

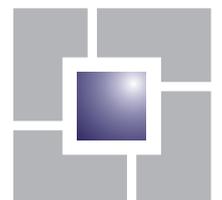
Llandinam Wind Farm Repowering and Extension

Session 4 – Strategic Issues and Cumulative effects

Proof of Evidence of David Tucker MSc, CEng, MICE, MIHT
on Matters of Traffic, Access and Transport

On Behalf of CeltPower Limited

Volume 1 – Text



david tucker associates
transport planning consultants



Llandinam Wind Farm Repowering and Extension

Session 4 – Strategic Issues and
Cumulative effects

Prepared by:

David Tucker Associates

Forester House
Doctors Lane
Henley in Arden
Warwickshire.
B95 5AW

Tel: 01564 793598
Fax: 01564 793983
inmail@dtatransportation.co.uk
www.dtatransportation.co.uk

Proof of Evidence of David
Tucker MSc, CEng, MICE, MIHT
on Matters of Traffic, Access and
Transport

On Behalf of CeltPower Limited

Prepared For:

CeltPower Ltd

24th February 2014
DAT/14016-20 Proof of Evidence _Final



Contents

	Page
1.0 Qualifications and Exerience	1
2.0 Scope and Nature of Evidence	2
3.0 Policy Context	7
4.0 Principles of Southern Traffic Management Plan	9
5.0 Impact on Existing Traffic	12
6.0 Crossgates Railway Bridge	14
7.0 Choice of AIL route	16
8.0 Cumulative Impact	18
9.0 Summary an Conclusions	20
Appendix 1	Traffic Management Plan – Additional Information
Appendix 2	Statement on traffic noise at A481/A483 junction by Dr Mathew Cand



1.0 QUALIFICATIONS AND EXPERIENCE

- 1.1 My name is David Anthony Tucker. I am a Chartered Engineer, being a Member of the Institution of Civil Engineers and the Institution of Highways and Transportation. I hold an Honours Degree in Civil Engineering and a Masters Degree in Highways and Traffic Engineering both from the University of Birmingham.
- 1.2 I have over 35 years experience in the planning, design and construction of a wide variety of projects in both the public and private sector, specialising in highway, traffic and transportation planning and design, including traffic and environmental impact studies.
- 1.3 I am a director of David Tucker Associates, Transport Planning Consultants. The consultancy specialises in expert advice on transport related matters throughout a broad range of projects for both the public and private sector. In particular, expertise lies in evolving transport strategies, identifying solutions and negotiating agreements.
- 1.4 I have extensive experience in the planning and delivery of major projects including wind energy parks, port development and logistic facilities. Schemes have included the production of land access strategies for a number of major projects including the development of Southampton and Bristol ports, the review and implementation of land access proposals for the London Gateway project and the implementation of abnormal load strategies for various sites.
- 1.5 I confirm that this evidence is true and has been prepared and is given in accordance with the guidance of my professional institutions. I also confirm that the opinions expressed are my true and professional opinions.



2.0 SCOPE AND NATURE OF EVIDENCE

- 2.1 This evidence has been prepared on behalf of CeltPower Limited to address the traffic, access and transport aspects of the proposed re-powering and extension of the Llandinam Wind Farm. In particular it addresses the strategic issues, including the delivery routes for AILs, and cumulative impact which are to be dealt with in Session 4.
- 2.2 The Llandinam scheme (the Development) is one of a number of proposed wind farms in the mid Wales area but differs in that it is a re-powering scheme. The site is currently an active wind farm with a total of 102 turbines operating over 1,307 hectare site. The proposed re-development will occupy much of the same area, with some extension to the north and east and reduction to the west, and will comprise 34 larger turbines. Full descriptions of the existing and proposed wind farm are given in the Environmental Statement (Original ES) and the Supplementary Environmental Information submitted in April 2013 (2013 SEI).
- 2.3 The principle traffic and transportation matters to be addressed relate to the engineering requirements and potential traffic impact of construction traffic both in terms of general construction vehicles and the Abnormal Loads (AILs) used for the transporting of turbine components from the port of entry to the site. Once the site is constructed the long term operational phase of the development will generate only limited traffic flows which will generally be car and light vehicle traffic. The principle issues to address therefore surround the construction phase.
- 2.4 Full details of traffic generation from the site and the resulting impact on the surrounding road network are contained in the Llandinam Wind Farm Transport Assessment (Doc CPL-TRA-003). This document, which has been agreed with both Welsh Government Transport (WGT) and Powys County Council (PCC), was dealt with at Session 1 of the Inquiry. The Transport Assessment establishes that there will be no overall adverse impact on the surrounding road network as a direct result of the proposed Llandinam development.



