

# Foel Trawsnant Wind Farm Amended Scheme

## Further Environmental Information

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### 1. Background

- 1.1.1 In December 2018 Wood Environment & Infrastructure Solutions UK Ltd (Wood) submitted an Environmental Statement (ES) on behalf of Pennant Walters (Foelt) Ltd (the applicant) relating to the proposed Foel Trawsnant Wind Farm amended scheme (document reference 40217rr066i1).
- 1.1.2 Subsequent to the above submission a request for further environmental information was made by Neath Port Talbot County Borough Council (NPTCBC) under Regulation 19(1) of the *Town and Country Planning (Environmental Impact Assessment) Regulations 1999 (England & Wales)* (as amended) (hereafter referred to as 'the EIA Regulations') (dated 29 May 2019, reference P2014/0825).
- 1.1.3 This technical note, and associated annexes and reports, responds to the request for further information by NPTCBC and other consultees.

### 2. Further environmental information

Table 2.1 details the requests for further environmental information set out in the Regulation 19 letter from NPTCBC and the corresponding responses from Wood on behalf of the applicant, which we trust meet the requirements of the planning authority.

Table 2.1 Regulation 19 requests and corresponding responses

| Item                        | Comment/Request                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Response                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Transport and Access</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                           |
| 1                           | <p>The Head of Engineering and Transport has reviewed the submitted information and have raised the following concerns:</p> <ul style="list-style-type: none"> <li>a) Item 2.4 of the CTMP indicates that a 4.5 by 215 metre visibility splay can be achieved. The Head of Engineering and Transport have advised they don't believe this can be achieved in an easterly direction and therefore require a temporary TRO to reduce the speed limit along this section of road.</li> <li>b) In relation to Item 4.4 (Dilapidation Surveys) of the CTMP The Head of Engineering and Transport (highways) will require the format of the survey to be agreed with the local Highway Authority prior to carrying out any work.</li> <li>c) Gradients of the access tracks are required, if any sections of tracks require hard surfacing to accommodate the AIL's then this needs indicated on the submitted plans.</li> </ul> | <ul style="list-style-type: none"> <li>a) The applicant agrees to the adoption of a TRO.</li> <li>b) This is agreed.</li> <li>c) On site access tracks have been checked and the applicants are content that the gradients are not prohibitive and there is no requirement for hard surfacing.</li> </ul>                                                                                 |
| 2                           | The Local Authority's bridges and highway structure manager has advised depending on the weight and axle configuration of the delivery vehicles it may be necessary for the developer to pay the costs associated with structural assessments of Highway structures along the route.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | This is agreed.                                                                                                                                                                                                                                                                                                                                                                           |
| 3                           | Bridgend County Borough Council (BCBC) has advised (see attached) that all of their concerns relating to highways are still relevant, could you clarify that this is the case as previous correspondence suggest that the Bridgend had have been resolved.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Having checked BCBC's comments from 2015 it appears that their concerns are no longer relevant based on the updated haul route and revised swept path analysis. Wood sent an email to BCBC to this effect on 12 July 2019 (to which Steven Jenkins, Senior Planning Officer for NPTCBC was copied). We believe this resolves all concerns raised by BCBC in 2015 in relation to Highways. |

