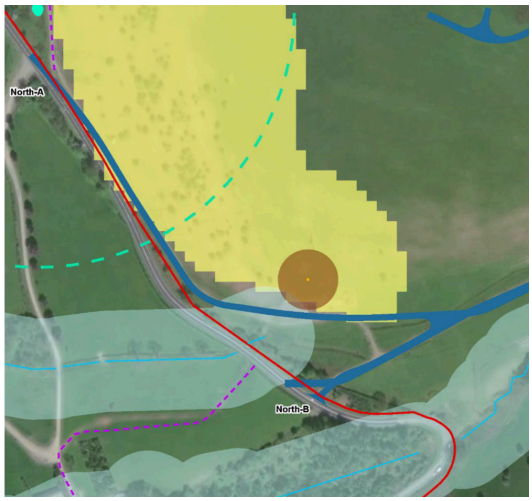


From current OS map



From Fig1b

ES Site Access South (B chosen)



ES Site Access North (B chosen)

7.2. The ES insists that only one option will be chosen depending on the UK port of turbine delivery: either Swansea or Birkenhead. We note that Powys responded to the PAC 10.71 "*The possibility of utilising two points of access should not be ruled out at this stage*". We do not feel confident that only one site access would be constructed if consent were granted. Site Access South (formerly Site entrance B) was chosen over former Site entrance A which would destroy much of a regionally important geodiversity site (RIGS). Site Access North, was chosen from 2 former possible northern entrances, A & B.

7.3. Both options are on a stretch of road with multiple bends causing difficulties for approaching traffic. Although the AILs will all come from one direction, the local road network is sparse so that HGVs are likely to come from both SE and NW and there is no way that negotiation of these bends by a proportion of the HGV traffic can be avoided. The main site approach form Site Access North is steeper (see above) and coincides with the A44 crossing of the overhead electricity export line. The Grove Villa Heart of Wales Line railway bridge over the A44 accommodates 4.4m vehicles and the "width" (diameter?) of a Nordex N163 tower component is listed as 4.8m (App. 10.2) casting doubt on the basic feasibility of Site Access North. Site Access South is immediately opposite Crug Eyri ancient monument and requires an entirely new exit from the A44.

7.4. There are major impacts of either site access. The lame description in ES3.40-4 provides no indication of the visual impact of either access. Construction impacts and safety implications are not addressed. The ES apparently regards the fact that planning permission is sought for two entrances as an excuse for not describing either.

7.5. Action needed; Further information is required about the design and environmental impacts of each access. Transparent discussion of feasibility of Northern Access. Guarantee that two access points will not be allowed.

8. TEMPORARY COMPOUNDS (our assessed area 3ha)

8.1. The PAC consultation ES included 2 construction compounds. Chapters 3 & 5 of the current ES have not been altered but Chapter 4 describes 3 construction compounds and a new security cabin. "*Three temporary construction compounds are proposed*". This is because the substation construction work-area has been separated off as a third "*temporary construction compound*". The building of 29,000m^2 of construction is modelled to produce 2,299m^3 of soil, suggesting that only an average depth of 8cm of soil is stripped which, we believe, casts doubt on the modelled quantities.

9. ON-SITE SUBSTATION (our assessed area 1ha)

9.1. This is described as on a platform which is difficult to appreciate from Figs 4.6a & b. VP3 shows a large gantry marked as 20.8m high. The 3rd construction compound is now separated out from the from the substation but on the same site. The significant visual impact of the substation will be made considerably worse by the steel pylons discussed below.

10. TURBINE SITES (ES estimate 4.6ha for turbines and crane hard-standings, 6ha for temporary turbine work excluding tracks.)