2.5 Matters relating to local access to the Llandinam site were dealt with in Session 1. A detailed scheme for improvements to the local road between the A483 Trunk Road and the site for both the delivery of turbine components and general construction traffic was submitted. Neither PCC nor WGT have objected to the detailed scheme. This scheme will be implemented through an appropriate planning condition and in an agreement under Section 278 of the Highways Act.

2.6 Over the past year the Transport Consultants for the sites being considered at the Inquiry have worked with WGT, PCC, the Police and the Highways Agency's Abnormal Load Division to establish protocols for the delivery of the abnormal loads associated with the proposed wind farm developments. This work is summarised in two documents before the Inquiry:

- Agreed Statement on the Delivery Process for Abnormal Indivisible Loads (AILs) (Doc CD-COM-TRA-002)
- Water Preferred Policy Assessment for Mid-Wales Wind Farms (Doc CD-COM-TRA-005)

In addition the Consultants' Group, working with WGT and PCC, have produced an assessment of the cumulative impact of non AIL construction traffic on the strategic road network (Doc CD-COM-TRA-003).

2.7 The proposed route for delivery of turbine components to the Llandinam site is from the port of Newport via Brecon, Builth Wells, Llandrindod Wells and Crossgates. This route was described in Chapter 9 of the 2013 SEI. A detailed draft Traffic Management Plan (TMP) has been prepared and submitted to the Inquiry (CD-CPL-TRA-003). The TMP has been developed in accordance with the principles adopted in both the sTMP and the Agreed Statement on the Delivery Process for AILs (Doc CD-COM-TRA-002).

2.8 The route proposed in the Llandinam TMP follows the trunk road network via the M4, A470 and the A483. There are two short sections which utilise local roads. These are a short section on the A438 to the east of Bronllys and a section of the B4567 and A481 to the east of Builth Wells. In addition there is a temporary haul route



which crosses the River Wye to the south east of Builth Wells. It will also be necessary to carry out some works at Crossgates to increase the headroom under the railway bridge.

- 2.9 Improvements involving third party land will be required at the junction of the A481 and A483. At this junction there are a group of private houses. Appendix 2 of this proof contains a statement by Dr Matthew Cand indicating that the noise impact on these properties from AIL movements will be negligible.
- 2.10 In response to the TMP both WGT and PCC have confirmed that they have no objection in principle to the use of a route from the south. However both organisations have raised a number of points of detail.
- 2.11 In their Statement of Case Welsh Government Transport (WGT) raise the following:
- a. The proposed traffic management methodology poses an unacceptable risk to trunk road users and will generate unnecessary delays.
 - b. The assessment of the impact of AILs is fundamentally flawed as the largest loads have not been assessed.
 - c. The viability and potential detrimental impact of lowering the highway beneath Crossgates rail bridge is uncertain.
 - d. The travelling public will suffer unnecessary delays and disruption if Fferm Wynt Llaithiddu and CeltPower implement different highway modifications along the route.
- 2.12 Powys County Council in their Statement of Case have raised the following concerns:
- Lack of sufficient evidence, and hence confidence, that AILs can be appropriately accommodated on the route in terms of highway horizontal alignment, highway vertical alignment and highway structural clearance.



- The lack of sufficient evidence, and hence confidence, that AILs will travel at an appropriate average speed to always avoid sensitive periods of the day, where sensitive periods of the day include commuter peak traffic periods, school arrival and departure peak periods and the period of darkness.
- The lack of sufficient evidence to enable confidence in the forecast degree of inconvenience to road users, and others, caused by the AIL movements.
- The opportunity for, and consequence of, accessing the site from Ellesmere Port via the STMP route.

