

**The Mid Wales (Powys) Conjoined Public Inquiry into
5 Windfarm Proposals and a 132kV overhead Electric
Line Connection**

**Session One
Alliance Proof of Evidence
Roger Durgan B Eng, C Eng., MICE
Local Transport Issues**

INTRODUCTION

1. This submission relates to the transport issues of general site traffic close to each Wind Farm Site and the local area. It does not address the issue of the routes for Abnormal Indivisible Loads that will deliver the Wind Turbine parts to the sites from the docks in South Wales or Ellesmere Port except in relation to the immediate access to each site. The issues relating to travel from the port(s) to the site will be the subject of a separate submission. The focus of the Alliance's position is on the environmental consequences of the predicted traffic and the engineering measures said to be necessary to accommodate it. Any interrelationship between general construction traffic and AIL traffic and resulting impacts cannot yet be addressed and will need to be revisited in a later topic.
2. Each Wind Farm proposal describes the estimated site traffic generated. This site traffic consists of light vehicles, Heavy Goods vehicles (HGVs) and Abnormal Indivisible Loads (AILs).
3. Each site is served by minor roads off the A483 trunk road between Newtown and Llandrindod Wells.
4. These minor roads leading to each site are the subject of proposals for selective widening, junction improvement and lay-by construction to allow access and passing of HGVs and to allow access for AILs. The nature of these proposals impinges on the local environment altering the existing character of the roads and adjacent verges and boundaries.
5. At times the site generated HGV traffic will be significant. The effects of this will be compounded should any of the construction periods overlap, or prolonged if there is no, or less overlap
6. In addition to the three wind farms the subject of this Inquiry there are five other Wind Farm proposals for the general SSA C area namely Bryngydfa, Garreg Lwyd Hill, Hirddywel, Bwlch-y-Sarnau and Neuadd-goch Bank which are either at the planning or scoping stage. Between them they are proposing a total of 80 turbines of average height 125 metres.

LLANDINAM WIND FARM, Celt Power Ltd (CPL)

7. The principal documents describing the Celtpower Ltd (CPL) proposals concerning the management of construction traffic are contained in Llandinam Windfarm Repowering and Extension Supplementary Environmental Information dated December 2011 (SEI) including the Draft Traffic Management Plan (TMP) as prepared by URS. The SEI issued in April 2013 outlines further modifications to the Traffic Plan. The Traffic Management Assessment (TA) dated July 2013 contains a summary of the proposals to date together with outline changes to

the proposed management of AILs. CPL state that further documents will be issued during construction including a lorry routing plan and a final TMP relating to the delivery of AILs.

8. There are two distinct traffic issues. One is the regular everyday site traffic during the two year construction period. The other is access to the site for the abnormal loads needed to deliver the turbine towers and blades. The access for normal HGVs is said to be from the north via the A483 from Newtown through Dolfor to the site via an unclassified road. This is a sensitive route. The current proposal for access to the site for Abnormal Indivisible Loads (AILs) is from the south. It is noted that AIL access has many problems and issues to be resolved and as yet cannot be considered as resolved. The Alliance would wish to make a number of points regarding this but this will form the subject of a separate submission.
9. The Draft TMP states that the project will create over 89,000 additional traffic movements over the course of the project. From table 2.2 in the draft TMP it identifies the import of capping material and concrete as being the most intensive operations, possibly around 200+ HGV movements per day. The maximum increase in HGV traffic using the A483 from Newtown is identified at 22% (table 9.3 SEI 2011).
10. Table 7.1 of the TA shows predicted traffic flows for the 22 month construction period. It states that there will be a maximum of 62 HGVs per day. In addition to the daily HGV deliveries there will be 256 AILs convoys (two AILs per convoy) accessing the site via this unclassified road.
11. The unclassified road from A483 to site has a maximum width of 4m and will require selective widening plus a junction improvement with A483 to allow 2 way passage of HGVs and access by AILs delivering turbine parts to the site. The works will require land acquisition and removal of existing boundaries and hedges in places. The changes will be permanent. It is noted that there is no discussion on the intervisibility of laybys to allow passing of opposing HGVs. I have found no reference to any Stage 1 Safety Audit relating to the highway improvement works at the junction of the unclassified road with the A483.
12. It is noted that the detailed proposals for this unclassified road are not the same as those proposed by Llaithddu Wind Farm for the same road
13. No consideration is given to the need to share access along the unclassified road from the A483 to the site with the developers of the proposed Llaithddu Wind Farm in the event of consent being given to both wind farms. A combined EIA and traffic assessment would be essential in this case. And any Stage 1 Safety Audit would need revisiting.
14. CPL state that as their development will be built before other adjacent proposals there will be no conflicts. This statement is based on assumption and will be subject to many factors

outside of any controls. One of them appears to be the assumption that the Llandinam Link will come forward earlier than other grid connection proposals. But, as noted in the Alliance SoC (para 9), Llandinam appears now to contemplate connection via the proposed new Hub at Cefn Coch and Llaithddu appears to contemplate a link towards Welshpool.