| Item                                | Comment/Request                                                                                                                                                                                                                                                                                           | Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| <b>Ecology &amp; Ornithology</b>    |                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 4                                   | Table 9.24 Summary of environmental measures relevant to non-avian ecology to be implemented within the ES still has Error messages this needs to be amended                                                                                                                                              | This has been corrected. An amended Chapter 9 is provided with this technical note.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 5                                   | Chapter 10 needs to be updated in line with the latest winter bird surveys and resubmitted.                                                                                                                                                                                                               | An updated Chapter 10 is provided with this technical note. The chapter has also been updated in line with the autumn 2018 bird surveys.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 6                                   | As Appendix 9D was not submitted previously this will need to form part of the additional information                                                                                                                                                                                                     | Appendix 9D is provided with this technical note.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 7                                   | The winter bird breeding survey will also need to form part of the additional submission and listed within the table of contents of the ES                                                                                                                                                                | Complete. The winter bird survey report is provided with this technical note (as Appendix 10F to the ES). the autumn 2018 bird survey reported is also provided (as Appendix 10E to the ES). The contents page of the ES has been updated to reflect this and is also provided.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Hydrology and water features</b> |                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 8                                   | The greenfield runoff (QBar) is stated as 16 l/s/ha which is based on a soil SPR of 0.50. However, using the UK Suds tool, this gives a value of 0.37 for the majority of the site. This in turn leads to a lower QBar value of approximately 8 l/s/ha. This needs to be checked and amended accordingly. | <p>In the ES chapter (12) a value of Standard Percentage Runoff (SPR) value of 0.5 was used, based upon a Hydrology of Soil Type 5 classification manually derived from the Flood Studies Report (NERC, 1975). The SPR value has been checked and updated to 0.37 based on the latest Wallingford UK SuDS Tool which incorporates a Soil Type 3 classification across the site from their digitised Winter Rainfall Acceptance Map (WRAP). This results in a reduction in the calculated greenfield runoff (Qbar) rate from 16 l/s/ha to 8.35 l/s/ha as shown below.</p> <p>Greenfield or rural runoff rates at the Site have been estimated using the Institute of Hydrology Report 124 (1994) (IoH124) method, using the UK SuDS Tool (see Equation 1 below, and <b>Annex A</b> with the UK SuDS Tool Output pdf) and are displayed in Table 2.2 below.</p> $QBAR_{rural} = 0.00108 \times Area^{0.89} \times SAAR^{1.17} \times SOIL^{2.17}$ <p style="text-align: right;"><i>Equ.1</i></p> |

| Item      | Comment/Request                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |                           |               |      |                           |               |      |        |      |      |      |       |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|---------------------------|---------------|------|---------------------------|---------------|------|--------|------|------|------|-------|
|           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p>Data used for the runoff calculation are as follows:</p> <p><b>SAAR</b> 1887 mm/yr (based on the site weighted average calculated from FEH*)</p> <p><b>Soil type</b> Soil class 3, soil index value (SOIL) = 0.37; from the digitised Winter Rainfall Acceptance (WRAP) Map, using the UK SuDS Tool</p> <p><b>FSR Growth Region (NERC, 1975)</b> 9</p> <p><b>Area</b> Drainage area considered (runoff site area), in hectares (ha)</p> <p>Table 2.2 Greenfield runoff rates (IoH124)</p> <table><tr><th>Catchment</th><th>Site area (ha)</th><th>SOIL</th><th>SAAR</th><th>Q<sub>BAR</sub> (l/s/ha)</th><th>Q100 (l/s/ha)</th></tr><tr><td>Site</td><td>117.58</td><td>0.37</td><td>1887</td><td>8.34</td><td>18.19</td></tr></table> <p>During the remainder of the ES chapter (12) there are references to the use of SuDS which will ensure that runoff is attenuated to pre-development (greenfield) runoff rates, shown in Table 2.2 above. These amended calculations will be taken into account and adhered to as part of the drainage design requirements.</p> | Catchment | Site area (ha)            | SOIL          | SAAR | Q <sub>BAR</sub> (l/s/ha) | Q100 (l/s/ha) | Site | 117.58 | 0.37 | 1887 | 8.34 | 18.19 |
| Catchment | Site area (ha)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | SOIL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | SAAR      | Q <sub>BAR</sub> (l/s/ha) | Q100 (l/s/ha) |      |                           |               |      |        |      |      |      |       |
| Site      | 117.58                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0.37                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1887      | 8.34                      | 18.19         |      |                           |               |      |        |      |      |      |       |
| 9         | <p>Although the Wood report is comprehensive, it needs more detailed and specific information related to the site. It is important that the measures identified in the report are implemented into the temporary and permanent works.</p> <p>Examples of where detailed information is required:</p> <ul style="list-style-type: none"><li>Swales – location, cross section detail including planting, long sections to ensure they are not too steep. Outfall locations, proposed discharge rates.</li></ul> | <p>It has been agreed with Steven Jenkins at NPTCBC that these details can be secured via a suitably worded planning condition, assuming the application is granted consent.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |                           |               |      |                           |               |      |        |      |      |      |       |