2.13 DTA have responded to both WGT and PCC on all the technical issues underlying their Statements of Case in a note entitled "Traffic Management Plan – Additional Information" attached as Appendix 1 of this proof. This note establishes that:

- There are no unresolved physical constraints to the use of the proposed southern route to accommodate the proposed turbine components.
- The TMP has been tested using the maximum dimension of the turbine components to be used at Llandinam
- The proposed convoy timings contained in the TMP are realistic and there will be no conflict with sensitive periods of the day.
- There will be no material impact on the travelling public and all abnormal load movements will satisfy the STMP vehicle delay criteria of "not exceeding 10 minutes".
- The proposed improvements at the Crossgates rail bridge preferred by CeltPower will have no material impact on traffic movements and indeed will increase safety for both pedestrians and vehicles.

Llandinam Wind Farm Repowering and Extension

Proof of Evidence David Tucker on Matters of Traffic Access and Transport
On Behalf of CeltPower Limited



-
- 2.14 In addition to addressing the technical issues addressed in the Additional Information note this evidence also sets out the reasons for Llandinam adopting a Southern Route rather than the sTMP, the potential cumulative impact with other projects and in particular the proposed coordination with Fferm Wynt Llaithddu regarding the design and usage of the Southern Route.
- 2.15 This evidence concludes that the proposed Southern Route for AIL deliveries and the management of construction traffic will ensure that the impact on existing road users from the construction of the Llandinam projects will be minimal.



3.0 POLICY CONTEXT

- 3.1 This section deals solely with the relevant transport policies. The more general policy context for the proposed development is contained in the evidence of Peter Frampton, the Original ES, the 2011 SEI and the 2013 SEI .
- 3.2 The Welsh Government (WG) set out its policy for the future of transport in Wales in “One Wales: Connecting the Nation – The Wales Transport Strategy” published in April 2008. This policy includes objectives such as reducing greenhouse gas emissions, reducing environmental impact from transport, integrating local transport, improving access between key settlements and sites, enhancing international connectivity and increasing safety and security. The delivery of the One Wales Strategy was to be achieved in partnership with the Regional Transport Consortium which each produces its own Regional Transport Plan (RTP). The Llandinam site falls within the Mid-Wales Transport Consortium (TTaCC) which produced its RTP in 2009. There are no specific transport-related policies that affect the Llandinam re-powering scheme.
- 3.3 The Welsh Government (WG) has issued a series of technical advice notes to support Planning Policy Wales. Technical Advice Note 18 (TAN18) deals with all matters relating to transport. TAN18 sets out how the transport elements of a development should be assessed although it makes no direct reference to the construction impact of development or to wind farm developments. However, the principles of TAN18 have been adopted in the development of the transport strategy for the Llandinam scheme.
- 3.4 Section 8 of the Powys UDP sets out the general position of transport and also reviews the highway improvement schemes in the county. It notes proposals for by-passes of both Newtown and Builth Wells. Since adoption of the Powys UDP proposals for a Newtown by-pass have proceeded with an ECI (Early Contractor Involvement) contractor being appointed last year. Draft orders are expected to be published in later in 2014. However there is no approved funding or completion date as yet for that scheme. Whilst the Builth Wells scheme does have a safeguarded route within the Powys UDP there are no current proposals for its construction.

Llandinam Wind Farm Repowering and Extension

Proof of Evidence David Tucker on Matters of Traffic Access and Transport
On Behalf of CeltPower Limited



3.5 In summary the Powys UDP places no particular requirements on developers of wind farms in terms of transport requirements.



