

# Mid Wales Conjoined Inquiry

Llaithddu Wind Farm  
Clarification for Session Four: AIL Clearances

**FWL TRA -014**



We note the inspector’s comments regarding specific issues on the route proposed by Fferm Wynt Llaithddu Cyf for the transport of AIL wind farm components, specifically those relating to the transits of Castle Square in Builth Wells and of Crossgates Bridge. Dealing with each of these in turn:

## **Castle Square, Builth Wells**

FWL’s longest component is the blade at 33.3m (FWL TRA-10 Appendix A Dwg SK001 E70 blade details), mounted on a trailer with a rear overhang of 4m. First, it is important to understand that significantly longer blades have been modelled as being capable of transiting Castle Square.

To be clear, FWL is not proposing such a movement. The longest Llaithddu component is however nearly 6m (c.20 feet) shorter than the largest component modeled as being capable of transiting the Square. This means that Llaithddu’s longest components have very significant margin and, in short, do not approach a length at which concern regarding conflict should arise.

The inspector will note from the tracking drawings SPA001 and SPA001-2 in Appendix A of the TMP (Reference FWL TRA-10) that the blade movement is accomplished without having to overrun the traffic island to the west of Castle Square. If this island was to be utilised (and there is no engineering reason why it should not be) the clearances would be very greatly increased; there is however no need nor justification for this as the foregoing paragraph and the drawings illustrate.

Further, the width test run (which we have clarified was in fact carried out for a 4.2m width tower section) used a trailer with a rigid length of 29m and no overhang (reference FWL TRA-09). As can be seen from the test run video (between 10:29 and 10:30 elapsed time shown on the screen), this presented no issues in Castle Square and was sufficient to satisfy the representatives of Welsh Government and Powys County Council that no further length run would be required (FWL TRA-10 Email dated 11 May 2012 given in Appendix A).

Additionally, construction of the Carno 2 wind farm involved the transport of 31m long tower sections through Castle Square and also 30.2m long blades (Ref FWLC 013 Clarification & Rebuttal Note Para 68, Page 5 and Appendix). The transport of all such loads was accomplished through Builth Wells without any incident. Whilst the Carno rigid length is slightly shorter than the Llaithddu loads, the Llaithddu loads benefit from a smaller turning radius (due to greater overhang at the rear) and a smaller kinematic envelope.

The Carno deliveries therefore provide useful confirmation of the absence of constraint in moving the Llaithddu blades through Castle Square.



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## Crossgates Bridge

To be clear, FWL is **not** proposing to move components with only 49mm of clearance. The following measures are proposed (and set out in the TMP) to increase the running clearance as follows:

1. An additional 25mm clearance from adjustment of the trailer suspension: the test run was deliberately carried out with this additional adjustment available (Ref FWLC 013 Clarification & Rebuttal Note Para 3.1.2, Page 1 and Appendix).;
2. More significantly, the use of a recessed frame trailer (Ref FWL TRA-10 Pages 74 – 76),
3. Allowing overhang at the rear of the trailer, therefore taking advantage of the taper in the tower section (FWL TRA-10 Page 76).

The combined effect of these changes is to increase clearances, so that the minimum clearance instead occurs with the base tower section, as set out in this table, reproduced from Table 5.4 on Page 76 of the TMP (Ref FWL TRA-10):

	Blade	Generator Ring	Nacelle Housing	Hub	Tower Adaptor	Base Tower Section	Intermediate Tower Section	Top Tower Section
<b>Overall Height</b>	4.075m	3.85m	4.28m	4.2m	3.96m	4.392m	4.150m	4.353m
<b>Clearance</b>	435mm	660mm	230mm	310mm	550mm	118mm	360mm	157mm

This minimum clearance is well beyond the level at which concerns such as road irregularities and other factors could give rise to any risk of bridge strike occurring. Nevertheless, to give further assurance on this a height gauge will be deployed both at the port at Newport and at the off highway hold point 18, just to the south of the bridge (Ref FWL TRA-10 Para 5.75).

Further details are set out in the TMP, Mr Buchan’s proof of evidence addendum, and in Mr Buchan’s rebuttal of Mr Durgan’s proof of evidence (Ref FWLC 013 Clarification & Rebuttal).

## Llandinam Repowering

If Llandinam is permitted it does of course propose works that will substantially increase clearances at Crossgates Bridge. It is likely that Llaithddu will be constructed after Llandinam because of grid connection timings, and therefore also likely that Llaithddu will be able take advantage of the significant increase in clearances created by the Llandinam scheme. It is important to be clear, however, that for the reasons set out above such modifications are not necessary for the safe transport of the Llaithddu components.