10.1. Turbine foundations are 25 m in diameter with a concrete depth of 3.5 m and overlay of depth approximately 0.5 m. Crane hard-standings and laydown/storage areas: from Fig 4.4 indicative areas, the permanent crane hard-standings are 1,045 m^2 per turbine (3.1ha for 30 turbines). But App. 11.2 - 4.5.4 says "*For each turbine area a permanent impervious area of approximately 2,015* m^2 *is proposed (0.2015 hectares*). This gives a total of 6 ha, considerably greater than the ES estimate. Fig 1 included in Fig 4.4 details another 2,012 m^2 temporary land-take for each turbine –- another 6ha for 30 turbines.

10.2. The Outline Drainage Strategy says the orientation of these large areas is to be decided later and so we do not know how they will relate to PROWs, valuable soils or habitats.

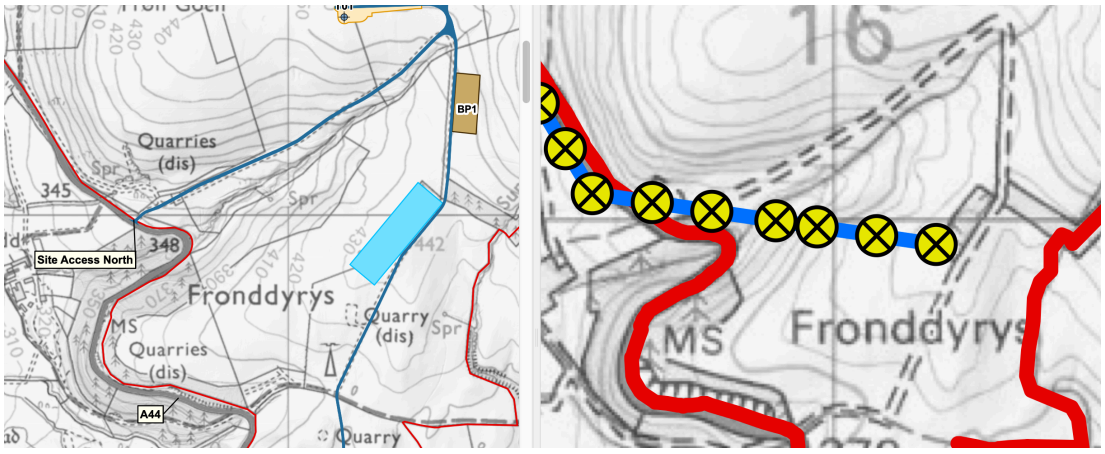
10.3. All the above structures require sustainable drainage both during construction and operation. No details are given in the indicative plans except for the track plan.

10.4. Action needed: Internal consistency between documents, a clarification of the area of temporary land disturbance. Adequate drainage arrangements to be specified and added to areas.

11. GGCT-U OVERHEAD LINE (OHL) – DNS CAS-02379-G1Z1J0 – GREEN GEN TOWY-USK PROJECT

11.1. This is described in the scoping report on the PEDW website with steel lattice pylons throughout but, in response to public outcry GGC has undertaken to support the portion of export line from Nant Mithil to Aberedw Hill on wooden poles "*typically 12.8m high and 127m apart*". The onsite portion from the Nant Mithil substation to the A44 is shown below descending a steep gradient to the A44 at Site Entrance North where it crosses the A44 (no details given). The construction of the OHL is only discussed in order to insist that it a separate planning application and does not require consideration.

Figure 10: Site Access North and Overhead Pylon line (GreenGen publicity)



11.2. There will be visual impact, habitat impacts, traffic impacts, construction noise impacts, safety considerations and possibly telecommunications impacts. Construction would coincide with turbine construction. The wind energy development cannot operate without electricity export and the 132 KV line is only justified by the wind energy source . The OHL is past the scoping direction phase and should have been scoped in for cumulative assessment. The Nant Mithil Application should not have been submitted without the cumulative impact of the entire GGCT-U project. Irrespective of this, the ES should have fully addressed the onsite impacts of 500m of export line.

11.3. We note that Condition 35 of Twyn Hywel Energy Park Consent says "*All electricity and control cables within the site and which are part of the development shall be laid underground. Reason: To minimise the environmental and visual impacts of the development*". There is no doubt that the GGCT-U overhead line within the site will not minimise visual impacts of the combined developments.