LLAITHDDU WIND FARM, Fferm Wynt Llaithddu (FWL)

15. The principal documents describing FWL's proposals for access to the site for general construction traffic are contained in the Environmental Statement (ES) April 2008 Chapter 12. The subsequent Traffic Management Plans published by SBA, Transport Planners in August 2012 (TMP) and June 2013 (the latter issued in July 2013) relate to the proposals for AIL access to the site only.
16. There are two distinct traffic issues. One is the regular site traffic every day during the two year construction period. The other is access to the site for the abnormal loads needed to deliver the turbine towers and blades. The access for normal HGVs is said to be from the north via the A483 from Newtown through Dolfor to the site via an unclassified road. The current proposal for access to the site for Abnormal Indivisible Loads (AILs) is from the south. It is noted that AIL access has many problems not pointed up in the SEI and as yet cannot be considered as resolved. (The Alliance would wish to make a number of further substantial points regarding the problems and unresolved difficulties arising with this TMP and AILs, but this will be the subject of a separate submission due for a later topic.)
17. The ES states that the project will create over 1,400 additional HGV movements. It projects a maximum of 80 construction vehicles per day during pouring concrete for foundation bases. All HGV traffic is said to use the A483 from Newtown. FWL state that the maximum increase in HGVs on the A483 north of the site will be 6.8%.
18. The unclassified road from the A483 to site (maximum width 4m) will require selective widening plus a junction improvement with A483 to allow 2 way passage of HGVs and access by AILs delivering turbine parts to the site. The works will require land acquisition and removal of existing boundaries and hedges in places. The changes will be permanent. It is noted that there is no discussion on the intervisibility of laybys to allow passing of opposing HGVs. I have found no reference to any Stage 1 Safety Audit relating to the highway improvement works at the junction of the unclassified road with the A483.
19. It is noted that the detailed proposals for this unclassified road are not the same as those proposed by Llandinam Wind Farm for the same road
20. No consideration is given to the need to share access along the unclassified road from the A483 to the site with the developers of the proposed Llandinam Wind Farm in the event of

consent being given to both wind farms. A combined EIA and traffic assessment would be essential in this case. And any Stage 1 Safety Audit would need revisiting.

21. The ES contains various specific statements that are questionable such as the number of vehicles required to deliver concrete for a turbine base: paragraph 12.21 refers to 35 vehicles, and paragraph 12.51 refers to 80 vehicles. A turbine base is around 500 cu m and requires around 80 concrete deliveries for one base thus 12.51 is assumed to be correct. There is also a statement that 276 AILs passing through the centre of Montgomery would have an insignificant effect. Even though that route is not now being proposed for AILs the fact that such a conclusion could be drawn does not give confidence for the expressions of judgement in other parts of the report.

LLANBADARN FYNYDD WIND FARM, Vattenfall (VATT)

22. VATT proposes a number of alterations to the structure of the local roads around the site. The latest amendments in response to comments made by Powys CC are contained in the SEI dated June 2013. This follows the ES in 2007 and SEIs in 2008, 2010 and Feb 2013.
23. VATT state that the maximum number of two way trips for construction traffic is 66 HGVs according to the ES. It is noted that this will cause a 28% increase in HGV activity on the adjacent A483.
24. The construction traffic programme, table 5.2 shows the projected construction site traffic over a 12 month construction period.
25. The construction traffic assessment seems questionable. For instance the maximum number of HGVs per day is stated at 66 (33 two way trips). The concrete turbine bases are around 500 cum and require around 80 concrete deliveries for one base. 272 AILs are shown being delivered over two months. This would require two convoys (two AILs) per day 7 days per week for two months. It is likely that only one delivery per day will be allowed but there is also no allowance for contingencies preventing delivery e.g. weather, emergency roadworks etc.
26. VATT has submitted detailed proposals for the selective widening, junction alterations and construction of lay-bys on the unclassified roads leading from the A483 to the site. In addition to comments made by Powys CC the following is noted:
 - a. The intervisible laybys only have room for one HGV therefore it is inevitable that there will be two or more together on occasions. This could lead to driving on the verges and breakdown of the road edge possibly leading to failures of the carriageway. Unless the developer has a system of traffic control the only other engineering solution would be to

widen the road to allow two-way passing of vehicles. This would cause substantial environmental damage and alter permanently the road character.