| Item                                | Comment/Request                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Response                                                                                                                                                                                                                                                                      |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                     | <ul style="list-style-type: none"> <li>Position of infiltration / attenuation ponds and hydraulic design of controls. Outfall locations, proposed discharge rates.</li> <li>Specific details of watercourse crossings – culvert type / material / size / calculations.</li> <li>Flow contours for each foundation pad.</li> <li>Contingency plans / interceptor locations in case of spillages.</li> </ul> <p>These details will need to form part of the ES.</p> |                                                                                                                                                                                                                                                                               |
| <b>Mineral and mining resources</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                               |
| 10                                  | The Coal Authority concurs with the recommendations of the Coal Stability Risk Assessment (June 2014, prepared by James Associates); that coal mining legacy potentially poses a risk to the proposed development and that intrusive site investigation works should be undertaken prior to development in order to establish the exact situation regarding coal mining legacy issues on the site                                                                 | It has been agreed with Steven Jenkins at NPT that the requirement for intrusive site investigation works can be secured via a suitably worded planning condition, assuming the application is granted consent.                                                               |
| <b>Landslip</b>                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                               |
| 11                                  | The site is to the east (and uphill) two dormant historical landslips AA21 (1 hectare in size) & AA22 (19 hectares in size). Whilst these are outside the area of the site the applicant should satisfy themselves that should they become active that site will not be affected and address this within the ES.                                                                                                                                                  | The applicant is satisfied that the historical landslips do not represent a risk to the proposed wind farm.                                                                                                                                                                   |
| 12                                  | The site is approx. 400m west of the Dyffryn Rhondda Aerial Tips. These are disused coal tips, again the applicant should satisfy themselves that should they become active that sit will not be affected and this addressed within the ES.                                                                                                                                                                                                                       | A stability appraisal of the coal tips was undertaken by James Associates in 2010 which confirmed that they “exhibit acceptable stability both in the short and long term”. The applicant is therefore satisfied that they do not represent a risk to the proposed wind farm. |
| <b>Other matters</b>                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                               |
| 1                                   | Whilst not part of the ES, the objection letter (attached) is quite detailed and has been sent to the AM. You may wish to respond and address                                                                                                                                                                                                                                                                                                                     | As discussed with Steven Jenkins the issues raised in the objection letter will be addressed in a separate letter to NPTCBC.                                                                                                                                                  |

| Item | Comment/Request                                                                                                                                                                               | Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | some the concerns that have been raised when you submit the additional info. We can then include any comments you have within our report when the application is taken to planning Committee. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 2    | Bridgend County Borough Council advised all their initial comment in relation to Noise are still applicable and advised that their recommended conditions should be imposed (attached).       | <p>Wood previously responded to the draft noise condition (no. 28), which was an amalgamation of BCBC and NPTCBC comments, for the approved (13-turbine) wind farm scheme and expressed concerns over the wording, as follows:</p> <p>"A full review of the condition is not possible as it makes reference to Guidance Notes and tables of the receptor coordinates (Table 3) and the associated noise limits (Tables 1 and 2) which have not been attached / included. The Guidance notes outline the required methodology to be adopted in the event of a complaint, therefore its adequacy in this respect cannot be determined.</p> <p>Our greatest concern with the proposed condition is the following:</p> <p><i>'No electricity shall be exported until the wind farm operator has submitted to the Local Planning Authority for written approval additional background noise data for receptors at Nant-yr-Hwyaid Farm and Tycanol, and the level of noise emissions set out in Tables 1 and 2 amended as necessary. The developer shall submit a scheme under this condition for the approval in writing of the Local Planning Authority.'</i></p> <p>Whilst it is recognized that during the initial surveys for the [2014] ES, access could not be arranged at R7 – Nant-yr-hwyaid, at significant expense to the client, Amec Foster Wheeler [now Wood] undertook additional background noise monitoring in January 2015. Noise monitoring equipment was deployed at a location in the vicinity of R7 – Nant-yr-hwyaid, which was agreed as being representative of that location (Simon Evans, Public Protection Officer NPTCBC was in attendance). The results of a revised noise assessment, which took into consideration the background noise measurements in the vicinity of R7 – Nant-yr-hwyaid was presented to NPTCBC within a Technical Note (ref 15343i2, June 2015). Amec Foster Wheeler understood that the contents of this Technical Note adequately addressed the concerns raised. With regards to monitoring at Ty canol, it was confirmed by Simon Evans (NPTCBC) that the results measured at R6 – Ty'n-y Pant Farm could be used as a proxy."</p> |