11.4. Action needed. The PEDW website material for DNS CAS-02379-G1Z1J0, together with relevant developer updates on this project is included in the documents for examination and the full cumulative impacts for this application are considered. A full description of the onsite elements with environmental impacts, including on the site-access points and A44 approaches is added.

12. CONCRETE

12.1. ES 4.42 says "*As a worst-case in terms of vehicle movements, the assessment of effects on access, traffic and transport assumes that all the concrete required for the Proposed Development will be imported to Site. The volume of concrete required for the construction of the wind turbine foundations is estimated to be 1,720*m³ *per wind turbine (or an estimated total of 51,600*m³ *for the 30 wind turbines), with an additional 300* m³ *being required for the substation control building*." and adds that batching may be required and would take place in borrow pits. App. 10 says "*The site is large enough to warrant onsite batching of concrete, located in the site compound area*." ES 10.66 describes this as "*embedded mitigation*": "*Concrete batching will be accommodated onsite, which will result in fewer trips than if ready-mix concrete were to be delivered to Site*."

12.2. We may take it that there will be on-site batching with heavy water requirements and dust pollution, neither of which is addressed. ES 4.121 says that should the fire service be needed " *It is anticipated that the fire service will use their own provisions and what can be utilised from watercourses*". We do not know where the batching water will come from.

12.3. Action needed: Details of concrete batching impacts and water source included.

13. SOIL AND VEGETATION

13.1. App. 11.4 - Table 4.1, shows a modelled account of stripped soil volumes in different soil categories for each infrastructure element. "*Earthworks*" – 35470 m³: soil stripped and stored short-terms in batters either side of the tracks for re-use. This presumably covers cut and fill. "*Temporary Infrastructure*" 8482 m³ - longer term storage of borrow pit and construction compound soils. "*Permanent Infrastructure*" 45,368 m³ –- soil from tracks, substation and turbine hardstanding is placed elsewhere on the site. It is not clear whether it contributes to fill.

13.2. Comparison with the similar table produced for the PAC shows borrow pit needs have been increased from 3813 m³ to 6183 m³. The overall soil volumes moved have increased by 1% to 89,320 although in the final layout there is one less turbine, less track and no underground corridor of over 500m between T20 and T26. These changes in volumes have not been explained apart from the division of the Substation area into Substation proper and Temporary Construction compound.

13.3. Soil movements are important for biodiversity and should be properly addressed in the ES written statement. Unfortunately there is not enough information to calculate the area of surface stripping which will include vegetation. Our estimates of construction areas over the site only address the simple basics. They ignore elements with no details given, bends and turnings, culverts, passing places, off-track damage

from constructions vehicles and soil storage areas etc. The four "organic rich" soil categories make up a substantial proportion of the totals in App. 11.4-Table 4.1. Long-undisturbed soils are shown in App. 11.4 - Fig 2.7 where we note that T5,10,11,16,18,19, 20, half of borrow pit 2 and plenty of track is on these more valuable soils. These are portions of the soil volumes which will be either placed elsewhere on the site or stored in unknown areas until construction is nearly complete.

13.4. Movement of soil during construction work releases sequestered carbon. Compaction of soils by vehicles working beyond infrastructure margins also increases carbon emissions.

13.5. Action needed: the ES should make a realistic estimate of the volume of soils removed and replaced.

14. SITE LAYOUT, HABITAT LOSS AND THE OHMP

14.1. The lack of information about construction of the site is important because it should be the basis for the claim of NBB in the OHMP. The OHMP says "*Due to enhancements requiring finalisation and further amendments within the finalised HMP, this Outline HMP has provided a comparison of habitat areas lost, habitat areas enhanced and created alongside hedgerow and watercourses based on the proposed enhancement areas within this Outline HMP*".