4.0 PRINCIPLES OF SOUTHERN DRAFT TRAFFIC MANAGEMENT PLAN

- 4.1 The proposed Southern Draft Traffic Management Plan (TMP) is set out in detail in inquiry document CD-CPL-TRA-003. Newport Docks are the chosen port of entry from where the turbine components will be transported westwards on the M4 from Junction 28 to 32 and then northwards on the A470 and A40 via Brecon and Bronllys to Builth Wells. The route then continues northwards on the A483 via Llandrindod Wells and Crossgates before turning westwards at a junction 7 miles south of Newtown onto the local access road. Full details of the route are set out in Section 6 and Appendix 2 of the TMP.
- 4.2 The route is designed to take the candidate turbine for the Llandinam site upon which the technical assessments are based. This is a Siemens 2.3-93 with 45m long blades and is mounted on a standard Siemens 80 tower. The physical dimensions of both the components and the delivery vehicles are set out in Appendix 1 of the TMP.
- 4.3 All the components are classed as Abnormal Indivisible Loads (AILs) due to their size and/or weight. The process for managing these loads is set out in full in the "Agreed Statement on the Delivery Process for Abnormal Indivisible Loads" (Doc CD-COM-TR-002). In effect there will be 8 abnormal loads per turbine and under current arrangements with the Police it will be possible to move two loads in any one convoy. This will therefore require 136 convoys for delivery of components for all the proposed turbines.
- 4.4 The TMP adopts the principle that the route must be designed to limit delays to the travelling public to no more than 10 minutes whenever they encounter a convoy movement. Delays will occur for traffic following behind slower moving convoys as well as for oncoming traffic on single carriageway roads whenever they have to be held back to allow convoys to negotiate bends and sections of road too narrow to allow two-way movements. The exact management strategy will be determined at the time by its Police escort. However, in principle, it is expected that the convoy will be kept moving as much as possible between layover points. The general principles of traffic management are set out in Section 3 of the TMP.



4.5 To satisfy the above principles it will be necessary to carry out certain works on the existing highway. These are set out in detail in Section 4 and Appendix 3 of the TMP. In summary the following modifications will be necessary:

1. Modification of several roundabouts along the route. This will primarily involve creating a drive-through arrangement for use by abnormal loads only.
2. Modification of the junction between the A479 and A438 east of Bronllys.
3. Creation of a temporary crossing of the River Wye south-east of Builth Wells to bypass Builth Bridge. Further details of the off highway works are contained in Gary Parker's evidence
4. Local works on the B4567 and at its junction with the A481.
5. Temporary works at the junction of A481 and the A483.
6. Lowering of the carriageway beneath the railway bridge at Crossgates. An assessment of the effects of these works on existing traffic is contained in section 6 of this evidence

4.6 In addition it will be necessary to create passing areas to allow existing traffic and abnormal loads to pass each other on narrow sections. This will generally be achieved by strengthening highway verges at appropriate locations. Whilst the final locations for these passing areas will be agreed between the Police, the Contractor and the Highway Authority as part of implementing the TMP proposals the anticipated locations are shown on the drawings in Appendix 6 of the 'Additional Information'. Red spots identify locations where AILs can be held to allow following traffic to pass whilst Green spots identify the locations where opposing traffic will be held.

4.7 Both WGT and PCC have questioned whether the proposed AILs can be accommodated along the route. Section 2 of the 'Additional Information' set out the

Llandinam Wind Farm Repowering and Extension

Proof of Evidence David Tucker on Matters of Traffic Access and Transport
On Behalf of CeltPower Limited



swept path analysis which has been carried out. This analysis has used the candidate turbine and proposed deliveries as set out in Appendix 1 of the TMP. From this analysis it can be seen that the route has been designed to accommodate the candidate turbine.



5.0 IMPACT ON EXISTING TRAFFIC

- 5.1 An assessment of the impact on existing traffic is contained in Sections 3.2 and 3.3 of the TMP and a proposed timing schedule is set out in Section 7 and Table 7 also in the TMP. Both WGT and PCC have questioned the validity of the assessment carried out within the TMP. Additional analysis has therefore been undertaken in Section 3 of the Note of Additional Information (Appendix 1). This section looks at both the time of travel and the delays likely to be caused to normal traffic by the AIL convoys.
- 5.2 Section 3 and Appendix 6 of the 'Additional Information' sets out queuing and delay calculations for both following and opposing traffic for each section of road from the northern end of the dual carriageway on the A470 at Merthyr Tydfil through to the site access. These calculations are carried out to the same format as those presented in the sTMP. No assessment has been undertaken for the M4 or the dual carriageway sections of the A470 south of Merthyr Tydfil as there will be no measurable delays to either following or opposing traffic on these sections.
- 5.3 The results for the 'following traffic' show that for all but one section the maximum vehicle delay is 7 minutes or less with the majority of sections being 3 minutes or less. Only one section (between Brecon and Bronllys) has a maximum delay of 10 minutes. The average vehicle delay is less than 5 minutes throughout. For 15 out of the 18 sections the following traffic queue is less than 10 vehicles. The maximum traffic queue is between Brecon and Bronllys at 33 vehicles. The delay and queuing on this section could be further reduced by creating an additional passing point, within highway limits, to the east of the A470/A438 junction at Bronllys.
- 5.4 For the 'opposing traffic' the maximum vehicle delay is 9 minutes on two sections, the A483 between Erwood and the proposed River Wye crossing and through Llandrindod Wells. Typically maximum delay is 5 minutes or less with the average delay of 3 minutes or less. The opposing traffic queue will be in the order of 20 – 25 vehicles between Merthyr Tydfil and the proposed River Wye Crossing and less than 5 vehicles north of Crossgates. The maximum opposing traffic queue all the whole route will be 43 vehicles through Llandrindod Wells.