- b. It is noted that the drawings contain statements to the effect that “earthworks are **expected** to be contained within the fence line”. This should be established one way or the other especially if potential land ownership issues may be involved.
- c. I have found no reference to any Stage 1 Safety Audit relating to the highway improvement works at the junction of the site access road with the A483.
- d. What provisions have been made for the residents of Hafod Fach at the access off the A483? The proposals involve the main site access passing adjacent to the house. The increased noise levels for this property are not even mentioned.

CONCLUSIONS

- 27. The whole area outside of major towns is tranquil. On the local roads HGV traffic is generally limited to local deliveries or to agricultural uses. There will be a marked adverse change in the character of the lightly trafficked roads and in the communities along and through which the net additional HGV traffic will pass. The character of local roads will further be altered by engineering works, spreading the long-term effects of the Windfarms yet further afield.
- 28. Specific to Llandinam:
 - a. 22% increase in HGV flow on the A483 through Dolfor will be noticeable along a route and through a community which will be sensitive to such traffic.
 - b. The measures to alter the unclassified road to the site will alter the character of the road.
 - c. Because of the only partial widening of the unclassified road, opposing HGVs could come into conflict causing breakdown of the road shoulder and conflicts with other traffic and users. This will lead to driving on the verges and breakdown of the road edge possibly leading to failures of the carriageway.
 - d. The question of third party land acquisition does not appear to be addressed.
- 29. Specific to Llaithddu:
 - a. The original ES dated April 2008 includes conflicting data which casts doubt on the reliability of the material provided.
 - b. FWL note a maximum 6.8% increase in HGV loads on the A483 through Dolfor with a maximum of 80 HGVs per day along a route and through a community which will be sensitive to such traffic.
 - c. The measures to alter the unclassified road to the site will alter the character of the road.

- d. Because of the only partial widening of the unclassified road opposing HGVs could come into conflict causing breakdown of the road shoulder and conflicts with other traffic and users. This will lead to driving on the verges and breakdown of the road edge possibly leading to failures of the carriageway.
- e. The question of third party land acquisition does not appear to be addressed.

30. Cumulative Llandinam and Llaitthddu

- a. The detailed proposals for the same carriageway serving the sites off the A483 differ for each project.
- b. If the projects are built concurrently then the combined additional HGV traffic will be more significant. There would also be the potential for dispute over the maintenance of the access road with potential delay to remedial works.
- c. If the projects are built consecutively then the construction period for the two projects will be 4 years and consequently there will be elevated levels of HGV traffic through Dolfor and Newtown for this period.

31. Specific to Llanbadarn Fynydd

- a. 28% increase in HGV flow on A483 will be noticeable.
- b. The SEI dated July 2008 includes questionable programme data which questions its whole veracity. In particular the AIL delivery programme is not feasible and the number of concrete deliveries is understated.
- c. The operation of the intervisible lay-bys on the unclassified roads adjacent to the site will be prone to failure possibly leading to driving on the verges and breakdown of the road edge resulting in failure of the adjacent carriageway.
- d. There are no proposals to mitigate the noise and inconvenience to the property Hafod Fach.

32. Cumulative effects of all Wind Farms in SSA C on local road network.

- a. These 3 proposals combine to provide the installation of a total of 80 Wind Turbines.
- b. They will either be constructed consecutively stretching out the local disruption to between 5 or 6 years. Or they will be constructed concurrently or partly concurrently, in either case the site traffic generated HGVs on local roads will be added together causing it to be in excess of 30% increase and hence become significant.

- c. Should any of the other 5 Wind Farms in planning be granted consent then concurrent construction would be inevitable. Up to a further 80 turbines may be constructed thus doubling all the effects of the construction of the 3 wind farms the subject of this Inquiry.

DOCUMENT LIST:

Department of Transport Guidance on Transport Assessment

Institute of Environmental Management and Assessment (IEMA) (1993) Guidelines for the Environmental Assessment of Road Traffic