14.2. The Nant Mithil application project should demonstrate NBB. "Net" means there should be a full descriptions of what is lost balanced against what is gained. Compensatory habitat for heathland and woodland loss should not count, particularly as loss is certain and immediate while compensation is uncertain and takes time. There is emerging evidence that tree replanting schemes may have limited success with climate-change weather patterns and establishment of heathland on new sites is an uncertain process.

14.3. The OHMP says: "*As a specific metric is not required for the NBB approach, this project has provided a quantitative comparison of habitat loss, habitat enhancement and creation*" Table 2 sets out the enhancement measures and habitat areas offering opportunities for these measures. Table 3 sets out "*permanent loss*" and "*enhanced/ created*" areas. The "*enhanced/created*" areas are very much smaller than the areas of opportunity habitats. For instance, pond enhancement and creation in Table 2 is 19.51ha but it is 1.34ha in Table3.

14.4. The loss in Table 3 adds up to 58ha (of which over 50% is "*other neutral/modified grassland*". We don't know how permanent loss areas are calculated because borrow pits, construction compounds, cable ditches etc. classified as "temporary" cannot be ignored in calculations of habitat loss. 58ha is certainly too small when compared to

our rough estimates of permanent infrastructure, inclusion of permanent infrastructure for which we are given no clear figures, disturbed areas of tracks and associated infrastructure, borrow pits, temporary construction compounds, working margins, laydown and storage areas. Biodiversity losses cannot be accounted for in two dimensions alone because they involve sub-surface changes in volumes of soil.

14.5. There are also 0.46km of linear features permanently lost. The "loss" of 0.43km of watercourse needs explanation.

14.6. The "*permanent loss*" is displayed against an impressive 277ha of "*enhanced/created*" habitat however we query the validity of this simplistic profit and loss accounting. The "*permanent loss*" is calculated in ground-areas of different habitats inhabited by species we can see and readily identify in macro-surveys (DNA studies excepted). It does not account for many other types of permanent biodiversity loss of small and microscopic organisms essential to ecological systems or for the impact of temporary losses which may eventually result permanent loss or degradation of habitats. Impacts of construction and operation on species abundance should also be factored in.

14.7. All these should be weighed in the NBB assessment. They include:

- blade kill of bats and birds – significant in combination with other losses despite Ch 7&8 conclusions;
- insects kill by turbine blades - known to be in significant numbers by turbines (Insect fatalities at wind turbines as biodiversity sinks. Voigt, C 2021);
- loss of interdependent micro and macro species including fungi though habitat destruction and soil movement;
- displacement leading to permanent loss of mobile populations, including protected species, abandoning the site due to construction disturbance;
- future failures to establish incoming populations due to the deterrent effect of operating wind turbines;
- "temporary" (but more than two years) habitat loss during construction, including extensive soil storage areas, vehicle and footfall damage outside the layout margins;
- long periods waiting for re-establishment of vegetative cover, growth of trees etc. which may be less successful than anticipated.

14.8. On the biodiversity benefit side of the balance, most of the "*enhanced/created*" area is enhanced by altered grazing patterns which are certainly desirable but dependent on landowner approval, buy-in and implementation. We do not know how feasible it is to integrate these into local farm work-plans.

14.9. The OHMP says "*management actions and monitoring results will be reviewed by an HMP Steering Group. The precise remit and structure of the Steering Group will be agreed post consent but at this stage it is considered to include the Applicant,*

landowners and livestock graziers and PCC". This means that the Applicant and the landowners (who are also the graziers as made clear in the secondary consents documents) will have a majority say, balanced only by PCC. PCC does not appear to have adequate professional ecology resource to stand up for biodiversity expenses when these are set against Applicant profits and "farming as usual".

14.10. It is easy for the current Applicant to make undeliverable promises because consent is likely to be sold on and none of the OHMP has to be finalised before consent. The profit margin will decide the price and the buyer's position in the driving-seat within the Steering Group is likely to prevent any costly outgoings for resilient ecosystems. ding can also be used.