-
- 5.5 As regards timing, Section 3 of the 'Additional Information' sets out in Table 1 a proposed timing schedule which avoids the sensitive hours of commuter peaks, school arrivals and departures and darkness. On the basis that the convoy would leave Newport at 9.00 am it would travel through to a layover area at the River Wye crossing, where it would be held for 45 minutes, before proceeding to the site with an arrival time of approximately 14.30. This schedule will allow a convoy to complete the journey in a single day and indeed have sufficient time for the empty vehicles, which will be non-ALLs, to travel back to Newport within a working day.
- 5.6 The above data demonstrates that delays to existing traffic are within the target maximum of 10 minutes set down by the highway authorities and generally lower than the delays forecast along the sTMP route.
- 5.7 As regards PCC's concerns that the ALLs will impact on sensitive periods of the day, the analysis shows that there will be no impact at all on those periods.



6.0 CROSSGATES RAILWAY BRIDGE

- 6.1 The TMP present proposals for lowering the existing carriageway under the Crossgates Railway Bridge to allow the candidate turbine to pass under the bridge unimpeded. These proposals involve either introducing single way shuttle working controlled by traffic signals or lowering the full width of the highway between bridge abutments. Full details of the proposals are set out in Paragraphs 6.4.18 to 6.4.23 of the TMP and the accompanying drawings 14016/20 and 14016/32 in Appendix 3 of the TMP.
- 6.2 In their Statement of Case, WGT have raised concerns over “the viability and potential detrimental impact of lowering the highway beneath Crossgates rail bridge”. To address these concerns the background analysis of the impact of the proposals on existing users of the trunk road is detailed in Section 4 of the Note on Additional Information (appendix 1). In addition details of the engineering works required are addressed in Gary Parker’s evidence.
- 6.3 The ‘Additional Information’ concentrates on the potential impact on both vehicles and pedestrian of the proposed Shuttle Working scheme (drawing 14016 – 20). The main impact of the full width lowering will predominately be during construction as explained in Gary Parker’s evidence. However it must be noted that none of the safety benefits for both vehicles and pedestrians achieved with Shuttle working, as a result of the propose improvements to the layout, will be delivered with the full width scheme (drawing 14016 – 32).
- 6.4 The Shuttle Working scheme affords a balance of benefit to all road users travelling under the bridge including increased safety for both pedestrians and vehicles. In addition it will be quicker and less problematical to construct. This lowering will not impact upon the foundations of the bridge abutments and, based on present evidence, will not require time consuming relocation or diversion of existing utility apparatus. Pedestrians on the western side of the bridge will be provided with a new 2.5m wide footway with pedestrian guard railing to replace the existing substandard footway which is unprotected from traffic and which varies in width from 1.06m to



-
- 1.3m. A similar substandard provision on the eastern side of the bridge will be replaced by a 1.75 wide provision with pedestrian guard railing.
- 6.5 A traffic assessment of the effect of shuttle working has been carried out using the computer program *Linsig*. The program has the ability to optimise the time allotted to each stream of traffic and to minimising the delays and queues caused by the traffic signal control. The results of that assessment are contained in Appendix 7 of the 'Additional Information'.
- 6.6 The 'Linsig' assessment show low degrees of saturation in both directions of travel indicating that that the proposed signal control will operate well within practical capacity and, with average delays per vehicle less than 30 seconds, it will not cause undue delays to the traffic on the A483 Trunk Road. In addition maximum queues represent queue lengths of about 30-35 metres. Such queues will not interfere with adjacent highway junctions. In particular southbound queues will not impact on the A44/A483 roundabout which is located approximately 160 metres upstream of the proposed southbound stop-line
- 6.7 Based on the above studies there will clearly be no detrimental impact on the flow of Trunk Road traffic as a result of the Shuttle Working. Indeed the proposals will improve both efficiency and safety for both vehicles and pedestrians.