| Item | Comment/Request | Response                                                                                                                                                                                                                          |
|------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      |                 | An alternative noise condition was suggested by Wood at the time, however, as the amended scheme proposes taller but fewer turbines we would recommend NPTCBC considers whether the previous noise condition is still applicable. |

\* The point SAAR value of 1884mm from the UK SuDS tool was refined to 1887mm as this is the site average weighted value which was previously calculated from Table 12.3 of the 2018 ES chapter, based on FEH sub catchment values

**Issued by****Chris Prydderch****Approved by****David Kenyon****Copyright and non-disclosure notice**

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# Annex A

## SuDS Tool Output

Calculated by: **GUY DOUGLAS**  
 Site name: Foel Trawsnant  
 Site location: Neath Port Talbot Council Area

## Site coordinates

Latitude: 51.63430° N  
 Longitude: 3.6782° W

This is an estimation of the greenfield runoff rate limits that are needed to meet normal best practice criteria in line with Environment Agency guidance "Preliminary rainfall runoff management for developments", W5-074/A/TR1/1 rev. E (2012) and the SuDS Manual, C753 (Ciria, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Reference: **FOEL - 40217**  
 Date: 2019-06-12 09:31

|             |       |
|-------------|-------|
| Methodology | IH124 |
|-------------|-------|

## Site characteristics

|                      |        |
|----------------------|--------|
| Total site area (ha) | 117.58 |
|----------------------|--------|

## Methodology

|                        |                             |        |
|------------------------|-----------------------------|--------|
| Qbar estimation method | Calculate from SPR and SAAR |        |
| SPR estimation method  | Calculate from SOIL type    |        |
|                        | Default                     | Edited |
| SOIL type              | 3                           | 3      |
| HOST class             | ---                         | ---    |
| SPR/SPRHOST            | 0.37                        | 0.37   |

## Hydrological characteristics

|                               |         |        |
|-------------------------------|---------|--------|
|                               | Default | Edited |
| SAAR (mm)                     | 1884    | 1887   |
| Hydrological region           | 9       | 9      |
| Growth curve factor: 1 year   | 0.88    | 0.88   |
| Growth curve factor: 30 year  | 1.78    | 1.78   |
| Growth curve factor: 100 year | 2.18    | 2.18   |

## Notes:

(1) Is  $Q_{BAR} < 2.0$  l/s/ha?

No

(2) Are flow rates  $< 5.0$  l/s?

No

(3) Is  $SPR/SPRHOST \leq 0.3$ ?

No

## Greenfield runoff rates

|                      |         |         |
|----------------------|---------|---------|
|                      | Default | Edited  |
| Qbar (l/s)           | 979.18  | 981.01  |
| 1 in 1 year (l/s)    | 861.68  | 863.28  |
| 1 in 30 years (l/s)  | 1742.94 | 1746.19 |
| 1 in 100 years (l/s) | 2134.61 | 2138.59 |