14.11. In addition, the OHMP says "*The HMP runs from the first commissioning of the Proposed Development to its decommissioning.*" Therefore it has no role during construction. None of the measures would be put in place for years. Investigations and surveys, drawing up of plans and discharge of pre-commencement conditions ought to over a year if adequately done, if only to cover seasonal weather events. There is a 2-year construction program which may suffer delays through waiting for appropriate weather conditions, unrestricted working seasons (outside the nesting season for example), deliveries and so on. Admittedly, we can't be sure that construction would be delayed by these factors because many construction plan best-practice timings are qualified by "*if feasible*".

15. CONCLUSIONS

15.1. This Chapter of our response was written to draw attention to how much we do not know about the site-specific detail of the project and its construction. We are not professionals in these fields and we apologise for any errors or misunderstandings.

15.2. The long time it has taken to uncover this information is itself a product of the failures to provide an **ES** with a transparent, full and consistent account of what is proposed. It is extremely difficult to match up the maps/plans presented under different topics because they are presented in different ways for different topics with frequent failure to superimpose the topography or infrastructure layout. Various statements in the text are not illustrated in Fig 4.01a. and the "detailed" Figs 4.01b-h are simply larger scale and do not provide any further information. The GGCt-U OHL is omitted. Fig 4.13 (PRoWs) which is one of the few examples showing the layout with contours contains a major error:

- We do not have a satisfactory description of the project. The missing information should be supplied.
- The failure to prove NBB in the OHMP (the foundation of the NBB claim) and to address the environmental impacts of earthworks and habitat loss on site in a transparent manner makes the description of the development unfit for EIA purposes and for assessing NBB.

For CPRW-Re-Think
January 2026

APPENDIX 1: BRYN BLAEN WIND FARM: AN EXAMPLE OF WIND FARM CONSTRUCTION IN POWYS.

Bryn Blaen Wind Farm, near Llangurig, Powys is a development applied for by Njord Energy, under the same management as Hendy Wind Farm. The application was refused by Powys CC but allowed on Appeal on 13/8/16. It was constructed in partnership with Jones Bros Civil Engineering on behalf of the client, Njord Wind Energy. Jones Bros have submitted a letter of support letter for Nant Mithil to PEDW.

6 x 100m turbines, 14.1 MW, 5km of access tracks, with access from the valley below. Constructed in partnership with Jones Bros Civil Engineering on behalf of the client, Njord Wind Energy.

Condition 34 is "**provision of a Construction Environmental Management Plan to be approved by Powys CC and implemented as approved**".

C34 has 26 items (a to z) with many subheadings. We have selected just 3.

(g). subheading *iv.* "*measures for the protection of water courses and ground water and soils;"*

(l) "*the location, design and construction methods of the access tracks including drainage provisions, and the pollution prevention measures to be implemented to ensure there are no polluting discharges from tracks and disturbed areas enters any watercourse*";

(o) "*the management of ground and surface water (including mitigation to protect private water supplies*)";

These are photographs of the site soon after turbine erection showing:

- access track with extensive fill and land-slippage,
- borrow-pit,
- PRoW site,
- road drainage and over-run.

We think they speak for themselves and show real-life examples of land-take and habitat damage which would not be apparent in the sketchy ES for Nant Mithil. Planning conditions did not prevent this damage for six 100m turbines. Extrapolate the impacts for thirty turbines 180-220m.

Bryn Blaen turbines were static for a year due to connection problems. Hendy turbines have been static for 5 years because there is no grid connection.

We appreciate that very many very general mitigation measures have been outlined for construction on Radnor Forest but are these tailored to the site and, if and when the time comes, will PCC be able to monitor activity on site and restrict it to agreed plans?

Access track with extensive cut and fill destroying wet-land vegetation and land-slippage

Borrow pit

Site of Public Right of Way.

Track drainage 1.

Track drainage 2

Overrun at entrance to PRoW