7.0 CHOICE OF AIL ROUTE

- 7.1 CeltPower fully supports the principals and objectives of the sTMP and Scottish Power Renewables, who are joint venture partners, are active members of the sTMP group in respect of other projects. However there clearly remains considerable uncertainty over the timescale for concluding all elements of the STMP and the mechanisms for delivery of shared works.
- 7.2 In particular CeltPower have concerns that full access to Strategic Search Area C (SSA C) using the sTMP section 6 is reliant on major improvement to the A483 through Dolfor and the associated link to the Mochdre Industrial Estate. Whilst that project is clearly progressing there remain a number of detailed design, land ownership and procedural matters to resolve with no certain delivery date.
- 7.3 The Llandinam repowering project pre-dates the establishment of the sTMP group and has never been seen as a candidate project for the sTMP due to its earlier delivery. The programme for delivery of the sTMP will be consistent with the projected build programmes for the majority of the wind farm proposals in Mid Wales which are dependent on the mid Wales grid project becoming available and it was these projects, and their particular cumulative impacts, that led to the development of the sTMP.
- 7.4 For these reasons there is concern that any requirement, as has been suggested, that Llandinam await the completion of the sTMP would lead to a significant delay in the Llandinam repowering project. This in turn would create unnecessary delay in bringing this existing facility back on stream as a modern and efficient power generator.
- 7.5 To address these concerns regarding the suitability and availability of the sTMP for the Llandinam repowering project studies were carried out to identify potential routes for delivering turbine components to the site in the absence of the sTMP. These are reported in the 2013 SEI. Several alternative routes around Newtown were investigated but all practical routes were in effect variations of the sTMP and suffered the same constraints including timing.



-
- 7.6 However the studies did identify various suitable routes from the South. The Water Preferred Policy Assessment (WPP) (Doc. CD-COM-TRA-003) clearly identifies the South Wales ports of Newport, Cardiff and Swansea as viable alternatives to Ellesmere Port for accessing sites in SSA C. In addition the WPP identifies that there are significantly lower flows and greater spare highway capacity on the southern route than on the sTMP. This, in turn, leads to greater efficiency in moving AILs and significantly less impact on the travelling public.
- 7.7 The route now being promoted from the South is readily available and can be delivered without any significant delay to the Llandinam programme. Furthermore due to the very low existing traffic flows along the southern route an AIL delivery from Port to site can be undertaken within a single working day avoiding the need for an overnight layover, with the associated cost and efficiency savings. This compares with the sTMP that does require an overnight layover, and hence a 2 day trip, to address the sensitive hour's constraints imposed on that route.



8.0 CUMULATIVE IMPACT

8.1 As a result of the number of Wind Farm sites now either approved or planned in Mid Wales there is understandable concern regarding the potential Cumulative Impact of the resulting construction traffic. To address this concern the potential cumulative effects have been split between the movement of AILs, which are heavily regulated, and the general construction traffic.

Abnormal Indivisible Loads (AILs)

8.2 The overriding priority is to provide safe passage for all vehicles along the AIL delivery route whilst minimising and limiting delays to other traffic caused by the AIL convoys to 10 minutes. The management of all AIL movements in Mid Wales will be carried out in accordance with the principles set out in the 'Agreed Statement of the Delivery Process for AILs' (Doc CD-COM-TRA-002). A key elements of that agreement is that all AILs will be managed by an appropriate 'Transport Tool' to ensure that all AIL movements are scheduled so that no two convoy movements are on the same part of the network at the same time.

8.3 CeltPower are supportive of the proposals in the Agreed Statement and see no reason why it should not apply to any approved route and be subject to an appropriate planning period.

General Construction Traffic

8.4 The Transport Consultant for the five sites have worked together to assemble a cumulative impact assessment of non-AIL construction traffic. This work has been coordinated by Kevin Martin at AECOM and a report has been deposited into the Inquiry (Doc CD-COM-TRA-003). Kevin Martin will be presenting this document to a Hearing session of the Inquiry.

8.5 Doc CD-COM-TRA-003 assessed a combination of Section 36 sites currently before the co-joined Inquiry and other non-Section 36 schemes which are either approved or known to be in the process of being promoted. For this assessment it was assumed that construction would commence once each site obtained planning approval. The assessment concluded that in general the cumulative impact did not



exceed the increases in overall traffic identified by the IEA guidelines as the screening threshold for assessment of potential significance.

- 8.6 The one exception was that under certain combinations of events the impact on the section of A483 south from Newtown to the B4356 could potentially be significance under the IEA guidelines. However it was noted that on this section of A483 existing traffic flows are considerably lower than those normally associated with a Trunk Road and the number of HGVs is relatively small. Notwithstanding that it was decided to look in more detail at realistic construction programmes for the sites accessing onto the A483, including Llandinam. This established that in practice there would be no significant cumulative environmental impact on this section.
- 8.7 Full details of the updated assessment are presented by Kevin Martin in his Hearing Statement to the Inquiry.

Coordination between Llandinam and Llaithddu on design and usage of the Southern Route

- 8.8 Both WGT and PCC have expressed concerns regarding potential differences between Llandinam and Llaithddu regarding the management of construction traffic. CeltPower are currently in discussion with Fferm Wynt Llaithddu regarding coordination of design and usage of the Southern Route. It is intended that an agreed position statement will be presented to the Inquiry.



9.0 SUMMARY AND CONCLUSION

9.1 This evidence has been prepared on behalf of CeltPower Limited to address the traffic, access and transport aspects of the proposed re-powering and extension of the Llandinam Windfarm. In particular it addresses the strategic issues which are to be dealt with in Session 4. These include details of the proposed delivery routes for AILs, impact of AIL deliveries on existing traffic, reasons for choosing a southern delivery route and cumulative impact. Matters relating to local access to the Llandinam site were dealt with in Session 1.

9.2 Over the past year the Transport Consultants for the sites being considered at this Inquiry have worked with Welsh Government Transport (WGT), Powys County Council (PCC), the Police and the Highways Agencies Abnormal Load Division to establish protocols for the delivery of abnormal loads associated with the proposed wind farm developments. This work is summarised in various documents before the Inquiry.

9.3 This evidence details a Draft Traffic Management Plan (TMP) which has been prepared specifically for the Llandinam project. This TMP, which has been developed in accordance with the principles adopted in both the Strategic Traffic Management Plan (sTMP) and the agreed protocols, utilises a route from Newport Docks in the South Wales to the site via the M4, A470 and A483. This route includes a temporary crossing of the River Wye south east of Builth Wells and a lowering of the carriageway beneath the Crossgates railway Bridge to increase headroom.

9.4 In response to the Draft TMP both WGT and PCC have confirmed that they have no objection in principle to the use of a route from the south. However, both organisations have raised a number of points of detail. This evidence addresses these issues and establishes that:

- There are no unresolved physical constraints to the use of the proposed southern route to accommodate the proposed turbine components.



- The TMP has been tested using the maximum dimension of the turbine components to be used at Llandinam
- The proposed convoy timings contained in the TMP are realistic and there will be no conflict with sensitive periods of the day.
- There will be no material impact on the travelling public and all abnormal load movements will satisfy the STMP vehicle delay criteria of "not exceeding 10 minutes".
- The proposed improvements at the Crossgates rail bridge preferred by CeltPower will have no material impact on traffic movements and indeed will increase safety for both pedestrians and vehicles.

9.5 In addition to addressing the technical issues raised by WGT and PCC this evidence sets out the reasons for adopting a southern route to the Llandinam site rather than the sTMP. The evidence establishes that the route now being promoted for Llandinam is readily available, can be delivered without any significant delay to the Llandinam programme and can be undertaken in a single working day without detriment to existing traffic thus avoiding the need for a lay-over with associated costs and efficiency savings.

9.6 Finally this evidence has summarised the work undertaken by the Transport Consultants for the projects before this Inquiry and establishes that there is no significant cumulative environmental impact associated with the Llandinam scheme.

9.7 In conclusion this evidence confirms that the proposed southern route for ALL deliveries and the management of construction traffic will ensure that impact on existing road users from the construction of the Llandinam project will be minimal.



david tucker associates

Forester House

Doctor's Lane

Henley-in-Arden

Warwickshire B95 5AW

Tel: +44(0)1564 793598

Fax: +44(0)1564 793983

inmail@dtatransportation.co.uk

www.dtatransportation.co.uk